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# FARMING

NOV.  
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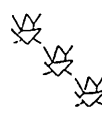


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 The Gurney-Tilden Co. Ltd.  
 DEAR SIRS - In reply to yours of 11th, I have been using your SOUVENIR range all fall and winter, and am delighted with it. I keep fire going day and night, and it gives positively no trouble. The oven works beautifully, is a perfect baker, and will give a roasting heat in five minutes at any time. It consumes on an average 1 1/2 scuttles of nut coal in twenty-four hours. The SOUVENIR is, to my belief, the zenith of perfection.  
 Yours truly,  
 NETTIE CUTTRISS.

Toronto, April 2nd, 1894.  
 The Gurney-Tilden Co., Ltd.  
 GENTLEMEN, - I have much pleasure in saying that the SOUVENIR Range you put in at Hamilton for the use of the cooking class recently held there gave me every satisfaction. It is certainly the very best stove I have ever used, being clean, reliable, and most economical, consuming an astonishingly small quantity of fuel. I have the honor to remain,  
 Yours sincerely,  
 FLORENCE SURRIDGE,  
 Principal Toronto Cooking School.



Messrs. A. Riddell & Son, Agents, St. Catharines.  
 GENTLEMEN, The SOUVENIR Range purchased from you has given us satisfaction where others have failed; in fact, it is the only really good cook stove I have ever seen.  
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THEY ARE SOLD EVERYWHERE    ARE EASY TO BUY    ONE WILL LAST A LIFETIME



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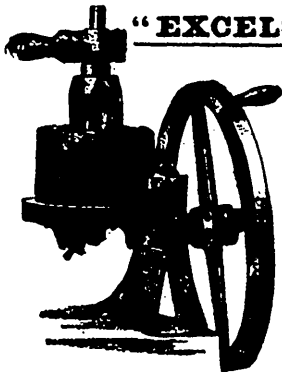
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will successfully cut fresh market bones, with the  
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We warrant these machines to cut fresh bones with meat and gristle, without clog or difficulty, or money refunded. Nothing on earth will make hens lay like green cut bone. Green cut bone, when fed to poultry, will double the number of eggs, make the eggs more fertile, make the eggs hatch vigorous chicks, invigorate the whole flock, stop feather picking, stop egg eating, mature broilers early, make little chickens grow faster and larger, reduce the grain bill one-half, and prevent roup. It is better than medicine, cheaper than grain. Try it. Price \$7.00 each.

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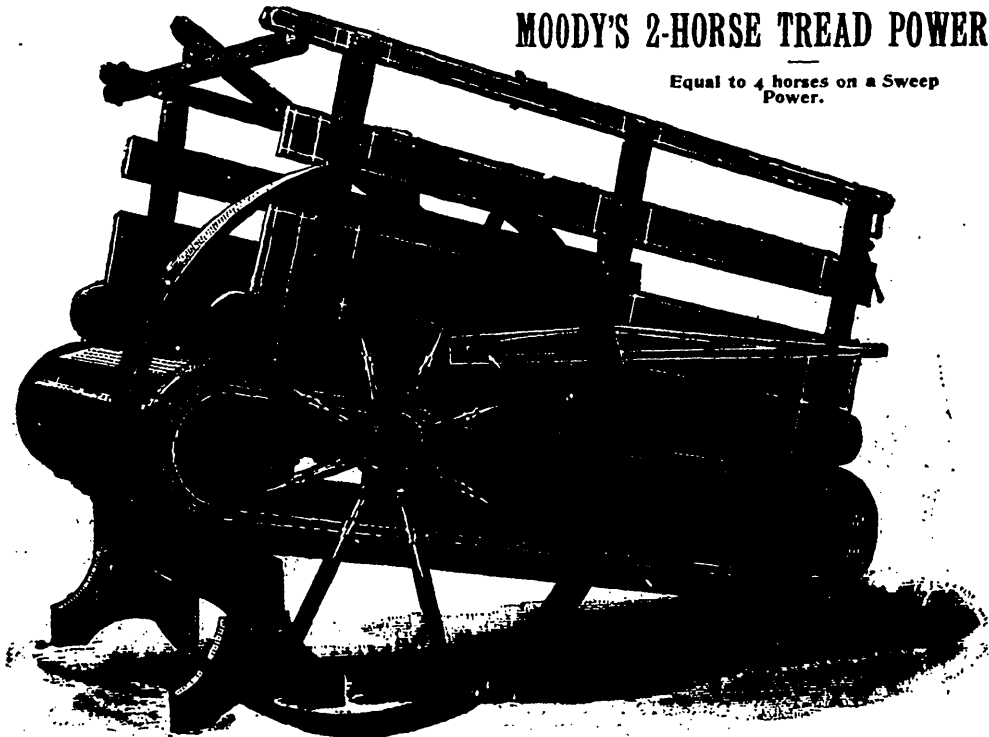
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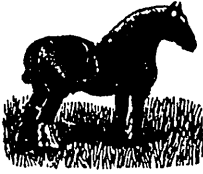


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**THORNCLIFFE STOCK FARM.**

I have on hand the best young **Clydesdale Horses and Mares** on this continent. Bred from the well-known sires, Prince of Wales, Darnley, Macgregor, Energy, Lord Montrose, The Ruler, Carruchan Stamp, Knight Errant, and other celebrities.

**SHROPSHIRE.**

Orders can now be booked for Shearling Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar None. Also rams and ewes of this year's importation.

**SHORTHORNS.**

Choice young Heifers and Bulls by the celebrated Cruickshank bulls, Northern Light and Vice-Consul.

My stock in the above lines were very successful at all the large shows last year. Call and examine stock before purchasing elsewhere. Terms reasonable.



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Patrons: Governor-General of Canada and Lieutenant-Governor of Ontario. The most successful Veterinary Institution in America. Experienced teachers. Classes begin on Wednesday Oct. 14th, 1896. Fees, \$65 per session.

PRINCIPAL PROF. SMITH, F.R.C., V.S.,  
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**Woodroffe Dairy and Stock Farm**  
OTTAWA, CANADA.**FOR SALE ----****Three  
Clydesdale  
Brood  
Mares**

weighing from 1,650 to 1,800 lbs. Also purebred colts from one to three years old; best breeding and good action. Prices and terms easy.

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Young bulls and heifers of finest Booth breeding always on hand at reasonable prices. Write for particulars.

**D. ALEXANDER,**  
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**SCOTCH SHORTHORN CATTLE  
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For Sale—Choice young cattle of both sexes of the most select breeding. Also young Berkshire pigs from sows selected from the herd of J. C. Snell, Edmonton, Ont. Write for prices. **W. WARD,**  
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Farm one-half mile from station, C.P.R.

**FOR SALE**

We have yet on hand **Two Very Fine Bull Calves**, about twelve months old, one from an imported Cruickshank cow, the other a Matchless, and both sired by (Imp.) General Booth (54353).

**W. J. BIGGINS,**  
Elmhurst Farm, CLINTON, ONT.

**"THE BRIARS"**

SUTTON WEST, ONT.



631

I have a number of exceedingly well-bred horses and colts on hand of Norland, Veteran, Clear Grit, Royal Revenge, and other blood, which can be bought on advantageous terms. If you want really good registered Shorthorns, I can supply these as well. Now is the time to buy.

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**SIMMONS & QUIRIE**  
**Shorthorns and Berkshires.**

The herd is headed by the imported bull, Blue Ribbon 17095 (63706). He by Royal James (54992), dam, Rostentz. Vol. 38, p. 298, E.H.B., by Gravesend (92460). Among the females are representatives of the Strathallans, Minas, Golden Drops, Mysies, Elviras—all pure Scotch breeding, except the Elviras, which are Scotch crosses.

The herd of Berkshires includes many prize-winners, and are an exceedingly choice lot.  
Farm 7 miles from Ilderton Station, G.T.R. Stock of all kinds for sale. Apply to

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JAMES QUIRIE, Delaware, Ont.**

**Shorthorn  
Bulls....**

I have six young bulls got by Aberdeen (imp.). Good ones. One a full brother to champion heifer at Toronto and Ottawa Fairs this fall. Also some

**Fine Young Heifers**

Write for prices, or, better, come and see them.

**JOHN MILLER,**

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**MARKHAM, ONT.****FOR SALE****CHOICE Shorthorn BULL CALVES**

By same sire as

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Toronto, Montreal, and Ottawa. If you want a really fine animal, good color, fit for service, see these.

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**W. C. EDWARDS & CO., Breeders and Importers.**

**PINE GROVE STOCK FARM,  
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Special bargains on young bulls of superior merit and select Scotch breeding. Also thick young heifers at the right prices. Two imported Cruickshank Bulls for sale; also Ayrshires, Jerseys, Shropshire Sheep, and Clydesdale Horses.

Post Office, Telegraph Office, and Steamboat Landing, Rockland, Ont., on the C.P.R.

703 **JOS. W. BARNETT, Manager.**



**LAURENTIAN STOCK and  
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Ayrshires, imported and homebred; herd headed by Imported Tam Glen 2nd, No. 1310 D. A. H. B. Jerseys all of the celebrated St. Lambert family; herd headed by Lisgar Pops of St. Anne's 25704 A. J. C. C. Berkshire Pigs. Young stock of all the above breeds for sale. Post Office, Telegraph Office, and Railway Station, North Nation Mills, P. Q., on the C.P.R.

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Six young Bulls twelve months old and under, and all the Heifers you want bred any way you wish from different strains of blood in Imported and Homebred Cows. Come and see them or write.

**H. CARGILL & SON,**

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**FOR SALE Shorthorns, Berkshires  
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Seven choice bull calves and six heifers, three young boars and five sows, also a fine lot of sheep of all ages and both sexes.

WRITE ME, OR  
COME AND SEE.

532

**H. B. JEFFS, Bond Head, Ont.**

**ARTHUR JOHNSTON  
GREENWOOD, ONT.**



Nineteen splendid young bulls of various ages; good Shorthorn colors. Also a number of heifers, equally good. No better selection of young cattle obtainable. Will be sold at largely reduced prices according to individual merit and breeding. Send for catalogue. All enquiries answered with pleasure.  
Claremont Station, C.P.R. Pickering Station, G.T.R.  
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**4 Grand Young Shorthorn Bulls 4**

Twenty heifers of finest quality and best Scotch breeding. Sired by the greatest living Cruickshank bull, Sittyton Stamp (66368). Also a few high-class Welsh ponies. Prices low. Write us. 497

**JOHN MILLER & SONS, Brougham, Ont.**

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Breeder of Scotch Shorthorns and Southdown Sheep Imported King James at the head of herd.

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**Riverview Farm, Danville, Que.**

**Cherry Grove  
Stock Farm**

We have for sale this year seven choice young bulls and a number of heifers, sired by our stock bull, Royal Lavender, by Indian Chief (imp.). These are of superior blood and qualities. This cut is a representation of our herd.

Call or write.



**JOHN MORGAN & SONS,**

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**FOR SALE,** 3 choicely bred SCOTCH SHORTHORN BULLS from 12 to 18 months old. Good colors and good animals, at prices and terms to suit purchasers.

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 **There Is No Doubt About the MERIT of DEHORNING**   
It cuts both ways, does not crush. One clip and the horns are off close. Write for circular. The Keystone Dehorner Mfg. Co., Picton, Ont., Can.

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Importer and Breeder of  
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A number of splendid cows and heifers and seven young bulls from Royal Gloucester, also a grand lot of Minas, and four of the Fanny B. sort, for sale on very reasonable terms.

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All Ages and the Right Sort.

Satisfaction **H. D. SMITH, Ingleside Farm,**  
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Awarded first prize at Montreal for BREEDERS' YOUNG HERD. Young animals of MERIT for sale. Pedigrees and particulars to parties wishing to purchase. Address, **SYDNEY FISHER, Knowl-on, Que.**

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**A CHOICE LOT OF  
Jersey Heifer Calves**

of good colors and rich breeding, 3/4 purebred and high grade. Dams have averaged the past year 330 lbs. of butter each, all sired by Canada's Hero, whose dam has a seven days' record of 19 lbs. 5 oz. For description and prices write to

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**FOR SALE**—Pure St. Lambert Yearling Bull, \$40. Also purebred and high-grade cows and heifers bred to Sir Ollie.

**JERSEY COWS AND HEIFERS.**

The highest testing strains.  
Rich breeding and good colors.

454 **ALSO TAMWORTH PIGS.**

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**THE MANOR FIELD FARM  
OF JERSEYS**

Combines blue blood with vigorous constitutions and undeniable dairy qualities. The St. Lambert bull, Kaiser Fritz 21773, bred by D. S. Dodge, Connecticut, U.S., heads the herd. Write or prices on young stock.

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**BRAMPTON JERSEY HERD  
A.J.C.O. OF CHOICEST STRAINS**

For sale, a grand yearling bull, Rhoda's Son of Brampton, a prize winner, and from first-prize stock. Also, registered bull calves and high-grade cows and heifers. Sir Ollie heads the herd.

**B. H. BULL & SON, 544 Brampton, Ont.**

AYRSHIRES.

**Choice Ayrshires**



This noted Bull  
"SILVER KING"  
with an unbroken record  
of 18 first prizes and the  
sire of many prize win-  
ners, is

**FOR SALE.**

Also a few choice young  
animals of high merit.

**WRITE ME.**

**D. McLACHLAN,  
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**AYRSHIRES FOR SALE**

Six young bulls, fit for service; also a choice lot of young calves from deep milkers, sired by White Prince II. and Earl of Percy; bred by J. H. Douglas, Warkworth, and a few cows and heifers at prices to suit the times.

**F. W. TAYLOR,**

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576

**AYRSHIRES**

—OF THE—  
**RICHEST MILKING STRAINS**

—AND THE—  
**CHOICEST BREEDING**

ARE KEPT AT THE GLEN FARM.

**YOUNG BULLS AND HEIFERS FOR SALE**

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**WHITESIDE BROS.,**

Correspondence solicited.

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**MAPLE CLIFF STOCK AND DAIRY FARM**

**AYRSHIRE CATTLE, BERKSHIRE AND TAM-  
WORTH SWINE.** Our herd is headed by the grandly bred Gold Ring 1387, from Nellie Osborne (imp.) 2018. We have still three young Bulls for sale, and young Pigs of both breeds.

**R. REID & CO.,**

729 (One mile from Ottawa.)

**Hintonburg, Ont.**

AYRSHIRES.



# Special November Sale

-AT-

## ISALEIGH GRANGE STOCK FARM.

Our stock of Shropshires and Yorkshires is larger than our winter's quarters will accommodate. We must reduce the number, and we are offering at reduced prices very choice young animals.

**YOUR CHANCE TO GET A BARGAIN IS THIS MONTH**

Write for what you want. Our prices will surprise you. We still have on hand our choice young Ayrshire bulls, grandly bred, at very low figures if sold at once. Our stock has won over \$1,000 at leading exhibitions this fall.

J. N. GREENSHIELDS, Proprietor.

T. D. McCALLUM, Manager.

53

**DANVILLE, - - QUEBEC.**

### Imported Ayrshire COWS and HEIFERS

... FOR SALE ...

I will offer for sale my herd of AYRSHIRES, including my imported heifers

Alice of Hatton, Violet of Park, Fair Queen, Imp, Miss Bonnie Doon, two heifers from Fairy Queen, also heifer calf, dam, Alice of Hatton, bull calf, dam, Violet of Park, both calved about 1st October, 1895, and a number of yearling and heifer calves sired by Dominion Chief, also two purebred Short-horn yearling heifers sired by Gibson Duke. Write for prices and particulars. . . .

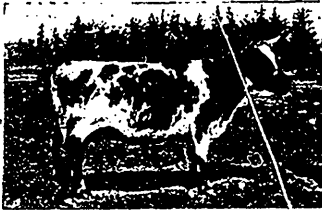
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### PARK HILL HERD

OF

## AYRSHIRES



Young Stock of both sexes for sale from the best milking strains.

For pedigrees and full information address

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PETITE COTE, - - - QUE.

### AYRSHIRE CATTLE

The bull Tom Brown and the heifer, White Floss, winners of sweepstakes at World's Fair, were bred from this herd. Young stock always for sale.

Also Leicester Sheep and Berkshire Pigs.



**DAVID BENNING, Breeder,**

WILLIAMSTOWN, ONT.

### FOR SALE

Choice young Ayrshires, of both sexes, sired by imported bulls Silver King and Glencairn. Write, or come and see them.

**DANIEL DRUMMOND**

Petite Cote, Que.

596

538

### CHOICE AYRSHIRES OF DEEP MILKING STRAIN

*Largest and Oldest Herd in Canada*

Headed by Leonard Meadowside, prize-winner at Chicago, Ottawa, and Gananoque. Shropshire sheep and choice Berkshires.

Visitors met at Queen's Hotel, Carleton Place.

Give us a call before buying elsewhere.

**J. YUILL & SONS,**

Carleton Place.



### ..SPRUCE HILL DAIRY FARM..

**6 Fine Young Ayrshire Bulls 6**  
of fine quality and choice breeding now for sale. If you want a good one write us for particulars. Our prices will suit you.

**A. McCallum & Son, - Danville, Que.**

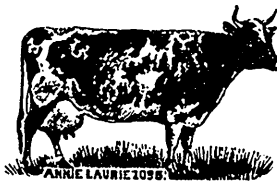
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AYRSHIRE CATTLE  
BERKSHIRE PIGS

Traveller of Parkhill at the head of herd, while my herd is descended from cows purchased of Mr. David Benning, are modern in type, and are of the choicest milking strains. Write for prices of young bulls and heifers.

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Ayrshire Cattle and Berkshire Pigs. First-class pedigreed stock always on hand and for sale. *First-class milking stock a specialty.*

**Wm. Stewart, Jr.**  
Menie, Ont.  
Hoard's Station,  
G.T.R. 524

### AYRSHIRES

Bulls for sale. Two fit for service, one from Jessie Osborne (Imp.). Also three fall calves, one from White Floss cow, which won silver medal at Toronto. All fine calves and sired by Imp. Glencairn.

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Tredonnock Farm, STE. ANNE DE BELLEVUE, QUE 719

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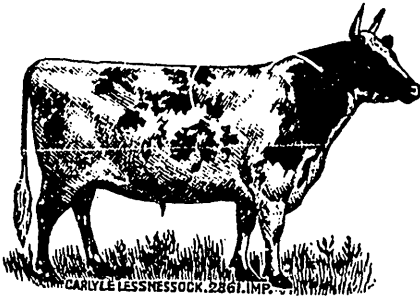
Among the young stock now for sale is Lord Stirling, that won 1st and Diploma at Sherbrooke, and 1st at Montreal. Also Dainty Lad, 1st at Sherbrooke and a winner at Montreal. Other choice animals from prize winners. For pedigrees, etc., write

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## MAPLE GROVE AYRSHIRE STOCK FARM

R. G. STEACY - Importer and Breeder - LYN, ONT.

= FOR SALE =  
 TWO BULL CALVES (Imported in Dam)  
 To head herd they have no equal.

## ROUGH-COATED COLLIES AT STUD.

Imp. Clip, stud fee..... \$15 00  
 Bisley, " " " " " " 25 00

Of most noted champion Southport perfection strains.

For further particulars address,

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## Maple Cliffe Herd of Ayrshires

NOTED PRIZE WINNERS—Choice quality and heavy milking families. Exceptionally choice young animals of both sexes for sale at prices to suit the times.

Apply to

ROBERT ROBERTSON, Compton, Que.

## AYRSHIRES

Always for sale. Some choice young bulls and heifers bred from the Glenhurst herd.

John Sandilands, Williamstown, Ont. 852

## THOMAS GUY

Sydenham Farm, Oshawa, Ont.



AYRSHIRE CATTLE LEICESTER SHEEP  
 BERKSHIRE PIGS

Four Young Bulls from prize-winning stock now for sale. Closely related to winners at the World's Fair. Write for particulars. 757

## HELBON STOCK FARM

Holstein-Friesians of the highest producing strains, founded on the best imported families of NORTH HOLLAND.

A few choice females of different ages and a yearling bull on hand at reasonable prices and easy terms. Also Improve Large Yorkshires of Sanders Spencer and Walker-Jones' breeding. Also choice Oxford Down rams.

J. W. LEE, 809 Simcoe, Ont.

## MAPLE HILL

## Holstein-Friesians

For sale, two yearling bulls, grandson of Koatje DeBoer, imp., who has a record of 63 lbs. of milk, making 3 lbs of butter, in one day. Also bull calves from Artis Peer's Poem, Cornelia Tensen, Cornelia Artis, Inka 5th, and Queen DeKol. These cows are all well-known prize-winners, with large milk records.

G. W. CLEMONS - St. George, Ont.

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## Holstein - Friesians

Choice young bulls and heifers, richly bred from BARTON, BARRINGTON, MERCEDES, and ARTIS strains. Prices reasonable.

807 T. W. CHARLTON, St. George, Ont.

We have a number of

Choice Young Holstein Bulls and Heifers  
FOR SALE

Price and quality must sell them!

Mostly sired by Stepkje 3rd Mink Mercedes Baron, a World's Fair prize winner.

Heifers and young cows bred to Sir Paul De Kol Clothilde, a milk and butter prince. His nineteen nearest relatives average twenty-two pounds of butter a week, and fourteen average 16,283 pounds of milk in one year. Write us for records of the dams of these young bulls. Four of our cows have won money in public tests (more to follow).

A. &amp; G. RICE, Brookbank, Oxford County, Ont.

## SPRING BROOK STOCK FARM

Holstein-Friesian Cattle and Tamworth Swine.

Though not on exhibition, owing to a trip to the Northwest, still the leading and most select herd in Canada. You cannot afford to invest before inspecting this famous herd. Write at once for prices.

A. C. HALLMAN,

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## HOLSTEIN-FRIESIANS

Purebred stock of all ages, male and female, of Netherland, Johanna, Moore, and Peel strains, for sale at lowest prices.

519 Londesboro Stn. JOHN MCGREGOR, Constance, Ont.

## GEM HOLSTEIN HERD.

**SNAP, \$75 CASH** Sir Archibald Mascot, 253, C.H. F.H.B., four years old, Oct. 8th, 1895, was never sick a day, is a splendid stock-getter, and is in every respect a first quality bull. We have used him as our stock bull with the very best results, only part with him to change breeding. Was a prize-winner three years in succession at Toronto Industrial Exhibition.

690 Shipping Stn., TORONTO.

ELLIS BROS.,

Bedford Park, Ont.

PUREBRED HOLSTEINS  
AND  
TAMWORTHS

Carmen Sylvia, the sweepstakes cow over all breeds in milk tests at Toronto and Gananogue, was bred by me. Pieterie, Jewel, Sir Henry of Maplewood, and Mercedes strains. Catholine 5th's Sir Aggie Clothilde at the head of the herd. Tamworths from imported stock.

Brockville, on G.T.R. and C.P.R.

777 THOS. DAVIDSON, Spring Valley, Ont.

POLLED ANGUS AND SHEEP.

**"RAPIDS FARM" LACHINE RAPIDS  
... QUEBEC ...**



Royal Blackbird of Craigston.

**POLLED ANGUS AND Ayrshire CATTLE**

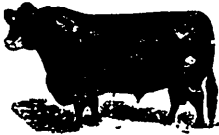
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WILLIAM STEWART & SON,

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**SHROPSHIRE RAMS**

Wholesale or Retail

**AT HALF PRICE**

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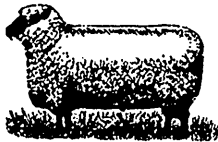
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"MINNIE MILES," twice winner over all breeds.

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I have for sale rams and ewes of all ages and both sexes at reasonable prices. All registered. Satisfaction guaranteed.

**100 YEARLING RAMS AT RANCHMEN'S PRICES 100**

Won many honors at World's Fair.

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Guelph, G.T.R.  
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Our flock, one of the oldest established Shropshire flocks in Canada, was founded in 1887. Importations arrive from time to time, selected in person from best English flocks. Imported stock of both sexes for sale. Homebred January and February lambs by the typical Mountford Exile and English-bred ewes are also offered.

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A grand lot of ewes on sale. Homebred and imported winners. Shortage of winter feed compels me to offer better bargains than ever. Choice imp. ewes at cost.

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Fine rams, shearing and 2 shears and ram lambs. Yorkshire sows due to farrow in a few weeks. Also Plymouth Rocks. We can suit you. Send card for particulars and prices. John Cousins & Sons,

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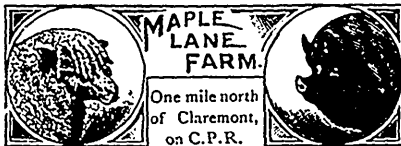
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Mammoth Bronze Turkeys

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A choice lot of boars and sows of all ages and the right type always for sale. As we have been breeding Berkshires for the last fifteen years from the best that can be got, our customers can rely on getting choice pigs. None but first-class stock sent out, and satisfaction guaranteed in every case.

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For a boar or sow of any age, that are right in quality, right in breeding, right in price, and guaranteed to be all right. Address,

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I have a large number of pigs of good length and fine quality, bred from the best imported families. Two fine litters of Spring '96. All first-class. Send order for a pair not akin, or a single pig of this most profitable breeding sort.

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One yearling boar, a prize-winner at the Western Fair, 1895. Has proved himself a good stock-getter. Also September, '95, boars and sows from prize-winning sires and dams; pairs not akin. Write for prices.

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I have for sale 4 choice young boars, 14 months old, of the right stamp, sired by imported **QUEEN'S OWN**.

Also a lot of young pigs from two to four months old. Prices to suit the times. Write for particulars.

686

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## MOUNT PLEASANT STOCK FARM

Large English Berkshires

Herd took 21 firsts, 10 seconds, and 4 third prizes in 1895. I have a number of pigs farrowed this spring, good length, and large bone, and fine quality. Registered pedigrees. Satisfaction guaranteed. Write for prices.

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The December number of FARMING will be a subject should procure extra copies to send to their

It will be a grand advertisement for the swinebreeders of Canada.

## Special Swine Number.

Those interested in the friends.

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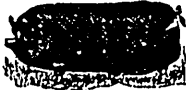
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Boars and sows of all ages, not connected. Sows in farrow. All first-class stock. Address,



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Young boars and sows of fall litters, bred straight from imported stock. Sires weigh from 650 to 840 lbs. Size and quality combined. Orders booked for spring pigs at eight weeks old. Jersey cows, heifers, and calves for sale.



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My herd is composed of the most popular strains of prize-winning blood from imported stock. A choice lot of spring pigs from imp. Black Joe ready to ship. Also a twelve-months-old sow due to farrow in August (a show sow).



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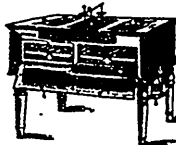
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The following is a copy of letter received by me from Michigan under date of October 12th, 1896:

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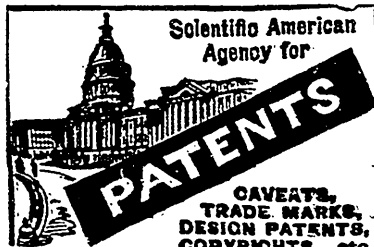


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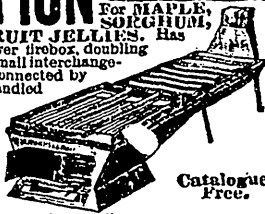
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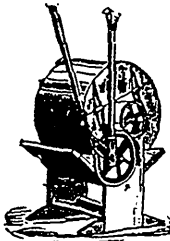
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Easy Terms. Correspondence invited.

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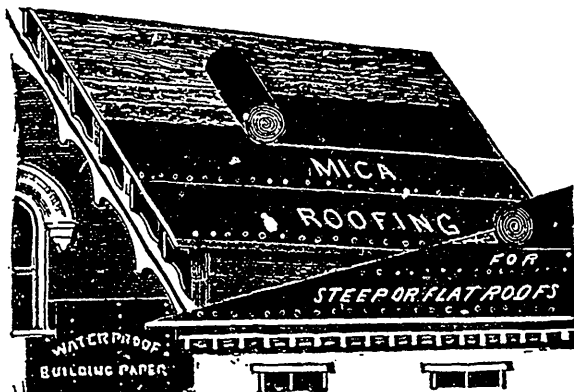
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24

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39

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**Stock Book No. 46. LAUGHTON, FOLKINGHAM,  
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THIS well-known flock has been established more than 100 years, and the pedigreed Lincoln long-wooled rams and ewes have been noted throughout the Colonies and South America for their "size, symmetry, and lustrous wool. Ewes from this flock have always passed from father to son, and have never been offered for sale. Mr. J. E. Casswell's grandfather, Mr. G. Casswell, of Laughton, was the first breeder in the county to let his rams by public auction. At Lincoln Ram Fair, 1895, Mr. J. E. Casswell made the highest average for 20 rams. During the last two years the following amongst other noted sires have been used: Bakewell Councillor and Baron Rigby, for each of which very high prices have been refused; Laughton Baron, Laughton Major, Laughton Style, Laughton Choice, No. 5; Ashby George, 60 guineas; Laughton Judge, 95 guineas; his son, Laughton Justice Lincoln, 200 guineas; Lincoln, 152 guineas; Welcott, 70 guineas; Lincoln, 72 guineas; and his sire, Laughton Riby. Shire horses, Shorthorn bulls, and Dorking fowls are also bred. Inspection and correspondence invited. Visitors met by appointment.  
TELEGRAMS: Casswell, Laughton, Folkingham, England.

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**B**ONNIE BURN STOCK FARM, Stouffville station and P.O., D. H. Russell, proprietor, Breeder of thoroughbred Shorthorn Cattle and Berkshire Swine. 799

**W**M. DONALDSON, Huntingford, South Zorra P.O., Ont., Breeder of Shorthorns and Shropshire Down Sheep. 701

## GALLOWAYS.

**A** M. & R. SHAW Brantford, Ont., Breeders of Galloway Cattle. Choice young animals for sale. 735

**D**AVID McCRAE, Janeville, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydesdale Horses, and Cotswold sheep. Choice animals for sale. 630

## AYRSHIRES.

**J** McCORMACK, Rockton, Ont., Breeder of Ayrshire Cattle, Toulouse Geese, and Colored and Silver-Gray Dorkings. 629

**W** M. & J. C. SMITH, Fairfield Plains, Ont., Breeders of World's Fair prize-winning Ayrshires, Merino Sheep, Poland-China Pigs, and Poultry. Stock for sale. 526

**W** F. & J. A. STEPHEN, Brook Hill Farm, Trout River, Que., Breeders of Ayrshire Cattle and Yorkshire Pigs. Young stock for sale at reasonable prices. 635

**W**ALTER NICHOL, Plattsville, Ont., Breeder of Ayrshire Cattle and Leicester Sheep. Choice young stock for sale. 527

## JERSEYS.

**W**M. ROLPH, Glen Rouge Farm, Markham, Ont., Breeder of Jersey Cattle. Herd nearly all pure St. Lambert. Young stock always for sale at reasonable prices. 708

**E** P. BALL, Rock Island, Que., Breeder of Standard-bred and Roadster Horses, St. Lambert Jersey Cattle, and Shropshire Sheep. 766

**D** H. KITCHESON, Menie, Ont., Breeder of A. J. C. C. Jerseys, Shropshire Sheep, and Berkshire Pigs. Stock for sale. Hoard's Station (G.T.R.). 737

**W**M. WILLIS, Pine Ridge Farm, Newmarket, Ont., breeder of St. Lambert Jersey Cattle, also Cotswold Sheep, registered. Stock always for sale. 855

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**E** PANNABECKER, Fairview Farm, Hespeler, Ont., Breeder of Registered Holsteins. Stock for sale. 720

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**J**OHAN A. RICHARDSON, South March, Ont., Breeder of Holstein-Friesian Cattle, Dorset Horn Sheep, and Tamworth Swine. All registered. 745

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**W** J. RUDD, Eden Mills, Ont., Breeder of Devon Cattle, Cotswold and Suffolk Sheep, Berkshire Pigs, Plymouth Rock Fowls, and White Turkeys. 740

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**R** J. LAURIE, Wolverton, Ont., Breeder of Tamworth Swine, Toulouse Geese, Rouen and Aylesbury Ducks. Stock for sale. 840

**W** H. O'DELL, Belmont, Ont., Breeder of Registered Tamworth Pigs. Stock for sale. 738

**C**OLLIE DOGS, Tamworth Swine, Duroc-Jersey Swine, Oxford Sheep, Bronze Turkeys, Toulouse Geese, Pekin Ducks, and Buff Leghorns. A. ELLIOTT, Pond Mills, Ont. 618

**M** E. STRATFORD, Brantford, Ontario, has twenty very fine thoroughbred Tamworth and Improved Chester sows, just now ready for service. Prices right. 802

**J** O. FRASER & SON, Fellows, Ont., registered Duroc Jersey swine, bred, and for sale. 856

## SHEEP.

**J**AS. P. PHIN, The Grange, Hespeler, Ont., breeding and importing Shropshire Sheep a specialty. 736

**A** TELFER & SONS, Paris, Ont., Breeders and Importers of registered Southdown Sheep. Stock for sale. 670

**J**NO. A. MCGILLIVRAY, Q.C., Jerseyville Farm, Uxbridge, Ont., Breeder and Importer of Dorset Horned Sheep, Jersey Cattle, and Tamworth Pigs. 494

**J**OHAN JACKSON & SONS, Abingdon, Ont. Southdown Sheep. Champion flock at World's Fair. Awarded 20 prizes—10 firsts. 628

**J**OSEPH STRATFORD, Brantford, Ontario, has twenty beautiful thoroughbred Dorset rams, one, two, and three shear. Prices right. 803

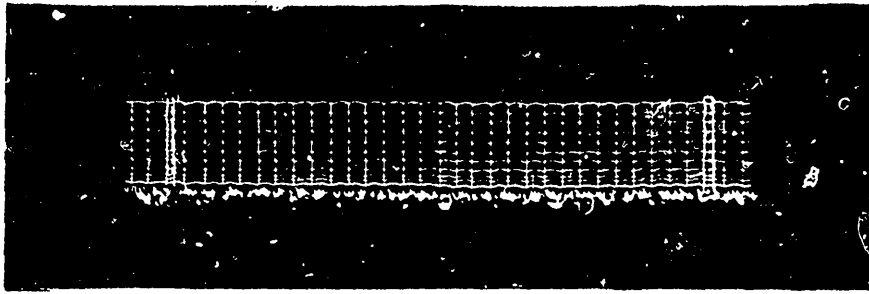
**D** A. CAMPBELL, Mayfair, Ont., Breeder of registered Lincoln Sheep. 600

**W** H. BEATTIE, Wilton Grove, Ont., Breeder and Importer of Shropshire Down Sheep, Collie Dogs, and B. and W. Turkeys. 607

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**W**ALTER HALL, Washington, Ont., Breeder of registered Polled Angus Cattle of the choicest strains. 562

**J**AMES BUCHANAN, Napier, Ont., breeder of registered Aberdeen Angus Cattle. Choice young stock by Lord Forest for sale.



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THE PAGE WIRE FENCE COMPANY OF ONTARIO, Ltd.,  
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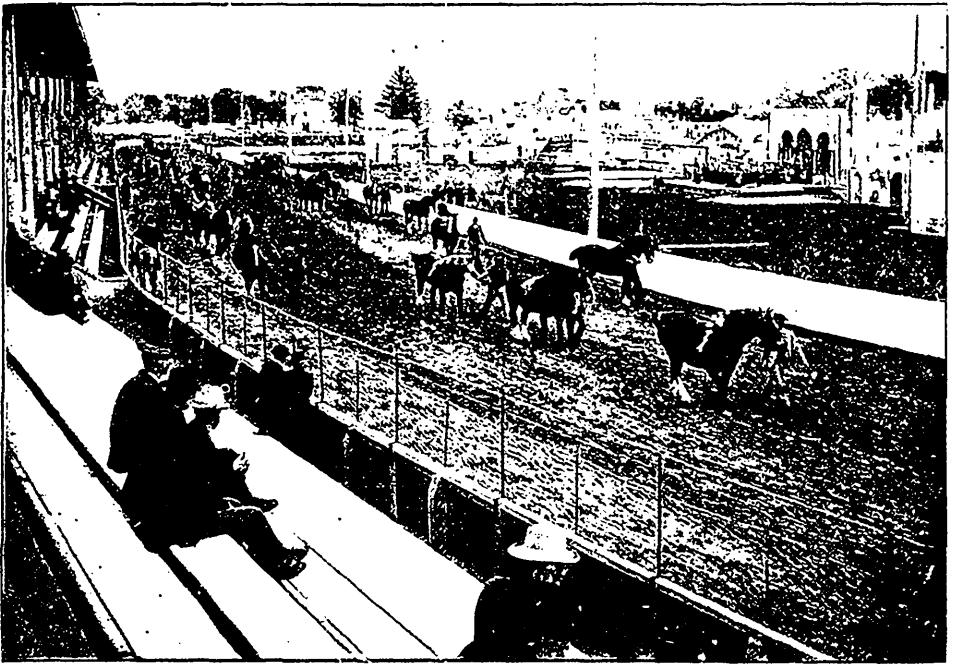
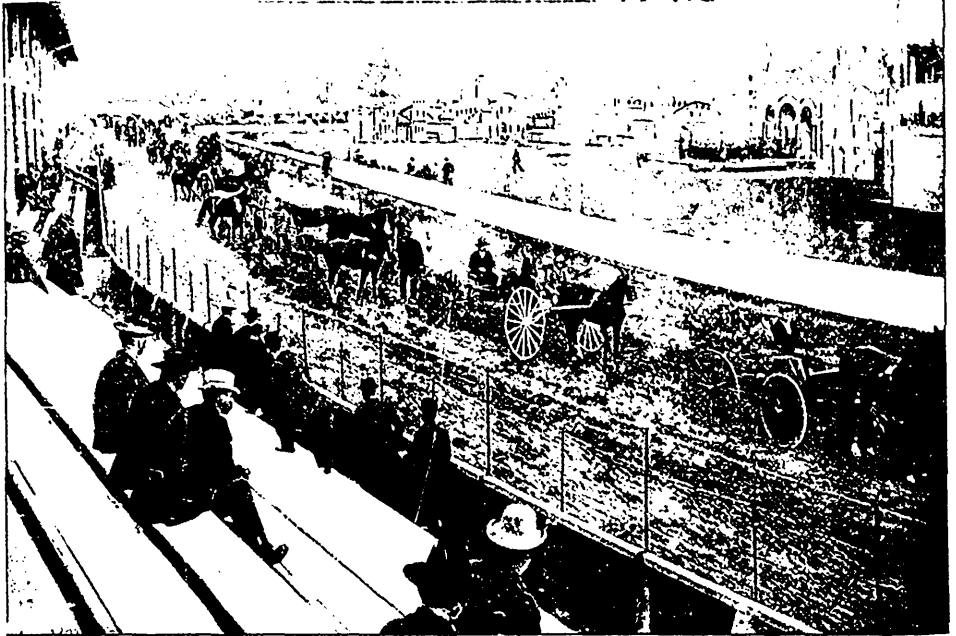
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**THE HORSE PARADE, CENTRAL CANADA EXHIBITION, OTTAWA, 1896.**

The upper view represents the Light Horse Parade. In the view are to be seen such horses as Messrs. Dawes' "Redfellow," Messrs. Edwards' "June Day," Messrs. Graham Bros.' "Goddard" and "Royal Standard," Senator Cochrane's "Princess Dagmar" and "Bartholpe Performer," Alex. McLaren's "Duke of Arkland," J. P. Thompson's "Kaiser Wilhelm," etc., etc.

The lower view represents the Heavy Horse Parade. In this view are to be seen Messrs. Graham Bros.' "Royal Standard," Messrs. D. & O. Sorby's "Grandeur," Mr. Robt. Ness's "Lawrence Again," Messrs. J. I. Davidson & Son's "Pride of Balsam," Mr. J. G. Clark's "Gallant Chief," Mr. E. B. Eddy's "Arbitrator," etc.

The pictures were taken by special arrangement, at a time when the immense crowds usually present on the grand-stand would not obstruct the view from the position in which it was necessary to place the camera.

# FARMING

Vol. XIV.

NOVEMBER, 1896.

No. 3

## TUBERCULOSIS IN CATTLE.

NOT BY ANY MEANS SO DANGEROUS TO HERDS, OR SO INIMICAL TO HUMAN HEALTH, AS IS SOMETIMES MADE OUT.

By D. McCRAE, Guelph.

D. McCRAE, of Janefield, Guelph, Ont., is one of the best-known and best-reputed authorities in Canada on all matters relating to live stock. His fondness and aptitude for stock is undoubtedly inherited; he is descended from a race of stockbreeders. His great-grandfather was in his day a famous breeder of Black-faced Highland sheep and Galloway cattle, in Galloway, Scotland. His grandfather was a well-known breeder and dealer in the same, who used to purchase Highland cattle and Galloways in the north and west of Scotland and drive them by the old drove roads a long mountain sides and on the open uphill country till he brought them to the English markets in Norfolk and Suffolk. His father, Thomas McCrae, who came to Canada when Mr. McCrae was but a child, was a well-known breeder of Clydesdales and Cotswolds, and the founder of the famous Janefield herd of Galloways. On his mother's side Mr. McCrae is equally well descended from a race of stockbreeders, his mother's father and uncle having been among the most famous Ayrshire breeders and prize-winners in their day.

Mr. McCrae's life as a boy was a thoroughly practical one, typical of a Canadian farm of the best sort in the early days; chopping, logging, clearing land, and attending to his father's

stock, etc., occupied his whole time when not at school. His education, however, was not neglected, and he attended for some time the Grammar School at Guelph. In 1862 he attended the class then just organized by the Board of Agriculture and Arts in Toronto for the study of agricultural subjects. Professor Andrew Smith, now principal of the Ontario Veterinary College, had just come from Edinburgh to take charge of part of the work; and with him was associated Dr. McEachren, now principal of the Montreal Veterinary College. Mr. McCrae attended the classes of these gentlemen; also those of Professor Buckland on agriculture in the University of Toronto, and also the lectures in chemistry and botany given in that institution. The interest taken in these classes (the first for the formal study of agriculture instituted in Canada) was considerable; and their outcome, without doubt, was, first, the establishment of the Ontario Veterinary College, and, secondly, later on, of the Ontario

Agricultural College. Mr. McCrae ascribes unhesitatingly his knowledge of agricultural subjects to the mental training he received while attending these classes, and he is now, and ever has been, a staunch advocate of a practical scientific education for farmers' sons wherever possible. His education being completed McCrae returned to his



D. McCrae, Guelph.

His education being completed McCrae returned to his

father's farm, and he has ever since been identified with agricultural pursuits. He was always associated with his father in the breeding, care, and management of the live stock of the Janefield farm. From the very beginning he had the special care of the purebred stock of the farm. He kept all the pedigrees and records, had his full share in all the work, and as time went on made most of the importations. For a number of years he was actively engaged in the woollen trade, as a member of the firm of McCrae & Co. of Guelph, of which his father was the senior partner. After a while, his father becoming ill and unable to attend to the farm, Mr. McCrae retired from business to assist his father on the farm; and on the death of his father he took the farm into his own hands, and has ever since been wholly identified with farming interests.

The Janefield herd of Galloways was begun in the sixties, and very soon became known as one of the best herds of purebred cattle on the continent. Mr. McCrae personally brought over from Britain many times the very best specimens of the breed he could obtain there, and some of his importations were very large in number and value. The prizes and medals won by the Janefield herd would take many pages of this book to enumerate and describe. For example, at the Toronto Industrial this year, out of twelve first prizes offered the Janefield herd won eleven. The interest of the owners of Janefield, however, has not been confined to Galloways. Polled Angus and Red Polls have been imported and kept. And Durhams, Herefords, and Ayrshires have also all been extensively bred at various times. In sheep the Janefield specialty is Cotswolds, considerable importations of this breed having been made several times. The present flock is bred from ewes purchased from Mr. Swanwick, of the College Farm, Cirencester, England. Southdowns have also been bred for several years. In horses Mr. McCrae has had a very large experience, especially in heavy draughts. He has personally imported several Clydesdales from Scotland, and has bred them here with success; also half-bred Thoroughbreds and half-bred Hackneys.

Mr. McCrae was for many years a member of the Board of Agriculture and Arts, taking an active interest in all its work, especially in the management of the Provincial shows. The prize farm competition was a scheme which he inaugurated and had much to do in carrying out. His work as a member of the board brought him in contact with all the leading stockmen in Canada, and on the board itself he was actively and closely associated with many men whose names are famous in the history of the agricultural development of our country, as, for example, the late Hon. David Christie, of Paris, one of the greatest Shorthorn breeders Canada has ever produced; the late Hon. James Skead, and Mr. Ira Morgan, of Ottawa; the late Stephen White, of Charing Cross; Mr. L. E. Shipley, of London; Sir Mackenzie Bowell, of Belleville; Mr. Wm. Saunders, now director of the Dominion Experimental Farms, Ottawa; and many others.

Mr. McCrae's acquaintance with stockmen in the United States is scarcely less extensive than it is with stockmen in Canada. He was early elected a delegate to the Chicago Fat Stock Show, which he always attended till it was discontinued at the holding of the World's Fair in 1893. He is also, and for many years has been, an appointed member of the National Live Stock Association of the United States. On the organization of the American

Tuberculosis, so common among cattle and other animals, is identical with "consumption" in the human family. Anything that will throw new light on this disease is of special interest to

Galloway Breeders' Association, in 1882, he was elected its secretary. As secretary he prepared the first volume of its Herd Book (published in 1883), and revised, personally, every one of its pedigrees. For this volume he wrote a history of Galloway cattle, which has ever since been recognized as the standard authority on all matters treated by it. He has remained continuously a member of the Board of Directors since the organization of the association in 1882, and he was its president from 1888 till 1892.

Mr. McCrae was one of the chief organizers of the Clydesdale Horse Association of Canada, which was formed in 1886, largely owing to his suggestions and efforts. He was its first president, and remained its president for three years, and on retiring, in 1888, he was presented by his fellow members with an illuminated address, expressive of their appreciation of his efforts in furthering the interests of the Clydesdale industry. He was the first to advocate, and was largely instrumental in inaugurating, the Toronto Spring Stallion Show, which, after several years of successful history, has recently been developed into the Toronto Horse Show. As president of the Clydesdale Horse Association he wrote the short history of the Clydesdale horse which is found in Volume I. of their Stud Book.

Mr. McCrae's merits as a stockman have been frequently recognized by his being chosen to act as judge, especially of heavy horses, cattle, and sheep. At the Toronto Industrial he has been judge seven years. He has also judged many times at Montreal, Ottawa, Hamilton, London, Winnipeg, and many smaller places, in different parts of Canada. At Chicago, at the World's Fair, he was chosen to act as the expert judge for Galloways, and he performed his duties so satisfactorily that he was specially complimented therefor by the Galloway Breeders' Association.

Mr. McCrae is an active worker in our Farmers' Institute system. He has been a member of the regular delegations for several years, and is a forcible and pleasing speaker, and his addresses are always intensely practical. His subjects are generally those connected with the breeding and care of horses, cattle, and sheep, or with wools, on which he is an expert, or with grasses, clovers, and fodder crops, to which subject he has given great attention.

Mr. McCrae is also a valued contributor to the agricultural press, both of the United States and Britain, as well as of Canada; as, for example, the *Breeder's Gazette* and *Farmers' Review* of Chicago, *The Live Stock Journal* of London, England, *The North British Agriculturist*, *The Sheep Breeder*, etc., etc. On grasses and clovers, as well as general live stock matters, he has written largely.

In general public and social life Mr. McCrae is highly esteemed. He is a J. P. for the county of Wellington. He takes a great interest in sanitary matters, and is chairman of his township board of health. For three years he was a member of the Wellington County Council, and for seven years a member of the Guelph city council. In these latter capacities he was an earnest advocate of good roads and free roads. He was the first chairman, and has since been continuously a member of the board of the Guelph Free Public Library (the first free public library in Canada). For several years he was an officer of the Wellington Field Battery, and he organized, and for five years commanded, the Ontario Field Battery, a corps that is principally manned by the students of the Ontario Agricultural College; and he is now a Lieutenant-Colonel the reserve militia of the county of Wellington.

the stockbreeder, the feeder, and the dairyman; and also to every farmer who has anything to do with stock. The general public, who are users of milk and beef, have also an interest in know-

ing the latest scientific information on the subject.

A French scientist of well-known reputation, Professor Ed. Nocard, has recently published the result of many years' study in a work entitled "The Animal Tubercloses, and their Relation to Human Tuberculosis." This book has been translated into English by Dr. H. Scurfield, and is the latest scientific work on the subject of tuberculosis. It has been freely used in compiling the following account of the disease.

ORIGIN AND EXTENT.

Tuberculosis is no new disease. When it be-

ferent kinds of animals. Not one of our domestic animals is proof against it. Some are more susceptible to it than others. Kittens are easily infected by it, and it is rather common among cats. Dogs are freer, but there are a number of well-authenticated cases where dogs have had it. Some of these cases appear to have happened by the dog contracting the disease from his master. It is frequent amongst pigs, and rarer amongst sheep and goats.

It is not common amongst horses, but if a horse does contract the disease it runs a rapid course, and soon becomes generalized and fatal.



Royal Blackbird, First Prize Polled Angus Bull,

As shown at Montreal Exhibition, and also at Central Canada Exhibition, Ottawa, 1896. The property of W. W. Ogilvie, Lachine Rapids, Que.

gan its ravages no one can tell. It was known to the ancients, and its various manifestations amongst cattle were described many centuries ago. Laws were passed regarding it in Italy and Spain four hundred years ago. It is prevalent in all civilized countries, though in some it is claimed that it is not so common as in others. Those countries claiming partial exemption are the northern parts of Norway and Sweden, Iceland, Algeria, and the steppes of Eastern Europe.

There is no disease which attacks so many dif-

The rabbit and the guinea-pig do not readily take the disease; but they are very susceptible to inoculation, and are, therefore, largely used in experiments relating to the disease.

It has been found in the camel both in Egypt and in the steppes of Asia. There are authentic records of tuberculosis in the lion, the tiger, the panther, the fox, the tapir, etc. Giraffes, antelopes, llamas, gazelles, etc., in zoological gardens are decimated by it, and it is the one disease which kills nearly all the monkeys brought to Europe. Among the birds of the



poultry-yard the disease is very common, and with them often assumes an epidemic character.

#### CAUSE IN CATTLE.

Tuberculosis is a parasitic disease which is both inoculable and infectious. Dr. Villemin, in 1865, demonstrated its contagiousness. Dr. Robert Koch has the honor of having isolated its microbe, which, therefore, has been given the name of "the bacillus of Koch."

This tiny organism, which is only one ten-thousandth of an inch long and one fifty-thousandth of an inch wide, is a slender, rod-like body which can only be seen under a microscope of high power. The spread of the disease has but one cause—the penetration into the living body, and the propagation there of this tiny microbe.

herd of a tuberculous animal. Is that condition enough? Professor Nocard answers, "No." The contagion of tuberculosis is of a particular kind, and transmission of the disease takes place only as the result of an intimate and prolonged living together. Just how the disease spreads among cattle is not known. Just when a diseased animal becomes dangerous to others has not been clearly shown. Their sojourning together on a common pasture may be looked upon as practically free from danger. There seems to be little risk of infection being carried a distance through the air, even a short distance. Cows in one end of a stable were all found healthy, while in the other end, connected by an open door, they were nearly all tuberculous. One range in a stable has been found infected, while the other range remained healthy.



Prize-Winning Herd of Purebred Ayrshires,

As shown at the Toronto Industrial Exhibition, 1896. The property of Alex. Hume & Co., Burnbrae, Ont.

When the bacillus has become lodged in any organ or tissue it begins to multiply, and causes an irritation which leads to the formation of tubercles, whence the general name of the disease, "tuberculosis." These tubercles, when they have reached their full growth, are little nodules about the size of millet seeds. When they are produced in large numbers they run together, forming masses of various sizes. The disease is a development of these tubercles in one or more organs of the body.

The tuberculosis bacillus may be carried into a healthy body, and may, nevertheless, not find a lodgment there; it may be thrown off again.

#### TO WHAT EXTENT INFECTIOUS.

Of course, for a healthy herd to be infected a necessary condition is the introduction into the

ill-ventilated, badly-cleaned stables, where animals are kept tied for a long time, seem to favor the spread of the disease. A stable may become infected, and be dangerous to animals brought into it. The power which tuberculosis possesses of spreading is not clearly known.

#### SYMPTOMS.

Tuberculosis in cattle is a disease whose progress is usually very slow. Its presence is often compatible with all the appearances of health, and it may exist for months and years without anything occurring to cause one to suspect its existence. Whereas in man, in whom it most commonly attacks the lungs, doctors easily recognize its commencement, it is not the same with cattle. In them the disease may escape the most careful examination, even at an advanced period of its existence.

Tuberculosis may attack any of the organs of the living body. About twenty per cent. of cattle slaughtered when diseased with it have it in the lungs. About the same percentage have it in the lymphatic glands; others in the liver, the intestines, the spleen, the bones, the joints, the udder, the skin, etc.

Naturally the symptoms of the disease vary greatly, according to the organ or organs attacked. If the lungs be attacked there is usually a cough at long intervals. The cough is a slight one, dry, a little whistling, and manifesting itself in short paroxysms. It may be noticed when the stable is opened in the morning, or after drinking, or when

at once. When the tuberculosis becomes general the development of the disease is extremely rapid. In man it is then called "galloping consumption," and is usually fatal in a few weeks. When it exists in this type the tuberculosis is spread throughout the whole body by the blood, and assumes the character of a general disease.

#### HEREDITY.

By the general public consumption has been looked upon as *the* type of hereditary disease. If the parents had it the children would take it, and reference would be made to whole families whose members, one after another, died from tubercu-



Iona, Sweepstakes Purebred Guernsey Cow (Imported),

As shown at the Toronto Industrial Exhibition, 1896. The property of Wm. Butler & Sons, Dereham Centre, Ont.

the animal rises. If the animal is taken out and given a quick run it may cough. As the disease progresses the coughing may become more frequent. When the animal does not throw out the mucus it may be noticed swallowing it. The skin loses its kindly feel, and the hair becomes dull and dry. The cow stands with her elbows out, and there is sometimes a peculiar tendency to shrink if pressure is put over the kidneys. All these signs are vague enough, it is true, but careful watching makes them valuable to breeders.

Finally, the disease may not be confined to one part of the body; several parts may be attacked

at once. This was true, not because of the transmission of the disease from parent to child, but because of the infection to which the child was exposed from living in contact with its diseased parents and in an infected dwelling, exposed to the contagion of the disease.

This truth has been learned by watching the disease amongst cattle. All the inspectors at public slaughter houses agree that a case of tuberculosis of the calf is very rare. At Munich, in Germany, an average of 160,000 calves are killed for veal every year, and all are carefully inspected. Out of this number there were found

tuberculous five in five years, or one per 160,000. At Lyons, France, five were found out of 400,000. At Berlin, Germany, four out of 150,000. All these are sections where the number of diseased cows is high. In Saxony, the most seriously infected country in Europe, and where about forty-four per cent. of the cows are diseased, thirty-three calves were found to be tuberculous out of 85,000, or about one-twenty-fifth of one per cent. It must also be remembered that none of these calves were killed under three weeks, and most of them were from six months to two months old. During that time they would be kept exposed to contagion emanating from the older animals.

The two lots were kept apart, and when put out to grass the byre was thoroughly disinfected. A wooden partition, covered on one side with felt, was put through the building to keep them apart when stalled again, and the attendants were also separated, and not allowed to go from one lot to the other.

As soon as convenient the diseased animals were fattened for the butcher, and, when slaughtered, the carcasses were inspected, and those found fit for food, which included nearly all, were passed for that purpose. In October, 1892, the seventy were again examined, and seven showing signs of disease were removed, leaving sixty-three.



Silver King, First Prize and Sweepstakes Ayrshire Bull,

The property of D. McLachlan, Petite Cote, Montreal. Silver King headed Mr. McLachlan's Ayrshire herd, which also won first prize at Montreal. Silver King has taken eighteen first prizes without a skip.

#### POSSIBILITY OF PURGING A HERD FROM THE DISEASE.

Professor Bang, of Denmark, has shown that it is quite possible to successfully purge a herd from tuberculosis, and that, too, without serious loss, by carefully testing the animals, isolating the healthy ones, and putting with these the calves from all the herd.

In May, 1892, an entire herd of 208 animals was tested with tuberculin. Although the animals seemed healthy, and there had been no special infection suspected, nevertheless eighty per cent. of the cows and forty per cent. of the bulls, heifers, and calves reacted under the test, that is, showed that they were infected. The diseased animals numbered 138, and the healthy an 70

In the meantime, the calves from the diseased breeding cows had, as soon as born, been at once removed to the healthy lot. By May, 1893, the calves had brought up the number of the herd to 103. Of these ten reacted when tested, and were removed. October, 1893, found 107 in the herd, of which only one reacted when tested. In May, 1894, there were 122, of which two reacted when tested. In October, 1894, there were 119, of which number one was suspected and was, therefore, removed. In May, 1895, there were 136 healthy animals in the herd, of which not one showed signs of the disease when tested. There were, however, at this time sixty-nine suspected animals. But in two years more, at the same rate of improvement, the entire herd would be free

from disease, the whole of the suspected animals being fed off without any serious loss. Most of the calves were the progeny of the tuberculous cows, but none of them have shown any disease except one, which, when tested at the age of six and a half weeks, reacted and was removed.

**THE DISEASE NOT HEREDITARY.**

This careful experiment seems to show that a healthy herd may be bred from a tuberculous stock by careful isolation, in other words that

**THE DISEASE NOT NECESSARILY FATAL.**

Tuberculosis is not necessarily fatal. The microbe may be taken into the system, and yet may not be able to obtain a lodgment there. It may at once be thrown off; or, having obtained a place and begun its work, it may be stopped, isolated, and rendered harmless by the vigor of a healthy system. That this is often the case is shown by the large number of animals noticed in the slaughter houses by the inspectors,



**Pride of Balsam, Heavy Draught Yearling Colt,**

The property of James I. Davidson & Sons, Balsam, Ont. Winner of first prize in his class at Central Canada Exhibition, Ottawa, 1896; also winner of third prize in his class at Toronto Industrial, 1896, and winner of first prize at Montreal.

the disease is not hereditary. The calves were always at once removed from their dams, being fed for the first few days on their mothers' milk heated to 65° C., and afterwards on boiled milk.

There are, it is true, a few cases recorded in which it is clear that the calf had the disease at birth; but these cases are so very rare—not one in ten thousand—that, as said above, it is clear that the disease is acquired but not hereditary.

in which the disease has been stopped and healed.

**MEAT AND MILK.**

Much alarm has been caused, and much harm done, by some writers in our public press who have exaggerated the danger that occurs from the using of meat and milk for human food of animals affected with tuberculosis. Professor Nocard, who has carefully experimented with the disease for

many years, has fed cats, kittens, pigs, dogs, calves, and other animals, large quantities of raw tuberculous meat—the very worst he could find, obtained from animals suffering from *general* tuberculosis—and all without producing the disease in the animals thus fed. Professor Perroncito, of Turin, fed eighteen young pigs for five months on the raw meat of condemned tuberculous animals, and could find no trace of the disease in any of them.

In Germany the official instructions issued regarding the careful inspection at slaughterhouses in that empire says: "The very numerous experiments made at Berlin and in a great number of German universities prove that, with the exception of the very rare cases in which tubercular nodules are found in the muscles, the ingestion (eating) of meat from tuberculous animals is powerless to transmit tuberculosis. *The meat of tuberculous animals is to be declared not unwholesome* if, the animal being in good condition, the tubercular nodules exist in one organ alone, or in two or more organs which are in connection with each other, either directly or by means of blood vessels which do not belong to the general circulation."

This important document is signed by:

The Minister of the Interior.

The Minister of Agriculture.

The Minister of Public Instruction and Hygiene.

The Minister of Commerce and Industries.

There is, therefore, no danger from the use of raw meat from tuberculous animals when the disease has not become general; there is none whatever if the meat, whatever kind it be, be thoroughly cooked.

#### MILK.

There is, however, more danger from milk, as the milk from tuberculous cows is sometimes virulent. Professor Nocard sums up his facts, and draws the following conclusions:

(1) The milk of a tuberculous cow is virulent only when the udder is the seat of the tuberculous lesions (derangements).

(2) The ingestion (eating or drinking) of a virulent milk is dangerous only when the milk contains a great number of bacilli, and is ingested in considerable quantity.

(3) Practically the danger from the ingestion of raw milk exists only for persons who use it as their *sole or principal food*; that is to say, for young children and certain invalids.

(4) To avoid all danger, it is sufficient to bring the milk to the boil before it is consumed.

It has been alleged that the boiling of milk renders it indigestible, and causes it to lose much of its nutritive value. This is absolutely untrue. All doctors who have made a study of the question are now agreed that children digest boiled milk just as well as, if not better than, raw milk.

Moreover, the substitution of boiled milk for raw has not only the advantage of abolishing all danger from tuberculosis, but it also has a marked effect in diminishing the number of deaths and illnesses due to those intestinal affections which are so common in hot weather.

#### TUBERCULOSIS IN THE UDDER.

Tubercle of the udder is rare. The disease betrays itself by a slightly hard swelling, without heat or soreness. Usually only one quarter is attacked, and that a hind one. For a long time the milk remains normal, but gradually it changes, becoming bloody and yellowish, and the udder becomes almost wooden in its hardness.

The milk obtained from a tuberculous udder, used alone, as a chief part of food, is dangerous. If, however, it be normal in appearance, and be mixed with the milk of eight or ten other cows, it becomes comparatively harmless. Also, if it be taken in small quantities only—one or two glasses at a time—it seems to be overcome by the juices of the stomach, and to be quite incapable of spreading the disease.

To the general public there is little, if any, danger from using *any* ordinary milk. It is well to know that this is the opinion of the best scientific men of Europe, who have given the matter close and careful attention for many years. However, even this slight danger should be guarded against, and the udders of milking cows should be carefully watched, and on the slightest suspicion of tuberculosis arising, the milk should be boiled, which process will always make it perfectly safe.



## BREEDING HORSES FOR PROFIT.

By J. H. REID, V.S., Professor of Veterinary Science, Ontario Agricultural College, Guelph.

During the last few years I have been doing my best to convince horse-breeders that even in



Prof. J. H. Reid, O.A.C.

these times there is a reasonable profit to be made by breeding horses of the proper classes. A good horse of any recognized class is, and always has been, saleable at a reasonable price; but plugs, or mongrel-bred fellows, can scarcely be given away. But, if things go on as they are, even the latter class will, in the near future, be worth money. When we consider that farmers, rather than winter their surplus stock, at the present high price of fodder, have slaughtered them, or sold them to be slaughtered, for any price they would fetch; and when we also consider that horse-breeding operations have nearly ceased, we may begin to wonder where a fresh supply is going to come from. The horses that have been kept will, from various causes, soon be reduced in number. Farmers and others must have horses to do their work; and when a man loses a horse he must get another to take its place. Unless, therefore, some farmers continue to breed, the demand is bound in time to exceed the supply; and when that time does come the man who has a few animals to spare, even though they be inferior ones, will be able to get a fair price for them.

Notwithstanding all this, I do not advise any man to breed scrubs. The time was when scrubs could be bred with a reasonable profit; but, comparatively speaking, it never did, and it never will, pay to breed them.

At the present time a first-class specimen of any class of horse is very hard to find; and, when found, he will command a good price.

### THE CLASS OF HORSE TO BREED.

In order to breed horses with reasonable prospects of profit, the breeder must first carefully consider the different classes that are in demand at fair prices. He must then decide which class it is most expedient for him to breed, having regard to his own individual taste and chances of success, and to the demands of the market best open to him.

### LAWS THAT GOVERN BREEDING.

Having decided upon the class of horse he will breed, he must exercise reasonable intelligence in the selection of both his sires and dams. He must remember that breeding is not a thing of chance, but that it is governed by fixed laws, the strongest of which is the law of similarity, or that "like produces like." With this law in view, he must be careful to select soundness, individuality, and good pedigree in both parents, remembering that a parent will, in all probability, transmit to its offspring its own peculiarities and characteristics, whether they be desirable or undesirable. An animal suffering from any disease, whether of an external or internal organ, will transmit to his progeny a predisposition to the same disease. If, therefore, we recognize this law of breeding, it will teach us to be very careful in the selection of our breeding animals.

Another important law of breeding is the law of atavism, or of "striking back," as it is sometimes called. Frequently we notice in offspring peculiarities which are not noticeable in either of the parents; but if we were acquainted with the ancestors of the parents we should observe that like peculiarities existed in some of these ancestors more or less remote. This law, therefore, will teach us to be careful about the pedigree of the animals we select for breeding purposes.

### SELECTION OF THE DAM AND SIRE.

We see, then, that in selecting his dam (or dams, if it be expedient to use more than one) the breeder must be careful, on account of the above laws, to secure the very best he can get, both as to individuality and pedigree. Then he must procure the services of the very best stallion he can get for a reasonable stud fee, having individuality and pedigree equally in view in the stallion's case also. If he exercises reasonable judgment in these selections there is every probability of the result being favorable. If, however, he should be disappointed in the first attempt let him not be discouraged, but keep on on the same lines, and success is bound to crown his efforts.

Having made the best selection of his dam that it is possible for him to make, he must study her carefully to see if she has any weak or deficient points; and then a stallion that is well developed in those points should be chosen to mate with her. On the other hand, if the mare shows any hyper-development of any point, a stallion

should be chosen to mate with her that has the opposite peculiarities.

#### THE HORSES THAT ARE IN DEMAND.

The horses that are in demand at good prices now are the heavy draft of 1,500 lbs. to 1,600 lbs. or over; the stylish, high-actioned carriage horse of good size; the large, stylish, good-actioned roadster; and the saddle horse and hunter.

#### HEAVY DRAFT HORSES.

The first class is produced by breeding heavy mares to draft stallions.

a racehorse at either the trotting or running gait. In selecting a trotting sire to produce carriage horses, we should look more to style, quality, action, and pedigree, than to speed. Extreme action in the carriage horse is now the fashion, and in order to get that we must have it in one or other of the parents, and in both, if possible. The Hackney and coach stallion, if suitably mated, will also produce carriage horses; but in these cases we must be careful to have considerable hot blood in our dams, else the progeny will lack quality. The Thoroughbred has sired many good carriage horses;



Allegretto, Thoroughbred Yearling Colt,

By May Duke, out of Andante, by Master Kildare. The property of Robert Davies, Thorncliffe Stock Farm, Toronto. Winner of second prize in his class at Toronto Industrial. Allegretto's stable mate, Scottish Chief, was the winner of the first prize in the same class.

#### CARRIAGE HORSES.

Carriage horses are produced by breeding our ordinary mares, if they do not contain too much cold blood, to the large, stylish, high-actioned trotting sire of good quality, the Hackney, the coach horse, or the Thoroughbred. Probably the carriage horse is most frequently produced by crossing a suitable mare with the trotting sire. But we must not patronize a trotting horse sire simply because he is standard-bred, and can trot fast, or comes from fast stock. I think the ordinary farmer should not try to breed

but as this horse lacks the extreme knee and hock action now so much demanded, we must be careful, if we use a Thoroughbred sire, to mate him with mares that possess this quality.

#### SADDLERS AND HUNTERS.

Saddle horses and hunters are always in demand, but to come up to the standard required they must have Thoroughbred blood. They may be produced by crossing a mare possessing considerable hot blood, say, a half-bred, or, better, with a trotting-horse sire; but they are usually got by crossing our common mares with a Thor-

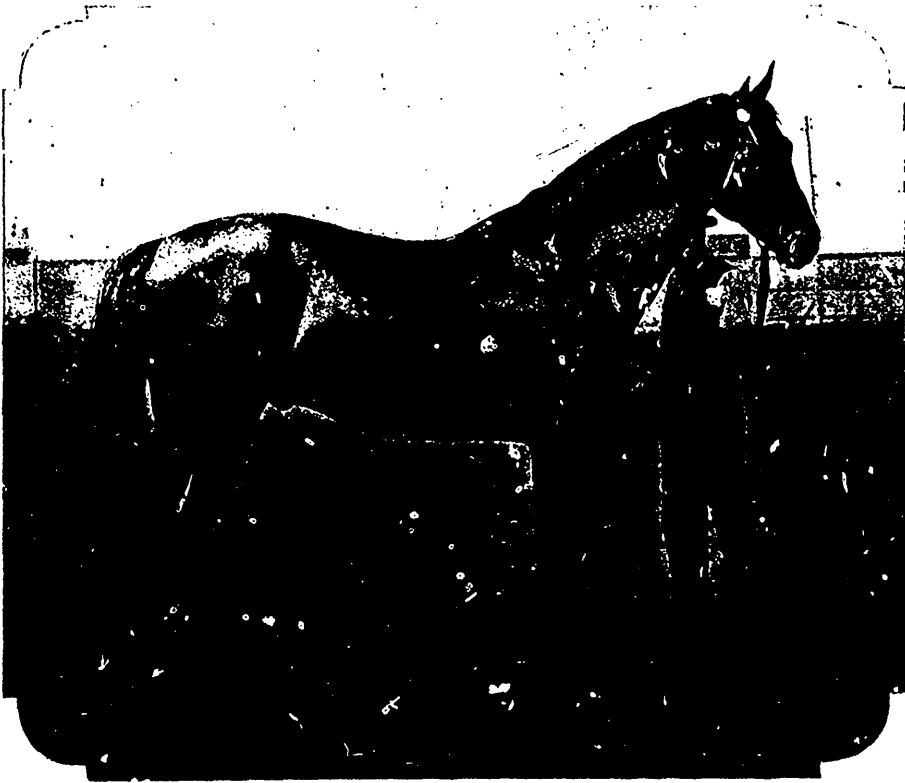
oughbred stallion. On account of the great prepotency of the Thoroughbred horse, we can, with greater probability of success, cross a cold-blooded mare with him than with any other sire; but even here the cross must not be too violent.

PREPOTENCY OF THE THOROUGHBRED HORSE.

On account, as already mentioned, of the great prepotency of the Thoroughbred horse, we must be very careful, if ever we are using a stallion

CHOOSE GOOD DAMS AND SIRES, OR DON'T BREED AT ALL.

In conclusion, I would say that if a breeder cannot use a mare suitable for breeding, he should not breed at all. In selecting a sire, choose the best you can get; then, if he has stood in your section in previous years, look around among your neighbors and examine his stock. If his stock be satisfactory, patronize him; if not, seek further. Some horses, though good as individuals, and, as far as we can ascertain, of good pedigree, do not produce well; therefore it is



First Prize Carriage Stallion,

Winner of first prize in his class at Montreal Exhibition, 1896. The property of J. Anderson, Dominionville, Ont.

of that breed, to select a sound, good-tempered horse of the desired size as our sire; for, if he should have any undesirable traits, either of conformation, action, or disposition, he will, in all probability, transmit these traits to his progeny, and in many cases in a more marked degree than he himself possesses.

Good saddlers and hunters, up to weight, are always in demand at fancy prices.

best, whenever it is possible, to examine a stallion's stock, and so profit by other breeders' experience. In no case would I recommend the use of a mongrel sire, even though he be a fine looker, as it would be the exception for him to sire a desirable animal. Unfortunately, most of our mares are far from being purebred; therefore, if we mate them with mongrel stallions we cannot reasonably expect good results. Give the cheap, mongrel stallion the go-by.



# HOW TO OBTAIN A GOOD DAIRY HERD.\*

By GEORGE HARCOURT, B.S.A., Stock and Farm Editor, FARMING.

The importance of having a good dairy herd cannot be over-estimated, for the competition the farmer has to contend with is growing keener every year, and the necessity of having a herd of profit-producing animals is becoming more and more apparent.



George Harcourt, B.S.A.

In this paper I wish to instance a few points which I think will be of service to anyone who is trying to build up a good dairy herd.

## THE RIGHT MAN.

Some one has said that the most important animal on the farm is *the man*. While some of us may object to being classed as animals, the fact remains that the statement is not far from the truth. A man who has no love for dairying, who does not love his cows, who does not like to feed them, to pet and care for them, and who is not interested in everything that pertains to their welfare, will never make a success of dairying. He had better try something else. I don't care how good a herd of cows you may put into his hands, he will not make a success of the work. We must have the *right man*.

## THE RIGHT COW.

The next thing is the right cow. Many farmers think that the common cows of the country are

no good for dairy purposes, and if they are to make a success of dairy work they must buy Jerseys, or Holsteins, or some other of the dairy breeds. Without doubt, good herds can be obtained in this way, but it is out of the question for the ordinary farmer to start in this manner. He can, however, begin with what he has, the common stock of the country, and build up from them. There are a goodly number of these common cows which would be uncommonly good cows if they had proper feed and care, and such cows will make a splendid foundation upon which to build. If you wish to add a number of purebred animals, certainly do so if you can; but don't buy a cow simply because she belongs to any particular breed. Find out, if you can, what she can do at the milk-pail, or what her ancestors did. Find out whether she can make a profit for you, and if she will be good foundation stock to build upon. Better buy only one good animal than two inferior ones; but, whether you can buy any or none, the practical way to improve your herd is to begin with the cows you already have.

## FEED.

An old Dutchman once said that he believed everybody would like to have a Jersey cow, and he was prepared to tell them how they could get one. Just feed the cow you have like you would a Jersey, and you will soon come to think you have one. There is a good deal of truth in what the Dutchman said; for the beginning of every improved breed of live stock has been better care and better feed. So true is this that it has passed into an adage, "Feed is half of breed," and I am confident that a more liberal treatment of our cows would result in increased profits. Scientists tell us that it takes about two-thirds of a full ration to maintain life in an animal's body, and that any profit on the food fed must come from the food fed over and above the portion of it that is needed to support life. Hence, liberal feeding is the most profitable feeding. So, then, begin with the cows you have, but feed them liberally.

## TEST THE COWS.

You will have some good and some poor cows in your herd. How are you going to find out which are the right ones to keep? Your knowledge of what a typical cow should be, aided by your eye, will now be brought out in choosing your best cow; but don't stop there, because

\*A paper prepared for the Farmers' Institutes meetings of 1896.

your ability to pick out a good cow is not infallible. The only way to know positively what a cow is doing for you is to *test her*. Profits are not so large that we can afford to keep a cow unless we know positively that she is yielding a profit. Obtain a suitable pair of scales at once, and place them in the stable in a convenient place for weighing. I have found a good spring balance a most convenient scale. Now weigh each cow's milk night and morning, and set it down on a sheet of paper. Tack the sheet on the wall, or, if that is not convenient, tack it on a piece of board a little larger than the sheet, and hang the board in a place handy to the scale.

I have found the following sheet a very good form, as it keeps the weights of each cow in a column easy to total :

Milk Record for month of.....									
Day of Month	Cow No. 1	Cow No. 2	Cow No. 3	Cow No. 4	Cow No. 5	Cow No. 6	Cow No. 7	Cow No. 8	Cow No. 9
1									
2									
3									
This space to be filled up with days of month from 4th to 28th.									
29									
30									
31									
Total									

If the whole month's milk cannot be entered on the sheet put as much as you can, then begin another. Preserve the sheets, or enter the totals in another book for the purpose, and at the end

of the year it is an easy matter to total the milk yield for the season.

We have now one fact about the cows, but we want another. It is not enough to know how many pounds of milk a cow gives; we want to know also how many pounds of butter she will give in the season. A Babcock tester will be necessary for this. A small one of these can be had for about \$5, and it can do the testing for a number of farmers. A test of the milk once a week will give a fair idea of the amount of butter-fat, and the amount of butter can be ascertained from this by adding one-sixth.

I know many farmers think they are too busy to attend to this kind of work, but I am confident from my own experience that it pays to take time, for then you can find out which cows are yielding you a profit, and which ones are boarding on you.

I know many will object to weighing the milk every time, but the definite knowledge obtained of the ability of each cow more than compensates for any imagined loss of time. Further, I am prepared to say that the weighing of the milk will be the means of increasing the milk yield, for the reason that you become interested in the amount of milk each cow gives, and you notice at once any shrinkage that occurs, and can then stop it, because you soon find out the cause of it. Right here is the value of the weighing; it furnishes an ever-present check upon what the cows are doing, a check that tells you of poor pasture, of scarcity of water, etc., or of extra feed. The constant weighing will also teach you a few things about your cows. It will teach you that it is profitable to supplement poor pastures, and that it is easier to keep up the flow of milk than to try to raise it after it has once fallen. If you are not weighing the milk there will be a considerable shrinkage before you are aware of it. If the milk is weighed only once a month you have no check on the cows.

A STANDARD.

From the weighing and testing of the milk we learn two facts about our cows—the total milk and the total butter yield of the cows. Having obtained these the next step is to decide upon a standard—a minimum yield of product that a cow must give or else not be retained in your herd. A very good standard is that in force in the dairy at the Ontario Agricultural College. It is 6,000 lbs. of milk, or 250 lbs. of butter, or 600 lbs. of cheese in the season. If the product of a cow will not total up to at least one of these three amounts in the season she should not be kept in the herd, but disposed of at once. Some may think this standard is too high. It is not too high

if you wish to have the good profit you should have on your cows. Compare your cows with this standard, and cull out at once.

You may think you are a good judge of a dairy cow, and that you can estimate her capabilities very accurately, but testing the cows in the manner I have described leaves no room for doubt or mistakes, and it will convince you that you do not know all about the capabilities of your cows. You will probably find that the cow you thought the best is not your best cow, but that another cow, of which you did not think very much, is your best cow. You will also find out, unless you have been very successful, that you are keeping at least one-quarter of your cows at an actual loss, and that if you had disposed of them and fed the feed

cases was practically the same, yet the one cow had the ability to make three times the profit upon practically the same feed. There are cows in every herd that have this ability. Find them out. In these days of keen competition we must reduce the cost of production, and this aspect of the question should always be taken into consideration along with others.

#### CULL THE CALVES.

Having found the most profitable cows, *save the heifer calves from these cows only.* You want only the qualities of your good cows to be perpetuated in your herd, not those of your poor ones. You cannot afford to wait until your heifers grow up and become milkers before you test them as to their ability. You must cull the calves.



Group of Prize-Winning Ayrshire Calves,

The property of David Benning, Williamstown, Ont., as shown at Montreal Exhibition, 1896. In the group are two bull calves and two heifer calves. Three of the calves won first prize each in their respective classes; the remaining calf won a second.

they received to the others you would have had more money in your pocket.

This has been the experience of others; it will also be yours.

#### WHICH IS YOUR MOST PROFITABLE COW?

Another point to be borne in mind is that it is not the cow that gives the greatest number of pounds of butter or milk or cheese that is always your most profitable cow, but that it is the cow that produces the greatest amount *at the least cost.* In the 90-day test at the World's Fair, the best cow cleared a profit of over \$73, the poorest a profit of only \$24. Turning now to the food account, we find that the cost of the food in both

I have touched upon the feeding, testing, and weeding of a herd; I would now like to say a word or two about the breeding.

#### THE BULL.

We say the bull is half the herd. So he is; but do we act as if we believed it? Is half the value of the herd invested in him? How much more care do we give a bull than a cow? How much more money do we give for a bull than for a good cow? If we are trying to build up a good herd, and feed well, and test the cows, and then turn round and use an inferior sire, perhaps one whose whole training and development have been to make beef instead of milk, how can we expect

progress? If, as is true, the progeny of this sire contains 50 per cent. of his blood where does the improvement come in? A stream cannot rise higher than its source. The only way to make progress is to be as careful, if not more so, in the selection of a sire as you would be in the selection of your cows. His dam and grand-dam, on both sides, should be noted for their producing powers. They should be animals whose abilities are superior to those of your own herd. When these superior abilities are added to those of your herd you may reasonably look for the next generation to be superior in profit-producing capabilities; but if the sire's ancestry is inferior to that of your own herd how can you look for improvement? Yet some men do this. A superior bull will cost money and time to find him, but I don't see how

progress is to be made unless you take this trouble.

I have said nothing about the breed of the sire, and I don't intend to—only this: Be sure and get a member of one of the dairy breeds, and having chosen a breed *stick to it*. Don't go jumping about. In four or five generations, by adhering to one breed, you can engraft its good qualities upon your own herd.

In conclusion I would like to impress upon the mind of every farmer three words—

“FEED, WEED, BREED.”

I could wish that he might never forget them, but follow closely in the ways they indicate, for I believe these are the highways to success and the ways a dairyman must walk in if he is to make a success of his work to-day.

## THE BREEDING, FEEDING, AND HANDLING OF BEEFING CATTLE.

By A. P. KETCHEN, Brucefield, Ontario.



A. P. KETCHEN is a farmer's son, still living and working on his father's farm at Brucefield, Ontario. Having several times contributed to the press good articles on agricultural topics, he came under the notice of the Superintendent of Farmers' Institutes, who engaged him last year to go out as delegate, the districts of Muskoka, Parry Sound, and Algoma being allotted to him. His topics embraced such practical subjects as "The Feeding of Hogs," "The Culture of Field Roots and Potatoes," "Keeping up the Farm's Fertility," etc.

It is an old adage that "well begun is half done," and one that applies with peculiar emphasis to the cattle husbandry, for if we wish to achieve success in that line of work it is of paramount importance that we start right.

Let it be remembered all the way through that the prime requisites to success are: First, *good cattle*; second, *good food*; and third, *good judgment*.

### FOUNDING THE HERD.

In setting out to found a herd of beefing cattle, perhaps the first thing to be done is to decide in our own mind just the particular class or type of cattle that we intend to keep, and be guided in this largely by the demands of the market, making our own tastes a secondary consideration. Having decided on the type of cattle we intend to keep, let us select our foundation stock with an eye single to the production of this particular type and of no other.

This will ensure uniformity in our herd, and in many other ways will be a very potent factor in those things that make for success.

Acting on the principle that the best is none too good, we will find it to our advantage in making our start to pay good prices for good cattle and be content with fewer of them. To illustrate this point, let A and B represent two young men starting. Each has as \$200 to invest in cattle. A goes to some good stockman and buys four first-class cows at a cost of \$50 each, while B attends the auction sales in the neighborhood, and succeeds in making his \$200 purchase six cows at a

cost of about \$33 each. Now let us see which has made the better investment. Each feeds about the same amount of feed per head per annum, say \$30 worth. Each of A's cows makes him an annual return of \$35, consisting of a calf worth \$15 and butter worth \$20, which will leave a clear profit on his feed of \$5 per head, or \$20 for the herd. Of B's cows, each makes \$20 worth of butter and drops him a calf worth \$8, making a total of \$28, or a loss of \$2 per head, and a deficit on the herd of \$12. Follow this out for ten years and you find A with \$200 in the bank due to this source of income alone, while B is \$120 in debt.

near Goderich. I fed these cattle for seven months, and the common cattle consumed the most feed, and only gained 130 lbs. per head, while the grades gained 270 lbs." (Notice the difference in gain on the same feed). "When sold, I got \$4.63 per cwt. for the common cattle, and \$5.37½ per cwt. for the grades, or a difference in favor of the grades of \$16 per head." Mr. C. H. Simmons, of Lobo, another very extensive feeder, places the difference in favor of the grades at \$20 at three years old.

But it is not enough that our cattle have two or three crosses of pure blood in them; we must remember that it is the cattle of the *right type*



J. G. Clark, Ottawa, and his Prize-Winning Grade Dairy Cow, Gentle,

As shown at the Central Canada Exhibition, Ottawa, 1896. The sire of Gentle was an Ayrshire, the dam a Short-horn. Gentle took the second prize, but Mr. Clark also won the first prize in the same class with his cow, Blossom. Blossom and Gentle were of similar breeding.

This is no exaggerated statement of the difference to the owner which results from keeping well bred grades as against the common cattle of the country, and it is borne out by the experience of prominent and successful cattlemen everywhere. Mr. Britton, of Toronto, gave evidence before the Agricultural Commission as follows: "In 1873 I bought 103 common native cattle back of Peterborough. They were three years old, and I thought I would try an experiment with them. I tied them up in two rows, and next to them I put two rows of well bred grades from

which feed best and sell best. Mr. John Mc-Millan, of Constance, M.P. for Huron, one of the most successful cattlemen in the province, says: "I will give you one sample of what I saw in the cattle market of Glasgow. As I was standing with two other Canadian farmers in one of the sale booths we saw six steers sold. They would average about 1,325 lbs., all grades but a little rough. The highest price paid was £16 10s. The next animal was a well bred, round-ribbed, smooth, compact little beast that would weigh about 1,250 lbs. This was sold for £18

10s. Here was £2, or \$10, more money paid for an animal 75 lbs. lighter in weight." It is worth noticing that these "smooth, compact little beasts" are just the kind of cattle that can be produced at a minimum cost to the feeder. So I repeat that we should be very careful, in founding our herd, to work ourselves into the right class of cattle, even though we have to be content with fewer of them. It is better to gain \$5 per head on four cattle, than to lose \$2 per head on six.

THE SIRE.

Having secured our cows, it becomes our duty to cast about for a sire of the right stamp, with which to mate them. Although I could be content with cows that were only good grades, I would lay it down as an *imperative* rule that the *sire* must be purebred. It is not enough, how-

should be broad over the shoulder and crops; be broad and full in the chest (indicative of a hearty, rugged constitution); his buttocks should be well let down behind; his legs should be short and well set under him; and he should be distinctly masculine, but not coarse, in the head; and have a full, mild eye, and be of a quiet, contented disposition; and, finally, he should have a fine, mellow, silky hide, or, in other words, be what stockmen call a good handler.

Having founded our herd, it will be our duty, by merciless weeding and careful selection, to maintain and increase our standard of excellence, always having our mind's eye fixed on the type with which we started.

FEEDING OUR HERD.

So much for the breeding; and now for a word about the feeding. A few years ago, a person



Grand Gloucester, Shorthorn Bull, under two Years,

The property of James Yule, Elder's Mills, Ont. First prize in his class both at London and Ottawa, 1876.

ever, that he be registered in the herd book; we should endeavor to see that he comes of a good strain of feeding cattle; for there are good and bad, or good and better, even among purebreds. The further we can trace the pedigree of our bulls through a line of good feeding cattle the better will be our chances of getting good profitable calves from him. But no matter how good a pedigree a bull may have, unless he has individual merit in himself I would reject him; for although it is just possible that by virtue of his breeding he may prove to be a good stock-getter, yet we have no means of knowing that until we try him. The margin of profit in any case is so narrow that we cannot afford to take any risks.

Our bull should have a broad, straight back; his ribs should be well sprung and deep; he

could scarcely pick up an agricultural paper but he would find someone dilating on the merits of "Feed vs. Breed," or "Breed vs. Feed." But in this enlightened age we have all come to recognize the fact that neither breed nor feed will, of itself, separate and alone, produce satisfactory results; and that it is only when we get these two factors working together that we have a right to expect paying returns.

THE CARE OF THE CALF.

We will start with the calf; and here again the old adage holds good, that "Well begun is half done;" for by long odds the most important period in an animal's life is the first twelve months. It has been said that you must start to rear a calf ten months before he is dropped. The meaning of this is that in order to have strong, lusty calves

it is necessary to feed their dams well during pregnancy. The dams should be kept in a good, thrifty, gaining condition, not too fat, of course, but in "good heart."

We like to have the calves dropped in the fall. It gives one a better chance to take care of them and teach them to eat, and I have noticed that, in nine cases out of ten, the calf dropped in the fall will be a better animal at thirty months than a calf dropped in the spring will be at thirty-six months. Besides this, there is a decided advantage to us in having our cows milking fresh during the winter, when dairy produce is at its maximum price.

Our own practice is to separate the calf from the

This careful feeding will pay handsomely, for it has been proved by careful experiment time and again that, while a hundredweight can be added to the weight of a calf at a cost of about \$3.50, it costs nearly \$12 to make the same gain with an animal in the third year of its life. These may be startling figures, but they are, nevertheless, facts. To corroborate this statement let me quote from an address by Mr. Thomas McMillan, of Seaforth. He says: "To show how much cheaper beef can be produced the younger the animals are, I will instance an experiment which was conducted by Groff Bros., of Elmira, who, in their day, were among the most successful feeders of



First Prize Fat Steer (by Velasco 22nd).

As shown at Toronto Industrial Exhibition, 1896. The property of James Rennie, Wick, Ont.

mother as soon as dry, and to feed new-milk for the first three weeks, gradually changing to skim-milk, which has been warmed to about the temperature of new-milk. It is a good plan to add a little boiled flaxseed or pea meal to the milk. If pea meal is used it should be well boiled before it is added to the milk, otherwise it will scour the calf. When the calf is about two or three months old we teach it to eat a little chopped oats mixed with bran; and by keeping a bunch of nice, sweet clover hay before a young calf it is surprising how soon it will learn to nibble at it.

Ontario, frequently carrying off the first premiums in this country, as they also did at Chicago. Two steers bred by them weighed at twelve months 1,000 lbs., and cost them \$34.67, or \$3.46 per cwt. The same steers gained during their second period of twelve months 500 lbs. each, at a cost of \$52.13, or \$10.42 per cwt. During the third period of twelve months they gained 650 lbs. each, at a cost of \$81.50, or \$12.53 per cwt. These figures are borne out by Stewart, a standard authority on feeding animals. He found the average cost per cwt. of nine animals at twelve months to be \$3.39; the same from twelve

months to twenty-four months, \$7.97; the same from twenty-four months to thirty-six months, \$12.54."

Hence we see the importance of good feeding and securing an early maturity right from birth; and here is where the fall calf gets the advantage over his competitor calved in the spring. The bull calf is apt to be better cared for during the winter, and when he is weaned he can be turned out on the fresh green grass of the spring, so that he receives little or no check, but goes on growing right along; and with ordinary care we will have no further trouble with him until he is ready for the finishing stalls.

FINISHING.

Whenever practicable the farmer should finish his own cattle, if for no other reason than that, when his beeves are sold as *stockers*, he is parting with a large percentage of the fertility of his farm. A stocker is mostly made up of bones and muscle, the bones containing a large amount of phosphoric acid, and the muscles a large amount of nitrogen. But during the finishing period the animal is mainly engaged in putting on fat, but as the fat taken from the food contains little or no manurial constituents, he leaves behind him a much more valuable manure than he did before the fattening process was begun with him.

When preparing for the finishing period, we must take care that the cattle do not lose in the fall what they have gained during the summer. To prevent this, our own practice is to have our cattle lie in during the cold nights, and to turn them out again during the day. In this way the change from field to stall is not so violent.

It is not wise to begin feeding too heavily at first; it is better to keep gradually increasing the ration until we are feeding all the animal will eat up clean. The time has gone by when we can depend on hay and grain as a ration and still hope for a profit; we must turn our attention to the production of cheaper food. For this purpose, perhaps, corn, either preserved in the silo or saved as fodder, fills the bill more nearly than any other article. On our own farm we feed a large quantity of turnips, and find that with real

good corn fodder and turnips we can keep our cattle gaining right along, and at a very small cost. Peas and oats, too, sown thick and cured as hay, make a very cheap and satisfactory fodder which is rapidly becoming popular. We sow three bushels per acre, equal parts of each, and on fairly good land we have a yield of fully three tons per acre of excellent fodder, which, when well cured, makes excellent feed, in my opinion better than hay. For cattle it is much better than timothy hay, as, in fact, it is for any kind of stock. If it is run through the cutting-box and fed with a few roots, cattle will do well on it with very little chop.

When feeding grain we find it an advantage to feed a mixture of two or three kinds, say, one of barley, one of peas, two of oats, and two of bran. We find that cattle do much better when fed with a mixture of this kind than when fed exclusively on one kind of grain.

ATTENTION TO DETAILS.

I will mention a few of the smaller details of the business, and then close.

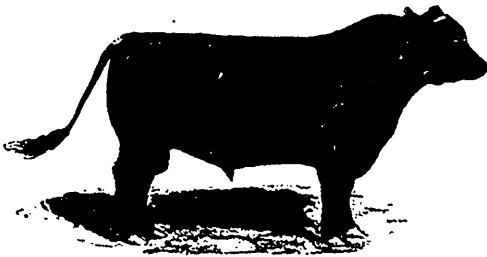
In the first place, I would say, *Feed regularly*, for regularity is one of the first principles of good feeding. When an animal becomes accustomed to getting its feed at a certain time every day, it

will rise and look for it; and if it is kept waiting it will worry and fret, thus weakening its digestive organs, so that they are not in a position to properly digest and assimilate the food it receives when it is given to it. Then make the cattle as comfortable as possible, so as to induce them to lie down, and never disturb them except at the regular feeding time.

It will pay to curry or card the cattle, say, three times a week; for an animal which is getting very little exercise, and is being highly fed, is liable to skin disorders which cause an itching irritation, and make it very uncomfortable and restless. An occasional carding will materially relieve this by removing the scurf and keeping the pores of the skin open and clean.

Keep off vermin by occasionally giving a little sulphur in the feed and dusting a little along the back. Salt regularly, say three times a week.

Treat your cattle kindly. I know a promi-



Lucretius, Sweepstakes and First Prize Polled Angus Bull,

As shown at Toronto Industrial Exhibition, 1896. The property of Walter Hall, Washington, Ont. Lucretius also won first prize in his class and sweepstakes at London, and headed the first prize herd at both exhibitions.



nently successful cattleman who says that he would dismiss a man on the spot if he found him abusing or ill-treating an animal. He argues (and, I believe, correctly) that if a steer is unduly excited or annoyed, it will take three days of good feeding to make good the harm which the animal has suffered thereby. So you see that it

is not a matter of mere sentiment, but a matter of dollars and cents, when I advise you to treat your animals kindly.

Finally, I would say, Look after the small details of your business, for, after all, it is by attention to details that success must be attained in any calling.

## SOME VERY TROUBLESOME WEEDS, BOTH OLD AND NEW.

By J. HOVES PANTON, M.A., F.G.S.

Any plant out of place is a weed, even if it does possess considerable beauty. Some plants are so



Prof. Panton, O.A.C.

frequently out of place that they have been always known as weeds, such as the bind-weed, thistle, burr, etc. In Ontario, we have somewhere about 150 species of plants commonly known as weeds, but, of these, nearly 100 have been introduced from Europe. Every year adds a few more foreigners, especially as farmers are nowadays more and more inclined to have new seed, which has been grown in districts other than their own.



The Perennial Sow Thistle (*Sonchus Arvensis*).

There is no doubt that weeds are on the increase in Ontario, both in number and species, notwithstanding that the cultivation of the land is

more thorough than it was in former years. This may be accounted for by the comparative indifference of many farmers as to the growth of weeds on the roadside, but also by the fact that the practice of procuring a change of seed from other parts is becoming more and more common.

The productive power of many weeds is very great. The following figures, showing the seed-bearing capacity of some of our common weeds, are the results of careful observations. In each case the seeds are merely those which are borne upon a single plant: Purslane, 900,000; burdock, 400,328; cockle, 3,200; mustard, 31,000; Canadian thistle, 42,000; ox-eye daisy, 9,600; chess, 3,500; mallow, 16,500; campion, 4,400; sow thistle, 19,000.



Penny Cress (*Thlaspi Arvense*).

When we consider this wonderful reproductive power, and the great vitality which some of these weed seeds possess, together with the peculiar capabilities for distribution with which many of them are endowed, it is not a matter of surprise that we find weeds comparatively common plants.

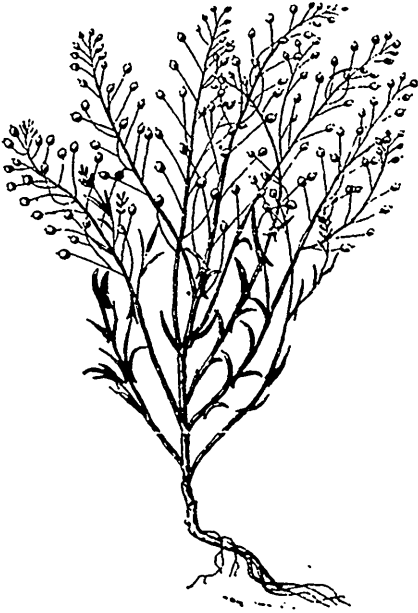
### METHODS OF DISTRIBUTION.

Weeds are largely distributed by the following means:

(1) By the obtaining of seed grain from other farms.

(2) By animals carrying seeds attached to their bodies.

(3) By the wind, especially where seeds are supplied with structures which enable them to be blown about.



Wild Flax (*Camelina Sativa*).

(4) By threshing machines, which often carry weed seeds from farm to farm.

(5) By manure obtained from city stables. The straw used in such manure is often got from *dirty* farms, and, therefore, frequently contains weed seeds.

(6) By railroads, which are highways along which many weeds travel and gain wide distribution.

(7) Also the resting of farms for short times has a tendency to develop careless farming and to encourage the growth of weeds.

Weeds, like other plants, take certain mineral substances from the soil, which, in time, impoverishes the soil, and thus deprives valuable plants of their food.

#### FOUR SORTS OF WEEDS.

A knowledge of the nature of weeds becomes of importance in destroying them. Roughly speaking, we may say that there are four sorts of weeds.

*Annuals* live but a year, bear many seeds, and, when young, are weak and tender; examples are: shepherd's purse, mustard, cockle, penny cress, wild oats, chess, ragweed, chickweed, sow-thistle.

*Biennials* live two years, and usually have a taproot. Unless these weeds are cut below the surface cutting merely increases their vigor. Examples are: carrot, blueweed, burdock, and mullein.

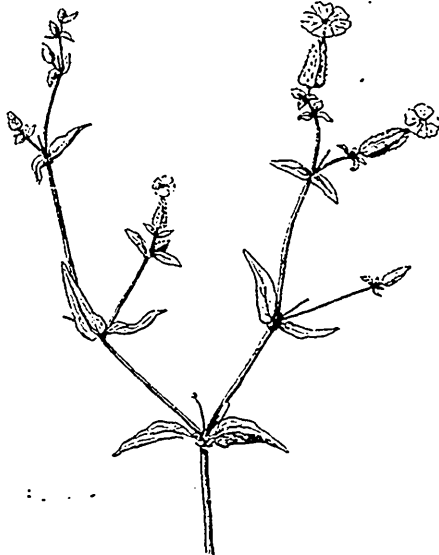
*Simple perennials* continue from year to year, and will reappear as often as cut unless the root is utterly destroyed. Ox-eye daisy, chicory, bindweed, sorrel, campion, are perennials of this nature.

*Creeping perennials* are more or less jointed in the roots, each joint capable of growing although separated from the root. Continual cultivation and smothering from light are necessary to kill creeping perennials. Examples are: Canadian thistle, couch grass, toadflax, milkweed, and perennial sow thistle.

#### GENERAL METHODS FOR DESTROYING WEEDS.

No specific method can be given for the killing of weeds; but there are certain general methods which can be used, and which, if followed, are likely to be successful.

Among these general methods are the following:



White Cockle (*Lychnis Vespertina*).

(1) Thorough cultivation of the land.

(2) Killing weeds along the roadside and in the fence corners.

(3) Preventing weeds from seeding.

(4) Never allowing weeds to have the benefit of sunlight. This result can be secured by constant cultivation, or any other means by which the weeds are kept continually covered.

(5) Destroying them at the proper time. In

the case of biennials this is when they are about to flower; in the case of many annuals it is when they are young and tender.

(6) Securing, as far as possible, the co-operation of neighbors in the destruction of weeds.

(7) Sowing clean seed.

Farming in which green manuring, hoeing, soiling, growing clover, and fall plowing are followed in a systematic manner, is not likely to be characterized by dirty fields. These practices involve most of the methods stated above, and bring about conditions adverse to the development of weeds.

#### WEEDS THAT SHOULD BE LOOKED OUT FOR.

I shall now direct attention to a few weeds as to which every precaution should be taken to prevent them from getting a foothold in our fields. Some of these are comparatively new to our province; but even these are making their appearance at several points.

(1) *The Perennial Sow-thistle (Sonchus Arvensis)*.—The perennial sow thistle has made its appearance in several places in Ontario. It is one of the worst weeds that could be introduced on a farm, and is an exceedingly difficult one to destroy. Any farmer who, unfortunately, has had experience with it considers it far worse than the Canadian thistle.



The Bladder Campion (*Silene inflata*).

Having a creeping rootstock, every inch of which will grow when cut off, and producing very many seeds (19,000 to a stalk), the perennial sow-thistle is very likely to become widely distributed if its progress is not prevented by thorough cultivation and constant watchfulness. It belongs to the same family (*compositae*) as the common thistle. It closely resembles the common sow-thistle of gardens, which, however, is an annual. The flower of the perennial sow-thistle is of a

bright yellow color, and is about the size of a dandelion; the flower stalk, especially near the flower, is quite hairy, and also the under part of the flower is covered with brownish hairs. The roots are about the size of a pipestem, and not fibrous, as in the annual form. The plant grows about two and a half feet high, and spreads rapidly from the roots, which keep constantly forming new centres. At first the leaves lie quite flat upon the ground, but a main stem soon develops,



Wild Tare (*Vicia cracca*).

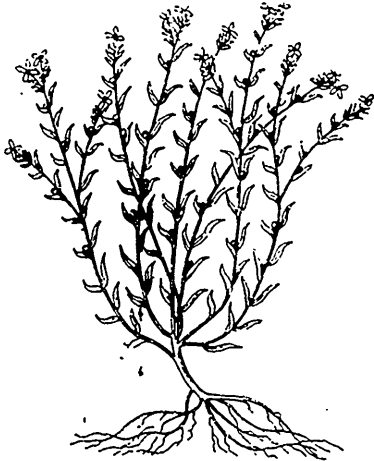
and the plant assumes an erect form. Every farmer should be able to recognize this weed, and should make every effort to prevent its getting a foothold upon his farm.

(2) *The Penny Cress (Thlaspi Arvense)*.—The penny cress is another weed whose advent should be watched. It is not a common weed yet, but we may expect it soon to get a foothold if it is not carefully guarded against.

It is exceedingly common in the Red River valley of Manitoba, where it is called the French weed; and, as much wheat is imported from that country, Ontario farmers may expect soon to find this plant introduced upon their farms by means of the seed-wheat thus obtained. Already several specimens have come under the writer's notice. It belongs to the cress family, in which also we find mustard, wild flax, pepperwort, etc., and, like them, it produces many seeds, which possess great vitality, enabling it to resist very

adverse conditions. The pods are very characteristic, being somewhat circular and flat, with a distinct notch at the top. The leaves are oblong, arrow-shaped at the base, toothed, and smooth. It bears small white flowers, with four petals and six stamens.

The penny cress is an annual, grows about one foot high, and when bruised emits a strong, offensive odor.



Pigeon Weed (*Lithospermum Arvense*).

If penny cress once gets a place on the farm it will be about as difficult to get rid of as the well-known mustard.

(3) *Wild Flax* (*Camelina Sativa*).—The wild flax is another weed making considerable progress in being widely distributed. It also belongs to the cress family, and is an annual. Its flowers are yellowish, but small; and its pods are round and about the size of a pea, and are filled with small brown seeds.

It has been found associated with flax—hence its name; but an examination of it shows that it is an entirely different plant.

(4) *White Cockle* (*Lychnis Vespertina*).—White cockle resembles purple cockle, except in the color of its flower. It is a biennial, and its flowers are what is termed dioecious, the flowers upon one plant being either all staminate or all pistillate.

White cockle is becoming quite common, and its seeds are frequently found in abundance in clover seed.

There should not be much difficulty in getting rid of this weed where thorough cultivation is practised. It belongs to the same family as the common purple cockle, namely, *caryophyllaceæ* (pink family).

(5) *The Bladder Campion* (*Silene Inflata*).—

The bladder campion is also a member of the pink family. This is a much worse weed than the preceding one, as it has creeping perennial roots, and, like it, it produces many seeds. Though resembling white cockle, and sometimes called by that name, it can readily be distinguished from white cockle by the bladder-like appearance of its calyx, which is very thin. Its pistil has only three styles, while the cockles have five. The seeds of this plant are often found among clover seed.

(6) *Wild Tare* (*Vicia Cracca*).—The wild tare belongs to the same family (*leguminosæ*) as that to which beans and clover belong. It bears a close resemblance to the vetch, but its seeds are much smaller. It is a perennial, and bears a cluster (*raceme*) of bright blue flowers. Its leaves are compound, and consist of 10-12 pairs of leaflets, at the ends of which are tendrils somewhat branched.



Sorrel (*Rumex Acetosella*).

(7) *Pigeon Weed* (*Lithospermum Arvense*).—Pigeon weed or redroot usually, grows about a foot high, and has a somewhat branched habit. Its leaves are narrow, and harsh to the feeling. Its flowers are white and small, and when matured produce four small, smooth seeds. This plant is always found most troublesome where fall wheat is grown, inasmuch as it flourishes

greatly when once it gets a start in the fall. It seldom troubles spring crops. Its root sometimes is quite reddish, and hence the name redroot. Wild pigeons are fond of its seed; hence its name of 'pigeon weed'.

(8) *Sorrel (Rumex Acetosella)*.—The sorrel is a weed, the small triangular seeds of which are very frequently found among clover seed. It is common upon poor soil. It grows about a foot high. Young plants grow up from underground stems, which are perennial. Its spear-head shaped leaves are very sour. The seeds are of much the same form as buckwheat, but very small.

(9) *Rib-grass (Plantago Lanceolata)*.—Rib-grass is another weed the seeds of which are frequently found among clover seed. They are something like flaxseed, but very much smaller. Rib-grass is a perennial, with long, narrow-ribbed leaves. Its flowers are borne on a spike. In the old country the seed of this plant is often sown in grass mixtures, and it is claimed that sheep are fond of it; but with us it is considered a weed, and farmers desire to get rid of it as soon as possible.

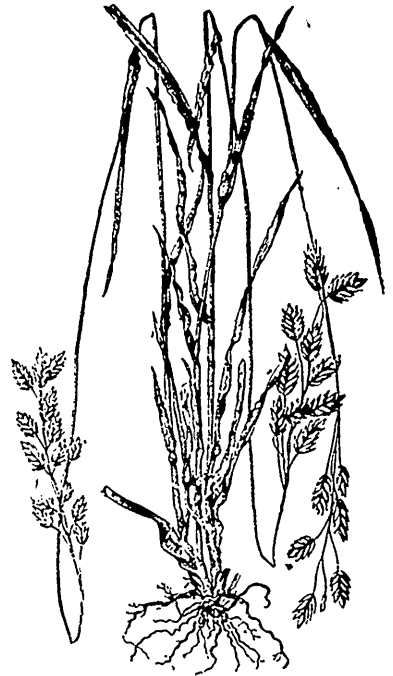
(10) *Bindweed (Convolvulus Arvensis)*.—Bindweed is considered to be one of the worst weeds to get rid of that the farmer has to do with. It



Bindweed (*Convolvulus Arvensis*).

has a creeping perennial root, and shows a wonderful power to continue growing under adverse conditions. The writer is at present carrying on a series of experiments with a view to ascertain what is required to subdue it. The plant is readily known by its flowers, which resemble those of the morning glory, but are about half the size. It grows close to the ground, and no careless hoeing or indifferent cultivation will ever overcome this weed. Such conditions seem to favor its growth. Nothing short of the most severe measures will ever rid a field of this pest.

(11) *Chess (Bromus Secalinus)*.—I desire to direct especial attention to chess because there are even yet some people to be found who believe chess is derived from degenerated wheat. This mistaken notion is one of the most remarkable cases known of persistent belief in a theory that has all the teachings of science against it. Chess is



Chess (*Bromus Secalinus*).

so completely different from wheat that botanists the world over place it in another genus (*bromus*), while wheat is placed in the genus *triticum*.

If chess is sown it produces chess. Degenerated wheat, if sown under favorable conditions, will return to wheat, but chess never does. The most rank evolutionist would not expect to see develop in the space of a few months a plant so unlike, in structure, form, and habit, that from which it is said to be derived.

Farmers who are careful to sow clean seed seldom have chess in their crops.

Chess will mature seed under adverse conditions, although the plant be only two or three inches high; but if conditions are favorable it grows three feet high. It thus happens that sometimes chess may remain unseen, being hidden amid the wheat in which it is growing, and yet be at the same time seeding the ground for a more suitable opportunity of development. But

if the wheat crop is injured by frosts, the ches then usurps the soil and becomes quite visible.

In conclusion, I may remark that all men who make plant-life a special study rank ches as a

typical plant which produces seed yearly, which seed if sown develops plants of the same character, whereas wheat seed will not produce ches, nor can ches produce wheat.

## FODDER CROPS.

By T. G. RAYNOR, B.S.A., Rosehall, Ont.

TOWNSEND G. RAYNOR was born in Prince Edward County, in 1863. He received his education first at his own public school, then at the High School in Picton, and then at the O.A.C. At this last institution he completed his regular course in 1885, and was awarded the gold medal. In 1889 he received his degree of B.S.A. Mr. Raynor is a practical farmer, and a successful one. Living in a county where grain growing has always been the leading feature of farming operations, he has made a special study of grains and fodders. When barley was an important crop of the country they used to grow it very successfully in Prince Edward. Mr. Raynor's own method was to sow it early and cover it as evenly as possible, especially avoiding getting it in too deep. Then he took care to harvest it early. His system was to swathe it, and when it was cured, to rake it up in even rows and house it as soon as fit. In this way he always got a first-class sample. At present his principal crop is peas, Prince Edward being one of the most noted peas-producing counties in the province. In connection with his general mixed farming Mr. Raynor gives considerable attention both to dairying and fruit-growing, and considers these branches as important parts of his system. Mr. Raynor has always taken a deep interest in Farmers' Institutes. He was mainly instrumental in starting the institute in his own county, and was its first secretary, and was then its president for a number of years. He was, for a long time, a member of the executive committee of the Central Farmers' Institute, and was its last president (1895). Mr. Raynor is one of the most popular speakers at Farmers' Institutes that we have. He has been continuously employed at this work since 1889, and, in consequence, has visited most of the counties in Canada while engaged in it. This year he visits Muskoka, Parry Soand, and Algoma.



and, in consequence, has visited most of the counties in Canada while engaged in it. This year he visits Muskoka, Parry Soand, and Algoma.

The value of a fodder crop depends largely upon two things: (1) Its composition; (2) its digestibility.

With regard to composition, it may be said that all foods are composed of certain elements which produce flesh and muscle and are called *flesh formers*; and of certain other elements which serve to keep up the animal heat of the animals, and enable them to do work and lay on fat, called *heat and work producers*. Those fodders which contain the most flesh-formers are the most valuable, as clover hay and pea straw, and such grain products as peas, bran, beans, linseed meal, etc.; those which are valuable specially as being heat and work producers are the straws of the cereals, corn fodder, and such cereals as barley, corn, and oats.

The composition, with respect to these food constituents, of any sort of ripened grain remains about the same, irrespective of the time it is harvested, but the corresponding fodder crops vary

considerably, according to the time of cutting and manner of curing. The digestibility of a crop also varies with the same conditions. In fact, the farmer has almost the control of the digestibility of the fodder crops he raises.

### CLOVER HAY.

One of the most important crops the farmer grows is clover. It is valuable as a fodder crop and as a restorer of lost fertility to soils. It feeds largely from the atmosphere, and is a nitrogen-gatherer; and from the subsoil also it draws heavily for its food supply. By the result of the decaying of its roots, and in the mechanical action it has on soils, it leaves them richer in the essential elements of fertility than before the crop was grown.

One of the best means to ensure a catch of red clover is to top-dress the land intended to be seeded down with farmyard manure in winter. In the spring get a good fine tilth, and, by not

pasturing too closely, some of the fall growth will serve as a protection against the next spring's frost, and serve as a mulch for the second season's growth.

To prepare clover for fodder, one of the best methods is to cut it when it is in full bloom. Cut it in the morning; stir it with a tedder if heavy; rake it up and put it in small coils in the afternoon. Let it stand for twenty-four or forty-eight hours. Two or three hours before housing open the coils into two or three bunches each, so that the wind may dry it.

Clover hay has often been preserved in good condition by putting it in large bulk, tightly packed, and, as each layer is put in, thoroughly salting it, or sprinkling it with air-slaked lime. This may be called the silo system of curing clover.

The principal losses in curing hay are two: (1) Too much drying. The leaves dry much faster than the stalks, and when there is too much drying these fall off, and thus the part of the plant richest in flesh-forming elements is lost. (2) Exposure to rains or heavy dews. These steep the partially cured plants, and wash out certain of their nutrient qualities, and make the stalks less digestible. The aim should be to cure rapidly, to go at each stage no further than is necessary, and to handle the crop as little as possible.

#### TIMOTHY HAY.

One of the greatest faults in curing timothy hay is to leave it too long before cutting. As the hay approaches maturity its stalks become woody and, to a great extent, indigestible. The best time to cut timothy is when what is popularly known as the "second blow" is on it. For mixed grasses, as beaver meadow hay, the time to cut is when the predominating grass has reached the stage of full bloom.

#### GREEN OATS.

Too little attention has been paid to green oats as a fodder crop, especially for the winter production of milk. When used for this purpose the oats should be cut when the grain has reached

the milk stage and the straw is yet quite green. It should be cut in the morning and hauled in during the afternoon of the same day; then packed firmly in bulk, with liberal applications of salt between the layers. The fodder would be improved if, when sowing, a little peas be added to the oats, say, about one-quarter peas.

This kind of green food should be worth at least \$6 per ton, and a fairly good piece of oats should yield three tons per acre, which would make the crop worth \$18 per acre. If the oats were allowed to mature a heavy yield would be forty bushels per acre, which, at thirty cents per bushel, would amount to \$12. When eight cents per bushel is deducted for threshing, grinding, etc., the value per bushel would be reduced to twenty-two cents, and the yield per acre to \$8.80. The difference per acre of \$9.20 would be placed against the feeding value of the straw which would be obtained from the matured oats.

#### CORN FODDER.

This is a most important crop to grow, especially in connection with dairy farming. Corn fodder, however, is not of much value as feed until the corn has reached the milk stage.

To secure a good crop of corn, it is necessary to thoroughly prepare the ground before planting and get a good



First Prize Holstein Heifer Calf, under one year,  
As shown at the Toronto Industrial Exhibition, 1896. The property  
of R. S. Stevenson, Ancaster, Ont.

fine deep seed-bed. Mark out with a corn-marker two ways, and plant in hills from  $3\frac{1}{2}$  to 4 feet apart each way. Plant with a planter from four to five kernels in the hill. Just as the corn is nicely sprouted and coming through the ground, harrow it with a light iron harrow; and harrow it two or three times afterwards until the corn comes up to the cross bars on the harrow. After this use a one-horse cultivator, at first going moderately deep; but decrease the depth every time afterwards, always being careful to cultivate the same way between the rows, in order not to interfere with the little rootlets any more than can be helped. If the cultivation be kept up once or twice a week as long as the crop can be cultivated a good crop of corn will be insured even in very dry seasons. Three or four stalks in the hill are plenty. Grow those varieties which

mature good ears and give at the same time considerable stover.

The time to harvest it is when the ears have reached the glazed condition. The crop may then be cut, and be cured in the silo, or in the stook, or between layers of straw. Taking all things into consideration, the silo is the best system of curing corn fodder, but good results are obtained in either of the other ways if the fodder before being used is put through the cutting-box and mixed with other foods. When the corn is mixed with straw in a stack or mow the feeding value of the straw is improved by its soaking up some of the juice of the corn stalks. The straw

soil it has been grown in and the manure that has been applied to it. The quality also depends largely upon whether the seed sowing has been thick or thin. The thicker the seeding has been the finer the straw will be and the better its feeding value. Finally, as to the time of harvesting, the earlier the straw is cut the better it will be for feeding purposes.

#### PEA STRAW.

Pea straw may be cut quite green and, nevertheless, the peas be matured all right for seed. If the peas be cut green the straw is quite valuable for feeding, for the pea belongs to the same



First Prize Jersey Heifer Calf, under one year, As shown at the Montreal Exhibition, 1896, and also at the Central Canada Exhibition, Ottawa. The property of W. A. Reburn & Co., Ste. Anne de Bellevue, Que.

so soaked, when cut up, makes a splendid coarse feed.

#### STRAW OF THE CEREALS.

Any straw is greatly improved for feeding purposes by being cut when green; on the other hand, the longer a straw is left after the milk stage of the grain is reached the poorer it is for feeding purposes. Good straw is preferable to poor hay. It varies in the composition of its food constituents according to its kind. Of the cereal straws oat straw is best; then barley, wheat, and rye in the order named. Of course the quality of any straw is to a great extent dependent on the

family of plants as does red clover, a family that is rich in flesh-forming constituents. With the modern pea-harvesting implements, peas may be harvested this way quite easily.

In any case a mixture of the coarse fodders and a liberal supply of mixed meal will give the best results for feeding purposes. It has been found by careful experiment that a full ration for producing milk should be so arranged that it will contain  $2\frac{1}{2}$  lbs. of digestible flesh formers to  $12\frac{1}{2}$  or 13 lbs. of digestible heat and work producers, or 1 lb. to 5 or  $5\frac{1}{2}$  lbs. A mixture of foods having these proportions will, therefore, give the best results.



## THE FARMER'S FRUIT GARDEN.

By H. L. HUTT, B.S.A., Horticulturist, Ontario Agricultural College, Guelph.

MR. H. L. HUTT, as is well known, is the Horticulturist of the Ontario Agricultural College. Having been born and brought up on a fruit farm in the Niagara district, his whole life may be said to have been associated with the fruit-growing industry. After obtaining a good general education, he took a full course at the O.A.C., and received his diploma in 1890, together with the high honor of the general proficiency gold medal. He then took the course for B.S.A. at the College, and in 1891 was granted that degree by the University of Toronto. After receiving his degree he returned to his father's farm and put his scientific education to a practical test. Spraying, pruning, and cultivation were carefully attended to. A silo was built, a regular rotation of crops was adopted, and work generally was conducted on scientific principles. At the end of three years the cropping of the farm was nearly doubled, which Mr. Hutt declares was due solely to the adoption of improved methods learned at the college.—In 1892 Mr. Hutt was selected as one of the speakers for Farmers' Institutes, and he has served in that capacity ever since, having gone through the northwestern, southwestern, and eastern parts of the province. This year he speaks in the counties of Huron, Middlesex, Lambton, Perth, and Oxford.—In 1893 Mr. Hutt was appointed to his present position, but before entering upon his duties he took a special course in horticulture under



Prof. Bailey, of Cornell University, and spent some time visiting the leading nurseries and fruit sections in New York State, and the large gardens, arboretums, and greenhouses in the vicinity of Boston and New York.—In connection with the Ontario Fruit Growers' Association, Mr. Hutt has taken an active part in the establishment of the fruit experimental stations lately instituted by the Provincial Government. Much of his time this summer has been taken up in inspecting these stations.

It has been said that farmers, as a rule, use less fresh fruit than city people; and the more I travel about the country the more I am inclined to believe there is some truth in the statement. Too many farmers are needlessly depriving their families of those wholesome fruit foods which should be on everyone's table.

In this respect I sometimes think that the farmer is the most humane and unselfish of men, for he will toil all summer to provide food for the dumb animals he has about him, and is ever ready to avail himself of any means whereby he may present this food to them in a more palatable form; while such a thing as keeping a garden and providing his own table with nature's best gifts is with him an after consideration. It is doubtful, however, if such unselfishness is altogether wise. In these cases I feel like entering a plea on behalf of the farmer's family. They should not be neglected.

The importance of fruit as an article of diet is recognized by all medical authorities; and the testimony of those who enjoy the use of an abundant supply of it goes to show that the fruit garden is, to a great extent, a profitable substitute for grocery accounts, as well as a good preventive of doctors' bills.

Many farmers who are well aware of the value of a good fruit supply still fight shy of putting out a small fruit plantation, thinking they can buy what they need cheaper than they can grow it. In this they are mistaken; and that is not the worst of it; for even if they could buy it cheaply they will not buy a one-hundredth part of what

their families would use if they had it to pick out of their own gardens.

The truth of the matter is, any farmer who can grow fodder for his cattle cheaper than he can buy it can do the same with respect to fruits for his family.

Probably the main reason why fruit gardens are not more common throughout the country is because the majority of farmers are not sufficiently acquainted with the management of the different kinds of fruits to know that ordinary fruits can be grown just about as cheaply and easily as any hoed crop on the farm.

Were the truth of this fact more generally realized, there is no doubt that well-kept gardens would become as common as corn-fields. The object of this paper is to tell, in as few words as possible, how our small fruits may be grown on the farm successfully.

One of the first things to be considered is the selection of a suitable piece of soil. This should be the choicest on the farm. It should be well drained, either naturally or artificially. If possible it should be situated near the house, where it will be convenient not only for the women to gather the fruit when ripe, but also for the men to utilize to advantage their spare moments in caring for it. And it would be all the better if it could be sheltered from the prevailing winds by an orchard, or some other wind-break.

Land on the farm is not a scarce article; therefore do not scrimp the size of your fruit garden. Make it long, one hundred yards at least; and as wide as you choose. Extend the rows the whole

length of the long way and as far as possible crosswise, so that nearly all the cultivation may be done by horse-power instead of by hand power. The width of your fruit garden will, of course, depend on your requirements. From one-half acre to one acre, planted in small fruits, should supply the wants of an ordinary family abundantly.

In selecting the kinds of fruit and determining the number of each to plant, the aim should be to provide a succession of fruit, fresh or preserved, to last throughout the year. A continuous succession of fresh fruits is obtained, first, by

three feet apart in the row, will yield all that is required by a family for a number of years. All that this plant needs is clean cultivation and liberal manuring. It is well, too, to break out the large seed stalks whenever they appear, so as not to allow the plants to exhaust themselves by producing seed.

#### STRAWBERRIES.

Strawberries are the first fruit of the season, and for that reason are, perhaps, more prized than any other fruit of the garden. They are best grown in rows about four feet apart, the plants being set about fifteen inches apart in the



Gallant Chief, Prize-winning Ayrshire Bull,

The property of J. G. Clark, Woodroffe Dairy Farm, Ottawa. As shown at Central Canada Exhibition, Ottawa, 1896.

having a succession of the different kinds of fruits, as strawberries, raspberries, blackberries, etc.; and, secondly, by having early and late varieties of these.

I will take up the different fruits which should be found in the farmer's garden, mentioning them in the order in which they come to us throughout the season.

#### RHUBARB.

Rhubarb, although not a fruit, is the first thing in spring which answers that purpose, and it gives us a wholesome foretaste of sweeter things to come. Two or three dozen plants, set about

row. They may be planted in spring or early autumn, but, as with all other fruits, early spring is the best time. Only young plants, from a plantation which has not yet fruited, should be planted.

Planting can be made a very easy operation. Mark out the rows with a corn marker, or use a garden line. Open the holes for the plants with a spade by sticking it into the ground five or six inches, and then pressing the earth back on each side. Slap in the roots, spreading them out fan-shaped, and close the earth firmly about them again with the feet. Pick off all blossoms the

first year. It is well to place the first runners so as not to let them take root too close together. They may be allowed to spread and form matted rows about a foot and a half wide. Keep the plantation well cultivated and free of weeds. In the fall, as soon as the ground is frozen hard enough to bear a team, cover the rows with a mulch of straw, or, better, of strawy stable manure. In the spring, when severe frosts are over, remove the coarsest of this mulch from the rows, and tread it down between them. This will preserve the soil moisture, and insure a good crop of berries even in a dry time. The season of ripening may be prolonged a week or more by leaving, in the spring, a portion of the patch covered for a longer time.

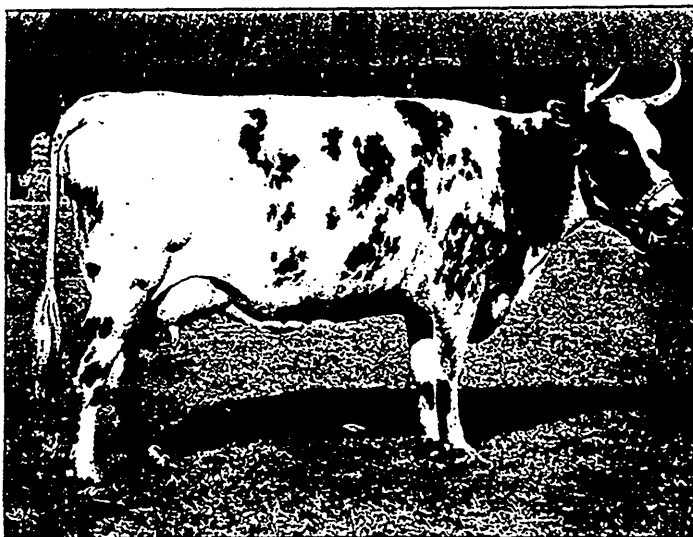
which may prove more productive or may be valuable for extending the season by ripening very early or very late.

To insure the fertilization of the blossoms and the setting of the fruit, varieties with imperfect blossoms, like the Haverland and Bubach, should always be grown in rows adjacent to those bearing perfect blossoms, like the Wilson and Beder Wood.

#### RASPBERRIES.

Next in order of ripening come raspberries. These begin to ripen before the last of the strawberries are gone, and, with a good collection of varieties, extend the season of fresh fruit another month or six weeks.

Raspberries should be planted in rows about



Lady Maggie, Prize-winning Ayrshire Cow,

The property of Robert Robertson, Compton, Quebec. As shown at the Montreal Exhibition this year.

When once planted, strawberries will bear fruit for several years, but the longer they are left the more numerous become the weeds, and the fewer and smaller the berries. As planting out a new lot is much easier than keeping the old ones clean, it is found by experience that we get the best berries with the least labor by planting out a new lot every spring and plowing up the old one after it has fruited once, or, at the most, twice.

The varieties that will give the best results can be determined only by experiment for each locality. It is advisable to start with a few varieties, such as Haverland, Wilson, Bubach, and Beder Wood, which have established a reputation for themselves in other localities, and then from time to time test with these a few of the other varieties

five feet apart. The plants may be set two or three feet apart in the row, so that they will, in time, make a close hedgerow; but it is a much better plan to arrange the raspberries, blackberries, currants, and gooseberries of our fruit garden *in a block*, in rows five feet apart each way, so that horse cultivation may be given both ways. In this way much hand labor will be saved, and these fruits may be cultivated as cheaply as corn in hills.

The cultivation employed for raspberries should be thorough. Keep all weeds down, and keep the surface soil loose and mellow. It will then act as a mulch, and retain the soil moisture below. Stirring well three inches of surface soil is better than plowing twice as deep. If the culti-

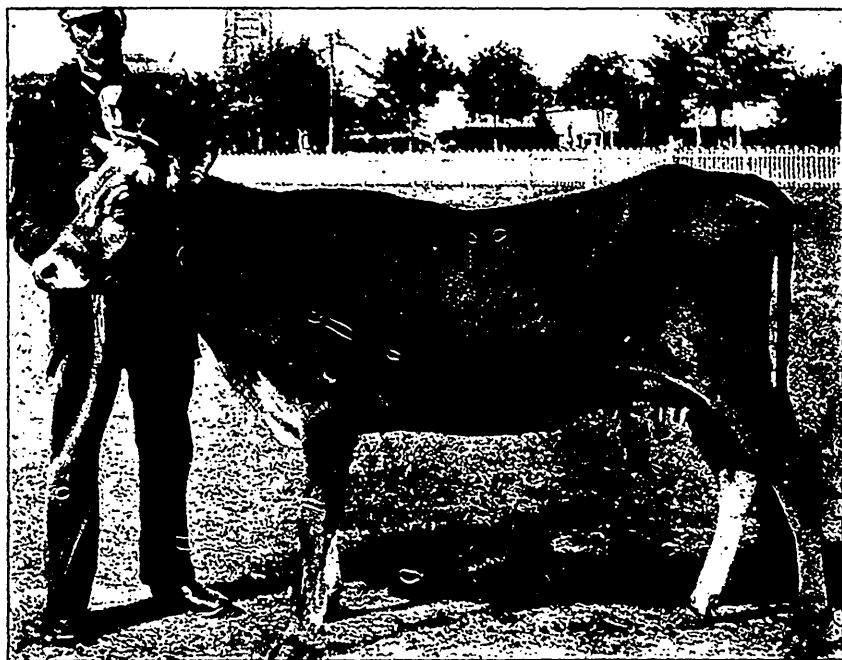
vator is started early in the spring, and used often enough to keep all weeds down, there will be no necessity for plowing among the bushes at any time.

Pinching back the tips of the new canes in the summer is advisable in all parts of the country except those districts where the canes have to be laid down in the fall for winter protection. This pinching back should be done as soon as the canes reach two and a half or three feet of height. It causes them to branch out and grow stout and strong, so that they will bear their load of fruit without requiring to be staked up to keep the fruit off the ground.

varieties of the different colors the like of which should be found in every farmer's garden: *Red*—Marlboro and Cuthbert; *black*—Souhegan, Hillborn, and Gregg; *purple*—Shaffer; *yellow*—Golden Queen.

#### BLACKBERRIES.

The large blackberry, or bramble, as the wild species is called, is not grown as generally as it should be. Some dislike to cultivate it on account of the sprawling growth of its canes and the stout, hooked prickles which they bear. These objectionable features may be overcome, however, by nipping back the young canes when they reach



Prize-winning Jersey Cow,

As shown at the Toronto Industrial Exhibition, 1896. The property of B. H. Bull & Son, Brampton, Ont.

The regular annual pruning may be done any time in the fall after the fruit is picked. It consists in cutting out all the old wood that has borne fruit, and leaving only four or five of the strongest new canes to each hill.

Raspberries begin bearing in a couple of years from planting, and with good care will bear profitable crops for ten or twelve years. A new plantation should be set out, however, as soon as the old one shows signs of failing.

The following named varieties have proved their excellence in many parts of the country, and make up a collection of the late and early

a height of three feet, and by wearing leather gloves while cultivating them.

The blackberry requires much the same sort of attention and pruning as the raspberry. The fruit begins to ripen after the raspberries are gone, and keeps up a nice succession of fresh fruit for the table. The Snyder and Stone's Hardy are hardy varieties which will succeed where some of the finer varieties, such as Agawam and Taylor, cannot be grown.

#### CURRENTS AND GOOSEBERRIES.

Currents and gooseberries are, perhaps, not so much prized in their season as raspberries and

strawberries, yet they have a place which cannot well be filled by any other fruit. I know well from experience that these fruits, in the form of jellies and jams, often make the most interesting portion of a schoolboy's lunch.

Like raspberries, blackberries require clean, shallow cultivation, and are always benefited by liberal applications of wood ashes, scattered evenly over all the surface of the ground. A mulch of some kind, scattered under the bushes before the fruit begins to ripen, answers the double purpose of retaining the soil moisture and keeping the fruit from being splashed with soil during heavy rains.

Currants and gooseberries may be grown in either bush or tree form. In the bush form about six branches should be allowed to constitute the bush. Train these up from the ground, keeping the bush symmetrical. The annual pruning had better be done early in the spring. It consists in removing, say, two of the oldest branches, that have fruited for two or three years, and allowing two of the strongest new shoots to grow up and replace them. Shorten in the new wood where necessary to keep the bushes symmetrical.

The "worms," common to both currant and gooseberry bushes, must be watched for and attended to as soon as they make their appearance. They can easily be killed by spraying the bushes with Paris green, at the rate of one-quarter pound to a fifty-gallon barrel of water. A pail of lime water added to the solution lessens the liability of the Paris green to injure the foliage.

The following named varieties should in most localities give good results :

*Currants.* — Victoria, Fay's Prolific, White Grape, and Black Naples.

*Gooseberries.* — Houghton, Downing, and Whitesmith.

So far I have mentioned only the small fruits which go to make up a well-stocked fruit garden.

In addition to these enough of the larger fruits, such as grapes, cherries, plums, apples, and, where the climate will permit of it, peaches,

pears, and quinces, should be grown to provide an abundant supply for home use. Space will not permit me to take up the management of each of these fruits in detail ; but, in conclusion, I should like to give a few *general* directions which are applicable to these and to most other kinds of fruits.

#### GENERAL DIRECTIONS.

(1) *Cultivate thoroughly and repeatedly*, especially as soon as possible after every heavy rain. Surface cultivation about fruit trees and bushes is preferable to deep plowing.

(2) *Apply fertilizers liberally.* Unleached wood ashes is one of the best fertilizers for fruit trees, vines, and bushes, and may safely be applied at all times. Barnyard manure should be withheld where there is a tendency to excessive wood growth. Scatter all fertilizers evenly over the ground as far as the roots extend.

(3) *Prune every year without fail.* For trees, currant bushes, and gooseberry bushes the best time to prune is early in the spring, before the bud starts. Vines may be pruned in the autumn as soon as the leaves have fallen ; and berry bushes in the summer as soon as the fruit is picked.

(4) *Keep a vigilant watch out for injurious insects and fungous diseases.* The Bordeaux mixture applied in a fine spray is one of the cheapest and most effective means of preventing nearly all fungous diseases which affect fruits. A simple formula for making this mixture is as follows : Take 4 lbs. of copper sulphate, 4 lbs. lime, and 40 gallons or a barrel of water. Dissolve the copper sulphate in, say, half of the water, and slake the lime in the other half, and when the latter has cooled pour it slowly into the copper solution and mix thoroughly. To constitute a combined insecticide and fungicide 4 oz. of Paris green should be added.

(5) In conclusion, do not expect an abundance of fruit *without making an intelligent effort to grow it.* But rest assured that with proper management the fruit garden will yield more profit and pleasure than any other equal area on the farm.

PURDUE UNIVERSITY, Lafayette, Indiana, Oct. 15, '96. Publishers of FARMING, Toronto, Canada. GENTLEMEN — I desire to receive FARMING for my private library. You are developing a magazine of such merit that I desire to secure the back numbers and have them bound for reference in the future, and I also wish to receive the numbers as published hereafter. If you will kindly forward to me a complete set of the back numbers, up to date, and place my name on your mailing list for the future, I will remit to you for the same. The October number of FARMING is the handsomest specimen of an agricultural periodical that I have seen published in this country. Your illustrations are beautiful. Very truly yours, C. S. PLUMM [Director of the State Agricultural Experiment Station of Indiana].

THE ANNANDALE FARM, Tilsonburg, Ont., Oct. 14, '96. Editor of FARMING, Toronto. DEAR SIR, — I am so well pleased with your October number that I feel inclined to give some of my neighbors the benefit of it by remitting you subscriptions for them. I will do so for two, at least. This October number is the best I have seen yet, but they are all good. Everything in this number is right to the point, and written by very able men, who are well posted in the matters on which they write. This one number is worth a whole year's subscription. I herewith enclose two dollars, for which please send the magazine to ———, of ———, and ———, of ———, commencing with the October number. If you can spare them, please also send me half a dozen or so copies of the October number for samples. . . . Yours truly, E. D. TILLSON.

# PRACTICAL HINTS ON THE KEEPING OF FARM POULTRY.

By W. J. HAYCRAFT, Agincourt, Ont.



MR. W. J. HAYCRAFT has been a farmer all his life, but he has made a specialty of poultry-raising. He was born in the township of Darlington, near Bowmanville, but moved to the township of Scarboro, near Agincourt, about eight years ago. He began to take an interest in poultry-keeping as *business* about ten years ago, and has had a large measure of success. His special lines are Bronze turkeys, Toulouse geese, and Pekin ducks, and in these breeds he has been a large winner at the Toronto Industrial Exhibition, having won at one time or another all the principal prizes offered for them. This year he has won over a hundred prizes at the different fairs. He has also, for some years past, been a large breeder of different kinds of fens; but he prefers Plymouth Rocks to all others. Mr. Haycraft is president of the East York Farmers' Institute and a director of both the East York Agricultural Society and the Scarboro Township Agricultural Society. Last year he was one of the Farmers' Institute delegates, having been appointed to the counties of York, Ontario, and Durham.

Most farmers consider poultry-raising for profit impossible, and condemn all sorts of fowls as useless and troublesome. This is a very wrong notion. Farmers are passing through a period of depression. They see that they must leave off their old-time methods and adopt new ones. Practical experience goes to show that one of the most advantageous changes in method that a farmer can make is to take more care of his poultry and devote more attention to poultry-raising.

At one time the cow was considered of little value, and she was left to shiver and shake in the cold winter blasts on the warm side of a rail fence or straw-stack, much of the time with her back

covered with snow. Now she is the subject of more humane treatment, and she has become more profitable. By being comfortably housed and well cared for, with silos, and root cellars, and cutters, and slicers introduced for her benefit, she has become a rent-payer and mortgage-lifter.

## POULTRY-KEEPING MAY BE MADE PROFITABLE.

It will be the same with poultry. Poultry, properly bred and fed, properly housed and cared for, are money-makers. But with the treatment they usually receive they are anything but money-makers. A common thing is to see a pail of grain thrown to them on the ground out of doors, say, two or three times a week. Each time this happens they gorge themselves; then they starve until they get another supply. Their owners then complain that "fowls don't pay." Of course they don't pay. Could we expect our horses, cattle, or swine to pay with similar treatment? But if poultry are properly cared for they will give as good a return for the money invested in them, and for the time spent in caring for them, and for the food they eat, as any other stock on the farm. Indeed, I believe that they will pay better than any other sort of stock.

## FIVE THINGS ESSENTIAL TO SUCCESS.

In poultry-keeping there are five things very essential to success, namely, good birds, good housing, good care, good feeding, and good marketing.

## SELECTION OF THE BIRDS.

In selecting our birds we must look out that we get those that are suitable to our requirements. I have often been asked, What is the best breed of fowls for farmers to keep? My answer is that *there is no best breed*, when all purposes are taken into account. Some breeds are good layers; some produce good table fowl. If we could get a breed that would possess both these characteristics, *that* would be the best breed for the farmer and for other folks as well. But, unfortunately, such a breed has not yet been produced. The breeds that come nearest to this ideal are the Plymouth Rocks and the Wyandottes. These breeds are both fair layers and unsurpassed as table fowl. If we want to go in for eggs alone, then we should choose some of the Mediterranean classes, as Minorcas, Andalusians, or Leghorns.

There are other fowls that are as profitable as the hen, namely, geese, ducks, and turkeys. Toulouse geese are prolific layers, but, as a rule, are poor setters. Emden geese are highly recommended, especially so on account of their white

plumage. Toulouse geese crossed with our common geese produce an ideal market bird.

The best ducks are Pekins, Aylesburys, and Rouens. Pekins are large and good feather-producers, often producing nearly as many feathers as a goose, but they are hard to get into full feather. Aylesburys are highly esteemed as table fowl. The Rouen is a very good duck, generally in full feather. They yield a good quantity of feathers, and are fair-sized in body; in fact, some claim them to be the largest of the three.

The Bronze turkey is generally conceded to be the prince of turkeys, but he is closely followed by the White Holland. Of all the species of fowl the turkey is the most noble. He reigns supreme over the barnyard; his rights none dare to dispute. He is a bird of courage, and, as has been said, would not hesitate to attack a grena-



Pair of Barred Plymouth Rocks.

Bred and owned by J. J. Lenton, formerly of Oshawa, Ont., now of Biltmore Farms, Biltmore, N. C.

dier of the British Guards who would presume to invade his barnyard with a red coat on.

In selecting our breeding stock, of no matter what sort, we must be very careful to pick out large, strong birds, that are well-formed specimens of their respective classes, taking precautions that the breeding mates are not related, for the future stock depends almost entirely on the parent birds. Do not try to economize too much in the price of your first stock; for when stock of the right stamp can be obtained a little extra price will be soon repaid by the superior excellence of the offspring. Three points are essential in your breeding-stock, namely, quality, health, and size.

#### HOUSING.

Very few farmers have a poultry-house other than the open driving-shed, where the hens are allowed to roost in all sorts of weather, and in all

seasons of the year. But everyone who wishes to make money out of his fowls should have a properly constructed poultry-house. This fact, however, need deter no one from keeping poultry. A suitable poultry-house, that will answer every purpose, can be constructed at a very small cost. The most suitable house, to my mind, is one that is 12 feet wide, and about 7 feet high; or it may be made with a sloping roof, and be 5 feet high at the back and 8 feet high in front. I prefer, however, the former plan, as we thus can have a walk-way through the entire length of the building, by which means we can feed and water the fowl, and gather their eggs without going into the pens. The length of the building must be governed by the number of fowl it is intended to keep. The building should face the south if possible, and have a good yard to form a run-way

for the birds. The closed yard is very necessary, especially if the poultry-house is near the garden or fruit-yard, for the hen is naturally very fond of currants, berries, and the like, and will make every effort to obtain them for herself when they are ripe.

As to the material of the poultry-house, I prefer a frame house, since, when it is so constructed, it is drier than when built of either stone or brick, and consequently more healthy. It must be made frost-proof, and should have an open space of 3 or 4 inches between the outside and inside sheetings. The roosts should not be more than two feet high, and should be all

of the same height. The floor under the roosts should be of boards, so as to catch all the droppings. The remainder of the floor should be of earth, but this should be kept covered with fine gravel.

#### CARE AND CLEANLINESS.

The roosts and nests should be movable, so that they may be easily taken out and cleaned. This should be done at least once a week. Putting coal-oil on the roosts and in the nests is a good preventive of lice. Smoking the house occasionally with burning sulphur is also necessary to destroy vermin. The house and roosts should be kept thoroughly whitewashed, and if a little carbolic acid be added to the whitewash when this is done it is all the better. Land plaster sprinkled on the floor and in the yard is a good thing to destroy odor.

FEEDING.

Oat chop, cornmeal, and shorts, moistened with water, make a good morning meal. Scraps of meat and vegetables should also be given. Wheat makes as good an evening food as can be got. Buckwheat is also good. For chickens, milk and bread are best. Peas and corn I have found to be good to feed to turkeys, geese, and ducks during the laying season, as these foods have a tendency to produce stronger young ones than others I have used. Ground corn, it is claimed, helps the egg-producing power of hens.

THE FEEDING OF CHICKENS.

In the case of chickens, leave them in the nest with the hen for about a day; then put them in a coop without a bottom, and move the coop daily, always keeping it on dry ground. Dry bread, or bread dipped in milk, and rolled oats, are good for all young fowl. Dandelion leaves and onion tops, chopped very fine, are an excellent relish for young turkeys. To prevent indigestion in chicks of all sorts the great rule is to feed little and feed often. Pure water should always be accessible to all fowls, both old and young. Milk is very acceptable to all young fowl. If the chicks are a little weak when they first break the shell, open it so as to get at their mouths and drop a little milk into them, and you will be surprised to see how soon it will strengthen them.

THE FEEDING AND CARE OF BREEDING FOWL.

You must be very careful not to overfeed your breeding-stock. Plump, glossy-looking parent birds will not always produce the healthiest offspring. By using purebred males we generally get the best results. The most profit is obtained from young birds. Those that go beyond two years, as a rule, return very little profit. Early-hatched birds are the best. Pullets, if hatched in April, will, if properly cared for, commence to lay in October, and will continue to lay during most of the winter, and this, as is well known, is the season of the year when eggs sell at their highest price.

MARKETING.

The best advice that I, or anyone else, can give with respect to marketing is: Put your produce on the market in the most attractive form possible. A serious mistake is often made in not gathering all eggs regularly day by day. Some people allow eggs to lie around for days—that is, until they go to market. Then all the nooks and corners where the hens endeavor to secrete their eggs are hurriedly searched, and all eggs found, whether good, bad, or indifferent, are taken to market for sale as if they were all fresh laid!

Probably some have been sat upon by brooding hens for a week! How can people have the conscience to call such eggs fresh? I say positively that this is what is ruining the reputation of Canadian farmers as egg-producers, and it is what is ruining our whole market. A customer, whether in city, town, or village, once deceived, is hard to be restored to confidence again. So, likewise, a foreign customer, whether in Britain or in the United States, if once he finds Canadian eggs are not to be depended upon, feels shy to try our market again.

DON'T KEEP TOO MANY MALES.

Another mistake which farmers often make is in keeping too many males. After the breeding is over, shut up what males you wish to keep, and kill off all the rest. If you do this, you will get more eggs, and those you do get will be of better keeping quality. No doubt many of my readers have seen eggs apparently as fresh as ever, although they have been under a hen for three weeks! The reason of this is that because of the shutting up, or absence, of the male birds the eggs were unfertilized. At the Ontario Poultry Association in 1894, while this question was under discussion, a member said that once he had had an egg that had been sat on for *nine weeks*, and that then he took it to an expert egg judge to see what he thought of it. The expert looked at it, broke it, examined it again, saw that it was good, swallowed it, and pronounced it perfectly fresh! This egg was unfertilized; and the fact shows how important it is, when raising eggs for the market, to keep the male birds shut up as much as possible.

CONCLUSION.

Summing up, I would say that to make poultry-raising profitable on the farm we must have vigorous stock, a warm house, a good-sized runway, good care and attention, the right kind of food, and the right sort of feeding (egg food for the laying hens, and fattening food for market fowls), and, finally, plenty of brains and some conscience. Don't palm off stale eggs on your customers. Aim to acquire a good reputation and your goods will soon be in demand. Produce both eggs and fowls of a quality that will induce buyers to come to your locality. Keep your poultry premises pure and clean. Clean out your pens at least once a week. Fight the lice all the time, for they are the poultryman's worst enemy. The dust-bath will help you greatly in this respect. Nip all disease in the bud. Don't delay in this matter, for delays are dangerous in the poultry business as well as in every other. Observe regularity in your feeding. Be energetic, and alive to information!



whenever you can get it. Don't allow yourself to be easily discouraged, and each year strive to improve on the methods and results of the previous year.

Lest I may be misunderstood, I would say, finally, that I do not claim that every farmer can justifiably go to the expense of at once putting up a new poultry-house. But in almost every farm-yard there is an open shed that for the time being can be converted, at very little cost of time

and money, into a suitable henhouse, until a better one can be afforded. And there is no better place as a runway for fowls than a barnyard. Exercise is essential to the health of fowls, and in a barnyard they get all the exercise they need in a very natural way. Put the foregoing hints to a wise use, adapting them to your own condition of things, and, without doubt, you will have sufficient success to amply repay you for your expenditure of time and trouble.

## THE BEEF TRADE OF CANADA: ITS PAST HINDRANCES, ITS PRESENT CONDITION, AND ITS PROSPECTS.

By D. McCRAE, Guelph, Ont.

[The subjects discussed in this paper are of the utmost present importance. The beef trade of Canada has been passing through a period of great depression. There are, however, indications—nay, more, there are *prospects*—of a better state of things. Those, therefore, who are in any way interested in the beef-producing industry will be much pleased to read Mr. McCrae's timely paper.—EDITOR FARMING.]

### OUR QUARANTINE REGULATIONS.

The wisdom of our present quarantine regulations is a question that, lately, has been very fully discussed by our leading breeders of purebred cattle. Some breeders have expressed themselves as favorable to modifying the present regulations and shortening the time of detention in quarantine. Other breeders—and these are the more numerous—have spoken in favor of discontinuing these restrictions altogether, and of allowing stock, after proper inspection, to be brought into Canada from all countries that are free from contagious pleuro-pneumonia. All breeders, however, seem to be against the continuance, in its present shape, of the lately ordered "tuberculin" test. For the information of those who have not had the opportunity of investigating the quarantine question for themselves, a statement of some points of importance will here be presented.

The first quarantine station for cattle in Canada was established in 1874, at the Levis Forts, opposite Quebec, convenient to the steamboat landing. The quarantine was established specially to guard against the introduction of pleuro-pneumonia.

### CONTAGIOUS PLEURO-PNEUMONIA.

Contagious pleuro-pneumonia is a specific disease which, as its name implies, is contagious in its character. It is said to attack cattle only, other animals being, as far as is known, exempt from it.

Its history cannot be traced with any certainty earlier than 1713. No doubt the herds of Europe

and Asia suffered from it long before this time, but the records are dim and uncertain. At the date named it is clearly described as existing in Switzerland and in some parts of Germany. In the early years of this century it was widely known in Europe; the cattle that were driven from place to place with the armies of Napoleon were thought to have caused its wide distribution.

About 1842 it was found in England, having been brought from Holland, and in the following year, 1843, it crossed the Atlantic.

### THE DISEASE IN THE UNITED STATES.

Its first recorded lodgment in the United States was in Brooklyn, New York. It had spread to New Jersey in 1847, and in 1859 a fresh and virulent outbreak took place in Massachusetts. This outbreak was traced to four cows brought from Rotterdam.

Between 1860 and 1866 efforts to exterminate the disease were made. These were successful as far as Massachusetts was concerned; but, inasmuch as other neighboring States did not cooperate, the disease became very prevalent along the Atlantic seaboard.

In 1874, as has been said, Canada established a quarantine against all infected countries, the period of detention being fixed at ninety days, which period has been maintained up to the present.

In 1882 the disease had become very common in the United States, so much so that cattle from that country were scheduled in Britain, and ordered to be killed at the port of entry within ten days of landing; and this order is still in force. In 1883 the disease was found in Ohio, and by that time it had spread to other States as well.

In 1884 the Bureau of Animal Industry for the United States was established, and the United States authorities at once began to give careful

consideration to the scourge; but little could be done without ample appropriations.

By 1886 the disease was rampant in Cook County, the county in which Chicago is situated. Chicago is the greatest cattle market in America—the largest in the world. Not only does this market handle fat stock, but in its yards are sold thousands of stockers which are sent out to numerous feeding grounds. It is also a great centre for purebred stock sales, and for sales of breeding bulls. At this time diseased herds sold by auction were distributed to several States, and every animal became a centre of contagion.

In 1888, however, the work of extermination was taken up in earnest, and, at an immense cost,

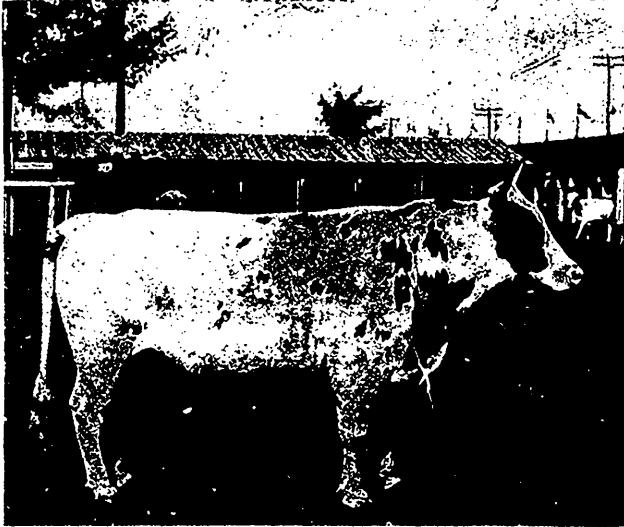
growing States, where they would be in contact with the home cattle of the farmers, of the young bulls sent to the grassy ranches and the prairies of the west, we may have some idea of the work that must have been done before the above result could have been reached, and of the credit, therefore, that is due to the officers of the Bureau of Animal Industry for the good result they accomplished.

#### THE DISEASE ERADICATED FROM BRITAIN.

Pleuro-pneumonia is now almost totally eradicated from Britain. This has not been effected, however, without great loss to the breeders and great expense to the government. No wonder, then, that English people are so anxious to keep a clean bill of health.

Any animal slaughtered in Britain, and known to have been diseased, is paid for up to three-fourths of its value, where the sum does not exceed \$150. For all animals not known to have been diseased, but which had been exposed, and, therefore, slaughtered, full value is paid up to \$200 each. In compensation to owners there was paid, in 1890, on the above scale, the sum of \$640,000, in 1891, \$730,000; in 1892, \$215,000; in 1893, \$90,000; in 1894, \$30,000; in 1895, \$725—a rapid and notable decrease.

We may conclude that Britain is now practically free from this disease.



Lord Stirling, First Prize Two-year-old Ayrshire Bull,

Winner of first prize in his class at Montreal Exhibition, 1896, and of first prize and diploma at Sherbrooke. The property of William Wylie, Howick, Que. Mr. Wylie's Dainty Lad also won second in the same class at Montreal.

a determined effort was made to stamp the disease out of Cook County. Other States went at the work as well as Illinois; and in 1892 the Secretary of Agriculture for the United States was able to report that, in the spring of that year, away down east, in New Jersey, the last animal in the United States affected by contagious pleuro-pneumonia had been slaughtered, and that the whole country was completely free from the disease.

When we think of the large extent of country to be covered in the work of extermination, of the years that the disease had been making its way from Chicago in all directions, of the difficulty there must have been in tracing infected stockers to the feeding farms of the great corn-

ing States, where they would be in contact with the home cattle of the farmers, of the young bulls sent to the grassy ranches and the prairies of the west, we may have some idea of the work that must have been done before the above result could have been reached, and of the credit, therefore, that is due to the officers of the Bureau of Animal Industry for the good result they accomplished.

The disease is so erratic, and, in some cases, so slow in developing, that it is always hard to stamp it out. Ordinarily an animal, after taking the disease, will show symptoms in from two to six weeks, but it may be twelve weeks before it is plainly apparent. Again, an animal may take the disease and have it in such a mild form as not to be detected or even suspected; and yet such an animal may spread contagion as quickly and as widely as the worst cases. Buildings become foul with infection, and a fresh, healthy herd brought into them may contract the disease. It is clear, then, that pleuro-pneumonia is a disease that needs careful watching out for.

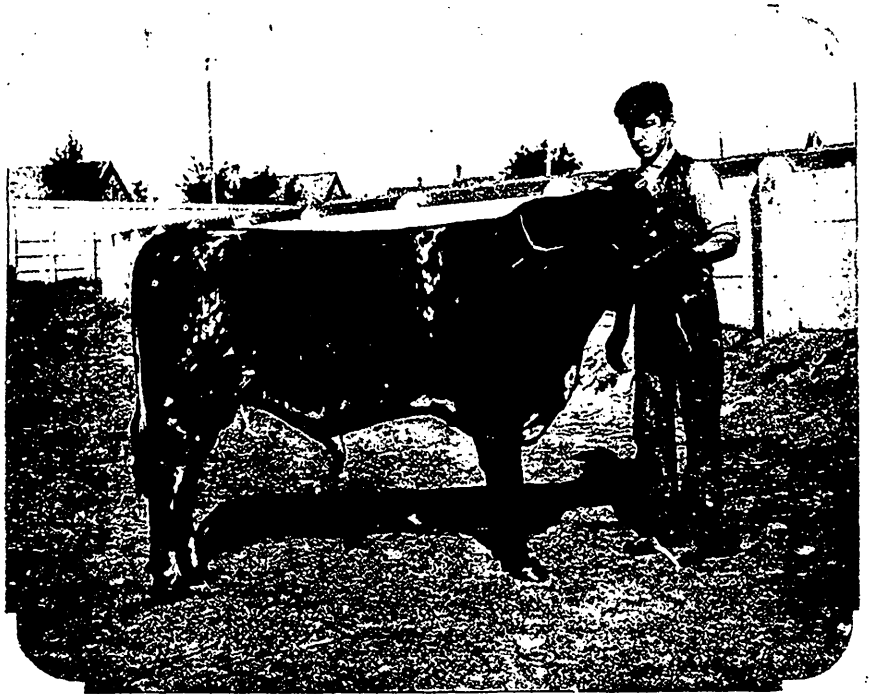
## NO CONTAGIOUS PLEURO-PNEUMONIA IN CANADA.

There never has been any record of a case of contagious pleuro-pneumonia in Canada. Our quarantine was started early enough, and was effective; no disease ever got beyond its walls. Because of this clean bill of health our cattle had, for a time, free entry into the United States (until 1892, as stated below). The same privilege was accorded to us by Britain, but on condition of our guaranteeing to keep up a close quarantine against the United States.

In 1892 we lost the privilege of having our

dian Government had broken their agreement with Britain, and had taken off the quarantine in Manitoba against the United States in favor of settlers' cattle. On the strength of this report our cattle were scheduled; and, in consequence, have, since that date, been denied free entry into the British markets.

As soon as this step was taken by Britain, the United States Government passed an order putting a ninety days' quarantine against Canadian cattle. They said, in effect, "We do not know whether there is contagious pleuro-pneumonia in Canada or not; the British authorities



Banker, First Prize Bull Calf,

As shown at Toronto Industrial Exhibition, 1896; also at Central Canada Exhibition, Ottawa. The property of W. C. Edwards, M.P., Rockland, Ont. At Toronto Banker was awarded the first prize out of thirty-two entries. (See FARMING for October, page 119.)

cattle enter freely into Britain, and since that date our cattle are slaughtered at the port of entry. The Canadian Government claimed that this action on the part of the British authorities was based on an erroneous opinion, inasmuch as we had never had any contagious pleuro-pneumonia in Canada.

Professor Brown, however, the veterinary adviser of the British Board of Agriculture, reported that he had found contagious pleuro-pneumonia in the lungs of a fat ox shipped from Winnipeg, May 7th, 1892. He also reported that the Cana-

say there is, and they ought to know; we will take their word for it, and quarantine all Canadian cattle."

The irony of fate was against us in this matter, inasmuch as Professor Brown more than hinted that he believed the ox which he found affected was not a Canadian ox at all, but an animal from the United States, allowed to be shipped through as Canadian.

## DISPUTES ABOUT THIS DISEASE.

We have all frequently seen reports in the press of the detection of animals from the United

States landed in Britain having contagious pleuro-pneumonia. The press of the United States has been loud in declaring that this could not be so; that the men who made the inspections were sent to find the disease, and had to obey instructions; that the whole business was a protective scheme in disguise.

It is not difficult, however, to account for these discrepancies. There is this disease—*contagious pleuro-pneumonia*—and there is another disease, known simply as pleuro-pneumonia. Ordinary inflammation of the substance of the lung is known as pneumonia; if the covering of the lung be also included in the inflammatory area, the disease is called pleuro-pneumonia. This latter disease, pleuro-pneumonia, is not confined to cattle, as contagious pleuro-pneumonia always is; it is found in the human family, and also in horses and many other animals.

Strangest of all, these two diseases (pleuro-pneumonia and contagious pleuro-pneumonia) cannot be distinguished with any certainty, unless by the best scientific experts, skilled in the use of the microscope. Even these experts do not always agree. Dr. D. E. Salmon, chief of the United States Bureau of Animal Industry, says: "It is well known that, generally, no special characters are found by which contagious pleuro-pneumonia can be distinguished with certainty from the sporadic form of inflammation of the lungs and pleura. . . . If a single case of inflammation of the lungs and pleura is discovered, it is difficult or impossible to make a positive diagnosis." In view of this opinion it is evident that there is a good deal of room for doctors differing.

#### RESULTS OF OUR LIMITED MARKET.

The stoppage of the free entry of our live cattle into the British market, in consequence of the scheduling of 1892, has proved a great loss to our beef trade. Had our beef interests been as well looked after by the Dominion authorities as our dairy interests have been under our special Dairy Commissioner, it is possible that the unfortunate scheduling would not have happened.

And, when it did happen, there were some who said it was no loss, but that it would be rather a blessing, inasmuch as it would compel our farmers to feed their cattle at home, and use the coarse grains grown here to do so, thus making in Canada the additional profit which had been made by the British feeder.

This idea, however correct in theory, has not been realized in actual practice. No greater number of good, well-finished cattle are now sent to Britain than were sent before 1892. On the other hand, careful estimates put the loss to the Canadian cattle-raiser, from his inability to sell his

stockers, at from \$10 to \$15 per head; and a larger sum than this was often made, in addition, by the British farmer who handled our cattle and prepared them for the British market. There has been, therefore, a double loss—a loss to the Canadian cattle-raiser and a loss to the British fitter.

The fact is that, in actual practice, the surplus of our stockers have not been taken by our feeders and fitted for export, as was said would be the case. On the contrary, they have been dumped, half-fed, on our local markets, causing a lowering of prices and a demoralization of the trade generally. Last year there were many train-loads of Ontario cattle bought at nominal prices and sent west to the ranches near Calgary, to be grass-fed there.

These statements may seem to be reflections on the enterprise of our Ontario cattle men, but they are, nevertheless, true. Our people have not, as yet, got generally into the way of fitting cattle for the British market, as the requirements now are. What with high freights, both on rail and ocean, and the lack of competition in freights, and also the difficulty of keeping up the quality of our herds owing to restrictions in the way of importing new blood, our beef cattle industry has been greatly depressed, and our farmers generally have not felt encouraged to go into beef-fitting to any great extent.

#### ABOLISH QUARANTINE.

If we believe that the British market is permanently closed against the free entry of our live cattle, and that contagious pleuro-pneumonia is practically exterminated, not only in Britain, but in the United States as well, there seems to be no good reason why our quarantine should be kept up against either the United States or Britain. We want new blood from both these countries, and we want it without any needless extra expense in getting it. We have good, healthy animals ourselves, and we want free entry for them into the United States, that we may sell them to the mutual advantage of ourselves and the buyers.

A certificate from a competent and reliable local veterinary surgeon that the individual animal, the herd from which it comes, and the district surrounding are each free from disease, and have been for a reasonable time, should be required. Then if, at the frontier, after careful inspection by a Canadian officer, another certificate is given, this, under present conditions, ought, for purebred stock, to be quite sufficient.

In addition to these checks, the Department of Agriculture could keep track of imported animals, and, if any necessity arose, could have them partially isolated and periodically inspected on the owner's farm for a limited time of probation

The owner would naturally be directly interested in keeping the isolation as effective as possible till the time of probation had passed. In the event of actual outbreaks the regulations should be made quickly exclusive.

As far as stockers and fat cattle are concerned, there may be differences of opinion as to the advisability of abolishing quarantine, as there would come up the question of Texas fever. This disease does not seem to be nearly as formidable now as it was years ago, but it would have to be considered in any scheme that would admit southwestern ranch cattle.

At present the duties on ordinary cattle would be a bar to any extended trade between the United States and Canada; but if quarantine regulations were relaxed, there is no doubt that the volume of this part of the trade would be very greatly increased. Only last fall a lot of 330 head were purchased in the county of Grey, shipped to the United States, and, in a private quarantine on the purchaser's farm, were fed for the New York market. Of course, the purchaser had to pay the United States duty in taking them across the frontier.

#### OCEAN FREIGHT RATES.

The question of freight rates is always an important one to the farmer. Rates have lately been ruling much higher to Liverpool *via* Montreal than they have been from the west to Liverpool *via* Boston or *via* Baltimore. This puts our cattle dealers at a great disadvantage; and it is proposed that arrangements be made with the United States to allow shipments of cattle in bond to be sent through that country for Britain, in exchange for a like privilege accorded their cattle going forward through Canada. If such an arrangement would give us competition in freight rates, and, as a consequence, *cheaper* rates, it certainly should be tried.

Recently the rate to Liverpool was forty-seven shillings per head from Montreal, while at the same time cattle were being taken by way of Boston for twenty-seven shillings per head. The higher price of freights *via* Canadian routes is frequently quoted by buyers as a reason why prices in Ontario are lower than the Chicago quotations. Usually the farmer knows nothing about what rates are, and when he ships his own stock he can seldom get as low a rate as large dealers. As a rule, therefore, he never thinks of making a shipment for himself. But I know of one farmer this year who fed a large lot of good cattle, took them *via* Montreal to Glasgow, and sold them there at a price which left him five cents net at home after paying freight charges and all other expenses.

This was as much as the best cattle were then bringing in Chicago, and the example is useful in showing what might frequently be done by individual farmers if there were a larger competition in rates, and, therefore, a larger volume of trade going on.

#### PRESENT POSITION AND NEEDS.

With our beef cattle shut out of the inland markets of England and Scotland, high freight rates, and, narrowed markets, the Canadian breeder and feeder of beef cattle has for some time had neither a profitable nor a pleasant time. Depressed trade and very low prices have driven some farmers out of the business, and others have grown careless in their breeding, thus making bad worse.

If a good animal cannot be fed at a profit, it is quite certain that there will be no money in feeding a scrub. But this fact has been too much ignored by our farmers, and, in consequence, a lot of inferior cattle have been bred that are no credit to any country. Our beef cattle are not equal to what they were five years ago; they are going backward in quality, and this at a time when, more than ever, we need good, blocky, easy-feeding animals to make a profit with in the face of lowered prices.

If we are to succeed at all, the quality in our stock must be kept up. The downward trend must be stopped at all hazards, and the upward grade taken again.

For some years past breeders of good beefy bulls have been unable to sell them even at sacrifice prices. Very many valuable breeding animals have been sent to the butcher at prices less than they would have brought as steers. The result is that to-day a buyer may go through the length and breadth of a township without being able to find a bunch of really first-class feeding steers. The short-legged, deep-fleshed, blocky type, with soft skins and nice handling hides, are all too rare.

To remedy this state of things, the use only of purebred bulls of the right sort should everywhere be proclaimed and acted upon. If this is not done our beef trade is doomed. We must breed the best or go to the wall. Quality is more needed to-day in beef production than ever before.

#### THE COST OF PRODUCTION, HOWEVER, HAS BEEN LOWERED.

Low prices and small profits have not been without bringing us some benefits. The dark cloud has had a silver lining. Our best farmers have faced the situation and have solved the problem for themselves, and shown how others can solve it. This, however, has not been ac-

complished without hard work on their part and some failures; but the net result is a great benefit to our country.

The cost of production has, with our best feeders, been very much lowered, and to-day cattle are being fed in Canada cheaper than they ever were before. So marked is this reduction in cost that even at present prices it has been shown again and again that good beefing cattle can be fed and marketed so as to leave a very substantial profit.

Another benefit is that these cheaper methods of feeding enable more animals to be kept on a farm than could be kept before; and the system, therefore, means, if generally adopted, an ever-increasing productiveness of our farms from the resultant manure returned to the soil; while it should also be remembered that the manure returned by fattening cattle is richer and more valuable than that returned by growing cattle, which means a further gain to the soil where cattle are finished off on the farm instead of being sold as stockers.

## PROSPECTS.

The prospects for the beef trade are, as far as can be judged, *excellent*. The present consumption of meat in America is away below normal requirements. Continued depression in manufacturing and commercial circles has left mechanics and others unable to spare the money to buy the beef they need and crave. There are already indications of a turn in the tide, and this turn will find first-class cattle scarce, which must result in greatly better prices. Something, too, can be hoped from an improvement of trade with Britain. Before our present calves will be ready for these improved markets, prices will probably be far in advance of present quotations.

The lessons are, therefore, plain. Improve the quality of the herds. Use only the best bulls. Keep the calves steadily growing. Feed liberally along the lines of the best modern feeders. Then, with cheapened transportation rates and wider markets opened to us, a great improvement in the beef trade of Canada may certainly be looked for.

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## IMPROVED OCEAN FREIGHT SERVICE.

A SAFE, CERTAIN, AND MODERATELY FAST RATHER THAN A PARTICULARLY FAST SERVICE IS WHAT CANADA'S AGRICULTURAL INTERESTS REQUIRE.

The position stated in the above title is, we believe, the right position for farmers to take with respect to the proposed bonus of \$750,000 a year to a fast ocean service, and it is, we believe, the position which the great mass of the farmers of Canada do take. It is the position taken, moreover, by most of our experienced shippers who have to do with farm products, and by the men who are actively engaged in the transportation industry as ocean freight-carriers. It is also the position taken by no less an authority than Sir Sanford Fleming, who, after most carefully considering the subject in all its bearings, pronounces that a 20-knot service by the St. Lawrence route is certain to prove a failure. His words are:

"Any attempt to establish on the St. Lawrence route a line of fast trans-Atlantic steamships to rival those running to and from New York would result in disappointment. Our great waterway will always be employed to the greatest advantage in the conveyance of *staple products* and ordinary cargo merchandise at the lowest possible rates, but to secure low rates it must be carried in steamships of moderate speed."

The question is not a political one; it is one of practical business. Our fruit industry, our dairy industries, our live stock and dead meat industries, have all been suffering for lack of good

ocean transportation facilities, coupled with corresponding land transportation facilities. What is needed is a means by which any of our products in the above industries can be shipped at any point in Canada for transportation to any point in Britain, with absolute certainty of safe arrival in marketable condition. *A safe, a certain, a regular, and a cheap transportation, from any Canadian point to any British point—this is the desideratum.* A day or two less of time in the transit, if it increased the freight rate materially (which it undoubtedly would—even to the point of prohibition), would be of no value to us.

Farmers are so vitally interested in this matter that any step of progress towards the end desired is of the utmost consequence to them. Many things, we believe, are happening, and will presently happen, tending to bring about the achievement of our hopes in this direction. In the meantime no event of greater importance has lately occurred than the building of *The Canada*, a fine large twin-screw steamship, the largest and finest ever commissioned for the St. Lawrence trans-oceanic route. She is a 16-knot vessel, and can carry 7,000 tons of merchandise; and she can leave Liverpool on a Thursday evening and deliver her mails at Montreal the following

Thursday afternoon. This is fast enough for our business requirements. Were she built to run 17 knots an hour she could lift only 4,000 tons of merchandise, every pound of which would, of course, have to pay in consequence a much higher freight. Were she an 18-knot vessel, she could lift only 3,000 tons; and if her speed were 20 knots, she could lift only 1,000 tons. This rapid decrease of carrying capacity with such slight increase in the rate per hour shows how the freight rates of 20-knot vessels must practically be prohibitory to farm products.

The question then is, Can Canada afford to spend \$750,000 a year in maintaining a service which, at the best, can be only a passenger service (and even that, according to Sir Sanford Fleming—and no one knows better—a service certain to end in disappointment)? or shall not the Government bend all its energies to securing what the farmers of this country really need, and what every one of our agricultural industries is suffering for the lack of—viz., a *certain, safe, regular, cheap, and moderately fast freight service* from any Canadian point to any British point? We believe the question needs only to be stated to receive its answer from all practical men.

On October 14th the Dominion Steamship Company, to whom *The Canada* belongs, held a reception on board the vessel as she lay at the

wharf in Montreal on the occasion of her first visit to that port. Present at this reception was a very distinguished company, including many leading members of the Dominion Government and parliament, also of the Quebec legislature and the Montreal city council, and many eminent representatives of the commercial, financial, shipping, and transportation interests of both city and country. The whole proceedings were of the greatest significance to every farmer in the land, but we have space for only a few characteristic extracts from some of the speeches that were made.

EXTRACTS FROM MR. LAURIER'S SPEECH.

"There is another question—the question of transportation, and certainly no more fitting place could be found than on board the good ship *Canada* to talk of that.

"Here we are in Montreal, the commercial metropolis of Canada, and I express my own feelings as well as yours, the mass of commercial men of Montreal, that we are, above all things, a *nation of farmers*. Other interests we have, and of great importance, I admit. We have fisheries not approached in any part of the world. We have forests not surpassed elsewhere, and mines which have not yet given the whole of what is expected of them, but we may fairly expect that they will, if not eclipse, rival California and Australia. But if I am to speak my own mind, the farmer is the chief of all. Unfortunately, the condition of the farmer for fifteen or twenty years has not been as brilliant or prosperous as we might have expected.



Twin-Screw Steamship "Canada," lying at her Montreal dock.  
The property of the Dominion Steamship Company, Montreal. Rate, 16 knots; freight capacity, 7,000 tons.  
The first trip of the *Canada* to Montreal was made October, 1896.

"The condition of the farmer everywhere was once one of exceptional wealth. After the Napoleonic wars the fortunes of the English farmer improved greatly, and after the introduction of free trade this much may be said for England, that her fortunes rose in a manner unexampled in the history of the world. The Canadian farmers were especially situated to take advantage of this. The time came when the produce of England was insufficient to feed her people, and they had to look abroad, so that for fifty years or so the Canadian farmer had almost a monopoly of the British market; but for the last twenty years the conditions have been changed. The farmer on this side has no longer the monopoly of the English market, but has to compete with Argentina, Russia, and even India, as well, and the Canadian farmer is so situated that while his competitors are on the seashore his own fields are thousands of miles away from it.

This is the problem, and the one thing which in this country the Government and every citizen must apply himself to—the question of transportation. No one has done more, Mr Torrance [the Canadian representative of the Dominion Steamship Company], than you towards the solution of that problem. I am bound to say for the late Government that the problem engrossed their attention for many years. It was recognized years ago that the Atlantic system had to be revolutionized, and the Government interested itself in the matter. When the present Government came into office, they had to approve or reject a contract made by their predecessors with the Messrs. Allan, deservedly well known and popular, with the object of giving us a fast Atlantic service. It was the duty of the Government to give a decision immediately, but this we could not do on the spur of the moment. We thought that before committing the Government we were bound to have more information. I speak in no carping or fault-finding spirit of our predecessors, but I want to impress on you that the late Government, in their idea of improving the service between Europe and Canada, had in view a passenger service, and not so much a freight service.

"Before committing the present Government to that contract—I do not say that we will not come to it eventually—which would have chiefly induced passenger traffic, we thought it wise to see if it were not possible to have a passenger traffic, but to also effect an improvement in freight traffic. The farmers must have a great deal to say on that question, because the prices of all farm products are determined in the British markets, and every cent paid by the farmer is taken from his products, and it therefore follows that every cent deducted for freight is so much less profit for the farmer. We therefore thought it well to

look ahead and inform ourselves before coming to a decision on this matter."

## EXTRACT FROM MR. FISHER'S SPEECH.

Hon. Sydney Fisher, Minister of Agriculture, said: "On such an occasion as this I may say a word on a subject of importance. It is the intention and desire of the Government to increase the trade in perishable products. We are producing in Canada the highest quality of fruit products, and the only difficulty is to place them on the English markets. Through the carrying corporations only can this be done, the railways, steamships, and cold storage people at various points enabling it to be carried to a successful issue. I call on transportation managers and capitalists to aid this trade, and by next season have a continued chain of cold storage between the farmers and the English market. I assure you, on behalf of the farmers, that we shall aid you in every way."

## EXTRACT FROM MR. HAYS' SPEECH.

Mr. C. M. Hays, General Manager of the G.T.R., said that he considered the building of *The Canada* the first step in the solution of the great problem before us. In these days of small profits, it was necessary to handle large quantities in bulk, and the first step towards that was the provision of the means by which commodities could be handled. The railways must have heavier locomotives and larger cars, and there must be the steamers into which to unload these cars without unduly delaying the traffic. Possibly, Canada had somewhat lacked in these facilities, and the building of the steamer *Canada* was the greatest encouragement towards the future of the country.

## EXTRACT FROM MR. SHAUGHNESSY'S SPEECH.

Mr. T. G. Shaughnessy, the representative of the C.P.R., said that a most progressive step had been made in providing a ship of the speed and capacity of *The Canada*, and he was certain that this was only one of the immensely progressive steps that would be made in the St. Lawrence steamships when the time was opportune. He concurred in the opinion which had been expressed that larger and cheaper freight carriers were required, and said that heretofore a steamship could take a cargo from Boston for nearly half what one of the St. Lawrence steamers could take it for from Montreal to Liverpool. We want cheaper ocean transportation for Montreal, for if we are to have a position in the markets of the world we must have just as cheap ocean carriage as any other port.

**Ontario Veterinary College.**—The opening lecture of the present winter session of the Ontario Veterinary College was delivered by Dr. J. T. Duncan, a member of the faculty. The chair was taken by Dr. Andrew Smith, president of the college, and several prominent citizens of Toronto graced the occasion with their presence. Dr. Duncan has recently returned from England, where he has been taking a special course of veterinary instruction. His remarks dealt principally with the history of the veterinary

profession, and contained much good practical advice to the students, who comprised the major portion of his audience. The college term opened this season with a good class list, which, while not quite so numerous perhaps as in some former years, is still of highly satisfactory proportions. Students have registered from all over Canada, from most of the States in the Union, from the West Indies, and even from England. The O.V.C. has won a well merited reputation for the thoroughness of its training.



## A PRACTICAL FARMER AS MINISTER OF AGRICULTURE.

The position of Minister of Agriculture for the Dominion is one of great importance. At present it is a position of magnificent possibilities of usefulness, for unquestionably there is, lying wholly

to be got from what he himself is able to get from the soil he tills.

IN FARMING for August last we gave a short account of Mr. Fisher's public life; but as now, in the course of our duty of illustrating the eastern fairs, we have the portrait of a very fine young herd of his to present to our readers, we take advantage of the occasion to give our readers also some particulars of Mr. Fisher's work and experience as a *farmer*. And we think we can do this in no better way than by giving the particulars in Mr. Fisher's own words, remarking only that when they were dictated by Mr. Fisher they were given simply as "points" to our live-stock editor, and with no thought on Mr. Fisher's part that they would be printed identically as dictated :



Hon. Sidney Fisher,  
Minister of Agriculture for Dominion of Canada.

within the province of the Dominion Government, a great work to be done for agricultural industry in Canada.

The improvement of our live-stock trade, which we are all so ardently looking for, by the securing of better transportation facilities, greater competition in freights, larger markets, and a relaxation of quarantine restrictions, is (to say no more) a task which may well employ the abilities of the most skilful and the most energetic administrator.

However, it should be a matter of great comfort to farmers to know that so far as a practical sympathy with their interests, and a practical knowledge of the needs of their situation, can influence action, they have in the present Minister of Agriculture for the Dominion a gentleman in whom they may have the most perfect confidence. What he will be able to do for us in promoting agricultural industry, and removing the restrictions and obstacles that now interfere with and hamper our live-stock trade, is, of course, something that the future alone can answer. But, at all events, we know that his sympathies are sincerely with the farming industry; for he is a farmer himself, and his own living (apart, of course, from his present official salary) is wholly

"I am a Canadian by birth and descent, my great-grandfather having come from Perthshire, Scotland, and settled in Quebec somewhere about 1790. I was born in Montreal, but I was sent to Cambridge, England, for my education, where I took my B.A. degree. I returned home from college in 1872, and in the following year I bought my present farm, though I had but very little practical experience and no training for the work. Since that time I have devoted all my abilities and energies to the business of my farm, taking the line of stock-keeping, and developing it into the making of fancy butter, which last I consider to be the highest development of the business.

"Starting in with little knowledge, I bought common cows and a thoroughbred bull—as good as I could find according to my judgment; first an Ayrshire, afterwards a Jersey, and about twelve years ago a Guernsey. Thoroughly satisfied with the last-named breed for my purposes, I have kept to it ever since.

"My first Guernsey bull was purchased from the well-known herd of the late Sir John Abbott, and afterwards I purchased several females from the same herd. Finding that there was no great choice of the breed in Canada, in 1889 I went down into the States and bought a bull and four females from the thoroughbred herd of Mr. Morton, who was at that time vice-president of the United States.

"Since that time I have been cross-breeding these two strains with what I consider great success; and I am especially proud of the fact that for the last two or three years my young animals have had exceptional success in the prize ring.

"For some twelve or fifteen years past I have been selling all the butter that I could produce to Montreal grocers at fancy prices; and I have taken a great many prizes, both for my butter and my cattle, at the various Eastern Townships and Montreal exhibitions. As far as I can make out I was the first man, certainly the first in Canada, and probably the first in America, to build a wooden silo; for I recognized the fact that the stone or cement silos, which were then being built, were beyond the means of the ordinary farmer, and that wood was for the purpose just as good a material as stone or cement.

"I regret that I can give you no details about the breeding of the young herd whose portrait you have taken. I have not my stock records here, and I do not even know which animals my farmer took to the exhibitions this fall. I picked them out with him when I was at home for a day or two just before he started for the fairs, but I did not look into their pedigrees or breeding, and I could not now describe them without referring to his notes and my stock books. I can only say that their mothers and father, as well as they themselves, are of my own breeding, and that the whole herd came from my bull, Nereus (3749), which I am using at the head of my herd. Nereus is from the Morton bull, out of one of my Abbott cows. I consider him a very successful specimen of the cross."

A few facts in regard to Mr. Fisher's public work as a farmer and dairyman will, we are sure, be interesting to our readers.

He is a director of his own (Brome) county agricultural society, and for a number of years back he has been either a director or vice-president of the Quebec Provincial Dairy Association, and also a director or vice-president of the Que-

bec Provincial Fruit-Growers' Association. By invitation he has gone about to most of the dairy and agricultural conventions held in the Province of Quebec, and spoken constantly on all sorts of agricultural topics.

When the Province of Quebec was desirous of establishing a scheme of dairy factory inspection, Mr. Fisher was deputed by the committee discussing the matter to draw up for the use of the Government a memorandum embodying his views as to what the proposed scheme should be. On this memorandum the present system of factory syndicates and factory inspection was based, and it is a matter of history that it has revolutionized the dairy system of the province. It must be a source of considerable satisfaction to Mr. Fisher to know that now, after six or seven years' work under the system, it has been found necessary to make no change of any consequence in the details of the plan which was outlined in the memorandum which he first drew up.



First Prize "Breeder's Young Herd" of Purebred Guernseys,

As shown at Montreal Exhibition, 1896. The property of the Hon. Sidney Fisher, Knowlton, Que. [NOTE—The Breeder's Young Herd is to consist of one bull under two years, two heifers of one year old and under two years, and two heifer calves under one year; the whole, except the bull, to be bred by exhibitor.]

**THE EARL OF CARNARVON'S BERKSHIRES.**—The Earl of Carnarvon, whose advertisement will be found in our present issue, owns a noted herd of Berkshires. We are informed on reliable authority that pigs of undoubted first class merit can be obtained from his herd. We advise all persons interested in Berkshires to read his advertisement, and if they think of importing anything to write for further particulars.

**SUCCESS OF THE PAGHAM HARBOR CO.'S SHEEP.**—We are always pleased to be able to record the success of

those who are advertisers with us. We therefore record with pleasure the success of the Pagham Harbor Co., of Selsey, Chichester, England, who by their own Southdowns, or else by those that they had recently sold, won at New York as follows: First for old ram; first for ram lamb; second for ewe lamb; first for four lambs the get of one sire (these by their own sheep); and first for yearling ram, and champion and second and fourth for yearling ewes (these by sheep they had sold). Our English advertisers, we are glad to say, are all breeders of high reputation.

## THE FARMERS' INSTITUTE SYSTEM OF ONTARIO.\*

By J. E. BRYANT, M.A.

An influence is at work which is destined gradually to raise the condition of Ontario agriculture until it shall be not merely the most important industry in our country (which it now is), but also intrinsically the most prosperous and the most conducive to the happiness and well-being of those who follow it of all the industries that it is possible for our citizens to pursue.

Ontario has the best natural facilities for the successful pursuit of the more profitable branches of agriculture of all countries in the world. The only countries that can possibly compare with it are the other provinces of our Dominion. Where can a climate be found so certainly to be depended upon for the health of man and beast as our Ontario climate? Where can soils be found so varied in their qualities, but at the same time so uniformly fertile, as our Ontario soils? Where are perennial streams of the purest water more generally abundant than they are everywhere in our province? Where does vegetation, whether of root, or grass, or grain, or tree, respond more liberally to the care of the husbandman than it

does in Ontario? Where is a land freer from those great cataclysms of nature—floods, cyclones, tornadoes, and earthquakes—than is our own land?

And where, too, has a better start been made in the career of agricultural progress than has been made by Ontario? Our farmers are already in the first rank of the world's successful tillers of the soil. In the production of every sort of purebred animal, whether of the stall or of the

pen, our breeders have shown themselves to be the superiors of many and the peers of all. To parody the words of a well-known patriotic song:

We don't want to boast;  
But, by jiminy, if we do,  
We've got the stocks, we've got the men,  
And we've got the methods, too.

It is the same with our dairy work, and it is the same with our fruit-growing, and it is the same with our poultry-keeping and our apiculture. There is no branch of high-class farming in which Ontario does not excel.

But while this praise is justifiable enough with respect to our best men and the highest reaches of our agriculture, it by no means applies to all our farmers and to all our agriculture. There are hundreds and thousands of Canadian farmers who are pursuing antiquated methods; who are selling from their farms year by year the sources of fertility in their soil, and impoverishing themselves and their land as fast as beneficent nature will let them. There are many others, too, who, with better intentions, and with the utmost desire to make



President Mills, O.A.C., Guelph,  
Founder of the Ontario Farmers' Institute System.

the most of their opportunities, are, nevertheless, unsuccessful because their methods and practices are not governed by sufficient intelligence or by a sufficient acquaintance with the methods and practices that best conduce to success. They mean to do well, and endeavor to do well, but all the same they fail for lack of the knowledge how to do better.

It is just here that the influence for good which we spoke of in our opening paragraph is silently,

\* It was intended to illustrate this article by portraits and sketches of the Institute delegates appointed for the coming season (1896-7), and we had prepared a large number of portraits for this purpose. As, however, our list was not quite complete, we determined at the last moment to hold them all over till the December number, when we trust we shall be able to publish portraits and sketches of the entire list of speakers for 1896-7 complete.

but, nevertheless; surely, effecting a constant change for the better. This good influence is the spirit of enquiry, of emulation, of imitation, of trial for one's self, which is aroused and stimulated when farmer meets with brother farmer, the less experienced with the more experienced, the less successful with the more successful, and discuss together the things which concern their calling. Such meetings never fail to do good, even when desultorily held and unmethodically

tem of Ontario and of the good work that it is doing. We shall not in this article take the space to repeat what was there said. We shall, however, emphasize some points there mentioned, and give a more particular account of the present organization and extent of the system and of the work that it is accomplishing.

PRESIDENT MILLS, THE FOUNDER OF THE SYSTEM.

To Dr. Mills, the President of the Ontario Ag-



F. W. Hodson,  
Superintendent of Farmers' Institutes.

managed. How infinitely more potent for good will they be when they become an organic and thoroughly energized part of the farmers' social system!

And this is what the Farmers' Institutes of Ontario are rapidly developing into under their present efficient management; an organic and thoroughly energized part of the farmers' social system.

In FARMING for September we gave a short outline of the origin of the Farmers' Institute sys-

tem of Ontario and of the good work that it is doing. We shall not in this article take the space to repeat what was there said. We shall, however, emphasize some points there mentioned, and give a more particular account of the present organization and extent of the system and of the work that it is accomplishing.

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REVIEW OF THE SYSTEM UNDER PRESIDENT MILLS' MANAGEMENT.

At a meeting of institute workers held in Toronto on February 7th, 1894, Dr. Mills, in a very able and carefully thought-out address, reviewed the work of the institute system from its inauguration in the winter of 1885 to the date at which he was then speaking. In that address he brought out most forcibly a number of points which his experience in developing and managing the work from its very beginning had shown him were of the utmost importance.

JAMES G. MUNRO, of Embro, is secretary of the North Oxford Institute. It is due to Mr. Munro's efforts that this institute, which for a while was in a languishing condition, has now come to the front as one of the leading institutes of the province. Mr. Munro was an early institute worker, and when the institute system was first inaugurated he, with a number of other progressive farmers,



James G. Munro.

started the West Zorra Farmers' Institute, which has had a successful career ever since. It will now, probably, be incorporated with the larger organization. Mr. Munro is a progressive farmer, and, being a fluent speaker, he can easily win and hold the attention of his brother farmers when speaking to them on institute matters. This is one reason, perhaps, why he makes so efficient a secretary.

GOOD LOCAL OFFICERS ABSOLUTELY ESSENTIAL.

The first of these was the absolute necessity of each local institute securing efficient and energetic officers, and especially an efficient and energetic secretary. On this head he said :

"An institute with a live, active, pushing secretary nearly always has a large membership and

large meetings; an institute with a slow, careless, inefficient secretary almost invariably has a small membership and poor meetings. *As secretary, so institute.* You might travel through some ridings for six months without knowing that there was such a thing as a farmers' institute in existence. There are other ridings which you can hardly enter without hearing that the farmers of that locality have among them a very important and useful organization known as the farmers' institute. The difference is all due to the officers, especially to the secretary. . . . To institutes everywhere I would say, If your secretary is inefficient dispense with his services at your next meeting. Continue to change until you get a good one—one who understands how to advertise and work up a meeting; who will canvass for members, answer correspondence promptly, and give personal attention to the details of his work, instead of entrusting them to others. When you get such a secretary pay him for his services, and keep him from year to year."

LOCAL TALENT SHOULD BE UTILIZED.

Dr. Mills' next point was the necessity of each local institute utilizing its own local talent to the fullest possible extent. His remarks on this head are so wise and trenchant that they must be quoted in full :

"No institute can live, grow, and do good work if it fails to bring out and develop its local talent. An institute that is always waiting to be spoon-fed by people from abroad never amounts to anything. It is all right to get outside help occasionally, but it is not right at all to rely upon it for the whole or even the principal part of the work. It is very much better to bring out your own men, develop what is in them, become self-reliant, and use outside men only as assistants. In some respects the papers of local men are the best you can get. The thoughts may not be very elegantly expressed; the diction may be faulty; but they contain the experience of the men who are working under the conditions which exist in your own locality, and for this reason they are of much greater practical value than splendid essays or brilliant addresses by men from a distance."

PRACTICAL MEN MUST BE ON DELEGATIONS.

The third point emphasized by Dr. Mills in his address was the necessity of having only *practical men* upon the institute delegations. Again we quote his admirable remarks :

"Farmers and farmers' sons are pushing ahead; they are becoming more and more intelligent every year; and they can no longer be induced to spend their time in listening to stale platitudes which they have heard or read a score of times. They will not put up with mere talk. They want pithy, practical, instructive papers or addresses, and nothing else will command their attention. Hence we must have good men for our delegations—not mere writers and talkers, nor visionary theorists; but able, well-informed, practical men, who have something to say and know how to say it. Such men are scarce and hard to get. . . . We can get plenty of men who are ready writers and fluent speakers; but mere

writing or speaking counts little with farmers, if a man cannot point to his own practice in support of what he has to say. Farmers are practical men, of strong common sense; and I do not know of any other class of people who have such an utter scorn and contempt for preaching without practice. What use is it for a man with a dirty farm to tell an audience of farmers how to destroy noxious weeds? Or for a man who cannot pay the interest on the mortgage on his farm to read an essay on feeding hogs or raising sheep for profit? Such exhibitions are worse than useless."

**A PERMANENT SUPERINTENDENT ABSOLUTELY NECESSARY.**

The fourth point taken up by Dr. Mills in his address (which may be said to have marked an epoch in the development of institute work) was that the time had come when either he should have an assistant to help him in his administration of the institute system, or else he should be relieved entirely of the care of institute work, and the management of the whole system be entrusted to some competent person as superintendent or director. He saw clearly enough, and expressed himself with equal clearness and force, that the institutes needed more time and attention than, under the conditions existing, he could possibly give them.

It is apparent that the points emphasized by Dr. Mills in his address all had one bearing; namely, that for the institute system to be as successful and useful as it should be, its management should be put into the hands of a permanent superintendent, who should devote his whole time to the work, and who should have experience, ability, tact, and organizing power sufficient to secure an efficient working of all the parts of the system; that is to say: (1) An interested and active membership in every institute; (2) the selection always of capable and energetic local officers; (3) the utilization to the fullest possible extent of local talent in the working out of the system; (4) the securing of none-but competent, practical men, who would command the confidence of their hearers, to serve on the various delegations; (5) the utilization, as far as possible, of the experience gained and results achieved in the working of the various special organizations connected with our agricultural industries; (6) the free interchange of ideas and experiences at local institutes by means of well-regulated discussions, held regularly, at well-advertised times and places; and, finally, (7) the dissemination, by means of published bulletins, reports, etc., to the fullest possible extent, among the whole membership of the system, of these ideas and experiences when found to be useful and practical, and of the best ideas advanced by the local men invited to

address local meetings, and by the different speakers and essayists employed on the various general delegations.

The proposition advanced by Dr. Mills for the appointment of a permanent superintendent or director met with immediate favor. Many expressions of approval were uttered at the meeting at which the address was given, the Minister of Agriculture, who was present, also acquiescing in the idea. During the summer public attention

VALENTINE FICHT, of Oriel, the president of the South Oxford Institute, was born in Strasburg on the Rhine, in the province of Alsace. He came to this country when nineteen years old, and on arriving had no money, and was in debt for his passage out, and had to set to work at once in order to pay for it. Nor could he speak a word of English. Now he has 400 acres of land, and his farm



Valentine Ficht.

(Maple Leaf) has long been noted for the excellence of its Shortborns, Cotswolds, and Clydesdales. He has always taken a deep interest in institute work, and has been an officer of the South Oxford Institute since it was started, and has been its president for the past three years. He has also been president several times of the Agricultural Society of his riding. He has been a successful institute speaker, and his subjects are always practically treated.

was drawn by the agricultural press and otherwise to the necessity of such an appointment being made. Finally, in October (1894), the Government chose Mr. F. W. Hodson, of London, for the position, giving him the title of "Superintendent of Farmers' Institutes."

## APPRECIATION OF DR. MILLS' SERVICES.

It is only just and fair to say that when the institute system was handed over to Mr. Hodson there was the fullest recognition, on the part of the public and of the Government, of the merits of the work done by Dr. Mills in bringing the system to the point of excellence that it by

work which he has done in behalf of our institutes during all these years. I want to tell you what perhaps you don't know, that he has done it all without any remuneration. . . . It is a wonder to me that President Mills has undergone this work all these years without getting anything at all for it; for he had quite enough to do without, and I hope you won't forget this in giving him your vote of thanks."

MR. F. W. HODSON, SUPERINTENDENT.

JAMES A. LAMB, of Walkerton, is the secretary of the South Bruce Institute, and has been so since its organization in 1877. This institute is one of the most successful in the province; its meetings are large and well attended, and in the discussion of the practical topics brought forward at them the members take the deepest interest. The institute also takes an interest in the work of the agricultural societies of the riding, and grants money annually to each of them for prizes. This fact suggests that a plan may yet be found by which Farmers' Institutes and agri-

The appointment of Mr. Hodson to the position of superintendent was an excellent one in every particular. Taking the points emphasized by Dr. Mills in the above quoted address as his guides, he has in his course as manager of the institute system followed them most closely and with the most marked and gratifying success. The general opinion of Mr. Hodson's fitness for the position was most strikingly illustrated by a remark made to the present writer a few days since by a gentleman thoroughly acquainted with the requirements of the place and of the way in which these are being met by Mr. Hodson, and whose opinion was not given either unthinkingly or without a sense of his responsibility in uttering it. He said:

"I do not believe any other man in Canada could have been found who would have done the work so well as he—planned it out so well, organized it so thoroughly, and with such minute attention to details, and, at the same time, with such regard for great practical general results. Men, of course, could now be found in plenty who would take up the work at the point to which Mr. Hodson has brought it, and who would carry it forward successfully. But I do not know of any other man who could have taken it up at the beginning and brought it to its present condition in so short a time so successfully as he."

The great excellences of Mr. Hodson's administration are: (1) The comprehensiveness of his plans; (2) the utility of the objects he aims at; (3) his complete knowledge of the particular details of action necessary to carry out these plans and attain these objects; and (4) the thoroughness of his organization to accomplish these details of action.

The first thing that was done was the securing of an Act of Parliament under which the Farmers' Institute system could be operated just as the schools of the province are operated under the School Act, or as agricultural exhibitions held in electoral districts are operated under the Agriculture and Arts Act. This was done in the session of the legislature following Mr. Hodson's appointment; and by it the Lieutenant-Governor in Council is empowered to establish rules under which the system is administered. The actual drawing up of these rules has, of course, largely been the work of Mr. Hodson.



James A. Lamb.

cultural societies may work together. The institute has also had the travelling dairy visit the riding twice, and its visits have proved very beneficial.—Mr. Lamb's own specialty as a farmer is dairying; a local cheese factory near by receives his milk in the summer time, and during the rest of the year he makes butter and ships it to Toronto.—Mr. Lamb takes a warm interest in local municipal affairs, and has occupied several positions of trust conferred upon him by his neighbors.

that time had reached. At the meeting of institute workers above referred to, the Minister of Agriculture, Mr. Dryden, on a proposition to extend to Dr. Mills a vote of thanks, said:

"I think it is perfectly right that this meeting should tender a vote of thanks to Dr. Mills, not merely for his excellent address, but also for the

## THE WORKING OF THE SYSTEM IN THE SEASON 1894-5.

It is just here, however, that Mr. Hodson's wisdom as an administrator and executive officer has been most strikingly manifested. Instead (as he might have done) of drawing up—out of his own head, as the phrase is—a set of rules which might seem to him to be best, and asking the Department of Agriculture to sanction these, he proceeded in a very different way. In October, 1894, immediately after his appointment, he addressed a letter to the head of each agricultural department in the United States, and of the provinces of Canada, and to the head of every farmers' institute system in America, and to very many prominent and successful institute workers. A copy of a similar circular letter was sent to every executive officer, as far as known, of every local farmers' institute in the province. In each of these circulars he asked for copies of such rules and regulations, and particulars of such methods, as the department or person addressed had found most useful in conducting farmers' institutes or kindred institutions. From the information secured in response to these letters the set of rules under which the Farmers' Institutes of 1894-5 were conducted was compiled. It is right to say that the institutes, as a whole, complied very generally with the requirements of these rules, and the first year's working of the system under the new management was a success, the number of meetings held being increased from 133 to 303, and the total attendance at these meetings mounting up to 71,033, being an increase in one year of almost 40,000.

## SUPERINTENDENT'S EFFORTS TO FRAME A GOOD SET OF RULES.

The Superintendent, however, rightly considered that what he had done in the way of constructing a set of rules was *only tentative*. As soon as the first season's work was over, the rules, as drawn up, were submitted in typewritten form to many of the leading institute workers in Ontario, with requests for criticism and advice. Advice was also sought from leading institute workers in the United States. Some valuable suggestions being offered in response to these requests, the necessary changes were made, and the "Rules and Regulations Governing Farmers' Institutes in Ontario" were finally passed by order-in-council, August, 1895. The institutes operated and the meetings held during the year ending June 30th, 1896, were all governed by these authorized "Rules and Regulations."

It had, however, been the Superintendent's intention from the beginning to give the rules a thorough, practical trial for two seasons before he

would consider them as finally fixed. Accordingly, in the spring of this year (1896) a letter was sent to every officer and every director of

S. P. ZAVITZ, of Coldstream, Ont., the secretary of the North Middlesex Institute, is an elder brother of Mr. C. A. Zavitz, the O.A.C. experimentalist. He has always lived at Coldstream, having been born there. Although he has followed "mixed farming" as a business, his specialty, or (as Mr. Zavitz puts it himself) his "hobby," is the apple tree. It was as a boy at home (his father having a nursery) that he got his first liking for the apple tree, and his love for it has grown and strengthened with his years. Before he was out of his "teens" he was an experienced grafter, and used to go through the neighboring townships improving orchards by top-grafting, and even yet he thinks there is a great deal of this sort of missionary work needed in the country. His own orchard



S. P. Zavitz.

comprises nine acres, and Mr. Zavitz thinks it will stand inspection. His farm is a hundred-acre one, and, apple enthusiast though he is, he does not forget his stock, for he built the first "tub" silo ever put up in his township.—Mr. Zavitz is a veteran institute worker. He was a promoter of one of the first twelve institutes held in the province in 1885 (the one at Coldstream). He has ever since been deeply interested in the good work. He has been secretary of the North Middlesex Institute the most of the time since its organization in 1887. "Eternal vigilance" is in Mr. Zavitz's opinion the only key to success in institute management. As an institute speaker Mr. Zavitz's range of subjects embraces many topics connected with apple culture, and also with general farming; and he has been called to speak upon these in many parts of the province.

every institute in Ontario, asking for a meeting of the officers and directors of each institute with the Superintendent, for the purpose of discussing the rules and regulations passed in August, 1895,



with a view to see if any further amendments or changes were necessary. In this letter the following statements were made :

If, after I have met with you and your officers, and the officers of other institutes, it is deemed advisable to change any clause or clauses

JOSHUA LEGGE, of Gananoque, is one of the best known agriculturists in the province, and equally well known as one of the most public-spirited men in his county and district. His public spirit has shown itself, among other ways, in a long and energetic service as a member of our volunteer force. He was an ensign in active service in the Fenian Raid of 1866, and was in active service in the next Fenian Raid. For fourteen years he was an officer in his regiment, eight of which he was captain.—Mr. Legge is, perhaps, best known to the province generally as one of the most active members of the late Agriculture and Arts Association. He represented his division (comprising Kingston, Brockville, and several adjoining counties) in the council of that association for eighteen years, and



Joshua Legge.

was finally elected its president. He was president of the Gananoque Horticultural Society eight years, and president of his own county agricultural society several times. He assisted in forming the South Leeds Farmers' Institute, and was its first president, and continued its president for ten years, resigning of his own accord simply to give younger men a chance of promotion. This institute has always had good and well-attended meetings.—As a municipal officer Mr. Legge has been equally well honored by his fellow-citizens, but we have only space to say that he was reeve or deputy-reeve of his township for fourteen years, and has been warden of his county—Leeds and Grenville.

of the present rules, it will be done. It is the wish of the Department of Agriculture to make these rules, in every respect, as acceptable as possible. While it is necessary that a uniform system prevail throughout the province, it is not

intended that the rules and regulations shall be burdensome to any institute ; nor is it intended or thought that they will increase the work of the local secretaries. The spirit rather than the letter of the rules is to be observed. . . . By this mail I send you and each officer and director of your institute a copy of the Act and " Rules and Regulations." Will you kindly look them over, and mark upon them such changes as you think should be made ?

MAJOR G. B. HOOD, of Sunnysdale Farm, Guelph, like Mr. Legge, Gananoque, is a veteran of 1866. He joined the volunteer service in 1864, and remained actively connected with it for twenty-six years, during the last eight of which he was major in command of No. 2 Battery of the 1st Brigade of Field Artillery. He then retired, retaining his rank. Major Hood's farm comprises 220 acres, and is one of the best in his township (Guelph). It is devoted to



Major G. B. Hood,

"mixed farming." The cream and milk of his dairy cows are sold in the city. He has a fine herd of Improved Yorkshire pigs to use up the skim-milk left from the cream sold. Considerable feeding for beef and mutton also goes on ; and corn, mangels, turnips, and rape are grown for his stock. No fertility is sold from the soil. Major Hood is a progressive farmer.—He is also a public-spirited one. He is a director of the Swine Breeders' Association ; also a director and associate-secretary of the Provincial Fat Stock Show ; and secretary, too, of the South Wellington Farmers' Institute.

A little later, in order to keep the matter prominently before the directors and officers, the following letter was sent out to the same persons as the previously-mentioned letter was sent to :

DEAR SIR,—I enclose a copy of a letter [the

letter referred to above], a copy of which was previously sent you. Will you kindly give me your hearty co-operation in this matter? We have now had two seasons' experience with the new rules, etc., and, while I believe them to be by far the best in America, yet I am anxious to meet the institute officers one by one, and, by their aid, make further and final improvements.

I remain, yours truly, F. W. HODSON,  
Superintendent.

In the meantime, on March 27th of this year, the Superintendent, by previous appointment, met at Toronto a number of leading institute officers and workers from various parts of the province, and discussed with them the rules and regulations as then existing. Five hours were spent in the discussion, at the end of which time the then existing rules, with a few minor changes, were unanimously adopted. Among those present at this meeting were Messrs. John I. Hobson, Mosforo; David McCrae, Guelph; James McEwing, Drayton; W. S. Fraser, Bradford; T. G. Raynor, Rosehall; A. W. Peart, Burlington; and Professor George Harcourt, St. Ann's, now of Toronto.

#### FINAL AUTHORIZATION OF THE RULES.

Finally, the officers and directors of the local institutes were consulted by the Superintendent, institute by institute, as proposed in the foregoing recited letter. Then, after a careful revision had been made, in which all the suggestions advanced by the various local institutes as aforesaid were duly considered, the "Rules and Regulations," as now existing, were approved by the Lieutenant-Governor in Council in September of this year, and thus constitute the code under which the Farmers' Institute system of Ontario is worked.

#### THE COUNTY COUNCIL EQUIVALENT GRANT.

One recommendation was made by ninety per cent. of the officers and directors consulted to which the Department of Agriculture and the Government did not see fit, as yet, to agree, and in this matter we think the Department and Government are right. Clause 1 of the Rules provides that the sum of \$25 shall be paid out of a legislative grant to each institute organized under the Act and Rules *on condition* that an equal sum be paid to the institute by the county council or municipality in which the institute is organized. The recommendation referred to was that the payment of the legislative grant shall not be dependent on a municipal grant, and that the county councils and municipal councils should be merely *asked* to contribute the sum of \$25 to each institute on condition that the said institute has conformed to the Rules and Regulations governing Farmers' Institutes.

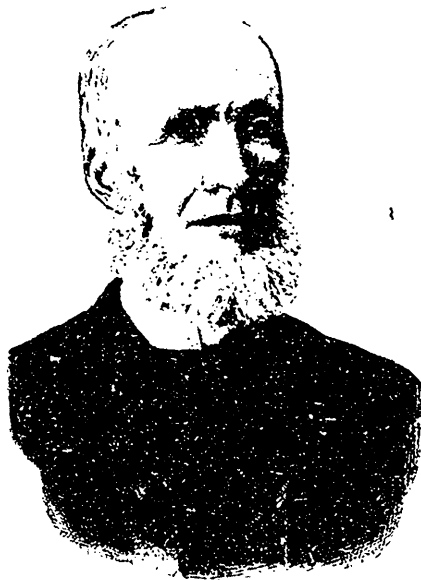
ALEX. McLEAN, of Maple Grove Stock Farm, Carleton Place, has the proud honor of being the president of the largest Farmers' Institute in the province. He claims that the men who come to speak at their institute meetings assert that in no other county in Canada do they find farmers taking such an interest in institute work as they do in North Lanark. North Lanark is certainly to be praised for its institute enthusiasm, for its population is not more than half as large as some western districts. Mr. McLean rightly thinks that the high position which their institute has reached is but a true index of the high standard which the North Lanark men have attained in practical agriculture, and maintains that parts of his district cannot be beaten for high-class farming, or for industrious, energetic farmers.—Mr. McLean's own specialty is dairying, which is also the specialty of most of his neighbors, each one striving to see whose cows will produce the . . . and



Alex. McLean.

the best milk. His farm is of 400 acres, and one of the best in the county. His herd numbers twenty-two milkers and several young heifers. The foundations of his herd were laid in purchases made from the Davidsons and other breeders in the neighborhood of Ashburn, Ont. From them he also has purchased several Clydesdale stallions, which have proved of great advantage to his neighborhood. He has for eighteen years been breeding Shropshires, his stock sires having been purchased from Hon. Mr. Dryden, of Brooklin, the Whitesides of Innerkip, and others. He claims that his flock can be beaten by only one other in the county. He also breeds Chester-Whites, from strains got from H. George & Sons, of Crampton. And, lastly, he breeds Plymouth Rocks so successfully that some of them were prize winners at the Toronto Industrial. Mr. McLean has had a silo (17 feet x 20 feet) for three years, and his experience leads him to assert that dairy stock cannot be successfully wintered without a silo. The silo is in use on many farms in his neighborhood.

CHARLES LAWRENCE, of Collingwood, has been president of the West Simcoe Farmers' Institute since its first organization in 1885. This institute is now one of the most prosperous in the province, but it was only hard work on the part of its president and other officers that achieved for it its present high position. Despite all they could do, it was two years before they had members enough to draw a Government grant, but ever since then their progress has been steady and encouraging. This institute undertakes the largest excursions that go to the Ontario Agricultural College, Guelph, and this year it took three railway trains to convey their party to the college, numbering as it did about 2,300.—Mr. Lawrence has done a good deal for agriculture in his district. He started the Great Northern Exhibition in Collingwood in 1884, and was elected its first president and still holds that position, and is now also its manager. This exhibition is the largest north of Toronto, and has been very successful, and has, moreover, been kept out of debt.—Mr. Lawrence is a successful farmer.



Charles Lawrence.

He cleared his own arms, and put up all his own buildings. When his buildings were first erected they attracted considerable attention on account of the conveniences which they possessed for feeding, being at that time novelties. In these buildings all the feed is ground and cut, and all the water for the stock is pumped, by wind-power, two windmills being used for these purposes. Mr. Lawrence breeds both Leicesters and Shropshires. He brought the foundation of his Leicester flock with him to the bush fifty years ago, and has kept them purebred ever since, and scouts the idea that sheep will run out if kept on the same farm for any length of time. He also breeds light and heavy horses and Shorthorn cattle.—Mr. Lawrence, some years ago, took an active part in introducing the study of agriculture into our rural public schools, but unfortunately, since that time, the Department of Education has taken a backward step in this matter, and the subject is no longer taught in our Ontario schools to any great extent.

We believe that it would be an unfortunate thing for the agricultural industry of the province if the Government were to make this concession. The work of the Farmers' Institute system is wholly educational. It is for the benefit, first, of the entire agricultural population of the province, without respect to wealth, rank, or position; and, secondly, of the population of the province as a whole, for whatever benefits agriculture benefits the entire community. This being so, it is *right* that the *local* community as a whole shall bear its slight share in maintaining this system; and it is *right* that the Legislature of the country as a whole should refuse to grant money for the benefit of a part when that part refuses to tax itself the slight amount necessary to secure the benefit for itself.

The whole matter is one of education. As soon as the farming population sees clearly that the Farmers' Institute system is primarily and principally for its own benefit as a whole, and not merely for a part of it, it will then decide the matter for itself at the polls. Farmers should never forget that by virtue of their plurality of votes they are the *sovereigns* of this country. If a thing is right, why, then, should they hesitate to demand it? We doubt not, however, that, by the exercise of tact and discretion on the part of the Department of Agriculture, the difficulty can be tided over until the educational work of the Farmers' Institute system has had time to have its effect; when it will be seen by county councils everywhere that the expenditure of money for the benefit of their local institute, is as wise an expenditure as they can make, as wise, for example, and as helpful to the community as a whole, as that made for high schools, or even for public schools.

Although the Rules and Regulations, as finally authorized, are now pretty generally known, it may be useful to give here a short synopsis of them. This we do, premising, however, that every institute member should endeavor to make himself thoroughly acquainted with the Rules, etc., in full.

RULES AND REGULATIONS, FARMERS' INSTITUTE SYSTEM OF ONTARIO, APPROVED BY THE LIE TENANT-GOVERNOR IN COUNCIL.

*Synopsis.*

I. LEGISLATIVE GRANT AND OBJECTS.

(1) The sum of \$25 will be given annually out of a legislative grant made for that purpose, to one institute in each district, on condition that an equal sum be given by the county council in which the institute is situated, and on the further condition that the Rules and Regulations govern-

ing Farmers' Institutes imposed by the Department of Agriculture are also complied with. (NOTE.—The boundaries of districts are fixed by schedule, and the fixing of these boundaries so as to conform to local requirements has formed a large part of the work of the Superintendent. The Farmers' Institute districts are at present 104 in number.)

(2) The object of each local institute shall be the dissemination of agricultural knowledge in its district and the development of local agricultural talent. It shall be the duty of the officers to bring the rank and file of farmers into touch with the most successful local men, that the farming community as a whole may become conversant with the best and most profitable methods of farming, stock-raising, dairying, fruit-growing, and all branches of business connected with the industry of agriculture.

II. ORGANIZATION OF INSTITUTES.

(3) One institute may be organized in each district.

(4) and (5) (These clauses provide methods for the organization of new institutes.)

(6) All memberships shall terminate on December 31st of each year.

(7) Each institute shall be known by a distinctive name.

III. OFFICERS.

(8) The officers of each local institute shall consist of a president, a vice-president, a secretary-treasurer, and one or more directors, who shall constitute a board of management. Each municipality in a district should be represented. The majority of the board shall be practical farmers.

(9) The president, vice-president, and secretary-treasurer shall constitute an executive committee.

(10) There shall be two auditors elected annually.

(11 and 12) (These clauses provide what shall be done when a secretary resigns, etc.; or when any other change takes place in the directorate.)

IV. ANNUAL MEETING.

(13) The institute year shall begin July 1 and end June 30. The annual meeting shall be held on the first Tuesday in June, at one o'clock p.m. At this meeting the board of directors and the auditors for the ensuing year shall be elected.

(14) No person shall be eligible for office, or be entitled to vote at the annual or any other meeting, who has not paid his fees in full for the current year. The election shall be by ballot or otherwise as decided by the members present.

(15) At the annual meeting members may suggest points in the district for the holding of the institute meetings during the year; first as to regular meetings, secondly as to supplementary meetings.

(16) At the annual meeting the executive officers shall present to the meeting in writing a carefully prepared report of the proceedings of the past year, in which shall be included a statement of the number of meetings held since the last annual report, the attendance at each, and the total number of papers read and addresses delivered. The

treasurer, also, shall present his report, and the auditors theirs.

(17) The annual meeting shall be devoted to "business," and to the discussion of ways and means whereby the institute may be improved.

(18) (This rule specifies plainly how the annual meeting shall be advertised.)

JOHN DOUGLAS, of Tara, the secretary of the North Bruce Farmers' Institute since its organization in 1887, is a splendid example of what a magnificent influence for good a public-spirited, capable, and high-minded farmer may exert in his own district. In the course of his useful life he has occupied almost every position of trust that it was possible for his fellow-farmers to confer upon him. For thirty-one years he has been treasurer of the agricultural society of his riding; for nine years he was reeve of his township. For thirty-nine years he was a member of the Bruce battalion of volunteers, and eighteen years of this time captain of a company. He has been warden of his county, and for many years has been one of its Justices of the Peace. His closest sympathies, however, have been



John Douglas.

with the institute work, and even this last month he has been organizing a new institute—that of North Bruce the old North Bruce Institute to be after this known as West Bruce. His own institute now numbers one hundred and eighty members, and holds five meetings in the year.—Mr. Douglas has lived on his farm forty-four years, and came and took possession of it when there was not a stick of timber cut upon it. During the last twenty years he has owned one of the best herds of Shorthorn cattle to be found in his riding; but he has lately resigned the active care of his farm to his son.—Full of years and occupation as his life has been, Mr. Douglas is still as hale and almost as active as ever he was. FARMING wishes him a long continuance of his health and activity.

(19) The order of business at the annual meeting shall be: (1) The president's report; (2) discussion thereon; (3) the report of the executive presented in writing by the secretary; (4) the treasurer's report, in writing; (5) the auditors

report, in writing; (6 and 7) suggestion of points at which to hold (a) regular meetings, (b) supplementary meetings; (8) election of directors and auditors; (9) suggestions and discussions how the institute can be improved or made more useful.

(20) At the close of the annual meeting the new board shall meet and elect from among themselves a president and a vice-president, and shall

J. P. Fox, of Winchester, was elected the secretary of the Dundas Institute three years ago, since which time its membership has trebled. Mr. Fox's own hard work as secretary has no doubt been, to a great extent, the effective cause of this good result, but he only claims that he has done his duty and nothing more. It would be a grand thing for the country if every other institute secretary in the province did his duty just as thoroughly. Mr. Fox was born on the farm on which he now resides, and has been engaged in farming and stockbreeding all his life.



J. P. Fox.

His farm comprises 150 acres, and it is one of the best in his section of Ontario. His present specialty is dairying; but he breeds Ayrshire cattle, Leicester and Shropshire sheep, and Berkshire pigs. Mr. Fox takes a lively interest in public matters. He is president of the Patrons of Industry for his county, and has been a director of his township agricultural society for over twenty years. He is a noted temperance worker, and a strong advocate of prohibition.

finally decide at what points in the district the regular and supplementary meetings shall be held during the ensuing institute year. The secretary must report these points to the Superintendent in manner prescribed.

(21) The board shall at the close of the annual meeting appoint from among themselves or otherwise a secretary-treasurer, who shall remain in office during pleasure.

(22) (Provides that in case any institute shall, through any cause, fail to hold a regular annual meeting, the Superintendent may appoint a time for holding a meeting which in all particulars shall be considered the annual meeting.)

#### V. OTHER GENERAL MEETINGS.

(23) Each institute shall hold at least five meetings each year in the district. At these meetings, except in the case of the annual meeting, papers shall be read or addresses delivered on topics relating to agriculture, horticulture, dairying, or kindred subjects. Free discussion is to be encouraged.

(24) All institutes organized under the Act shall be strictly non-partisan and non-sectarian in every phase of their work.

(25) No subject shall be presented or discussion allowed at any institute meeting of a political or sectarian nature; nor shall any speaker or reader be allowed to advertise wares or schemes in which he has a direct or indirect pecuniary interest. No low or frivolous entertainments are to be allowed.

(26) The regular delegations shall visit only two places in one year in each institute district; except when a delegation spends two days at one place, in which case only that one place shall be visited. The Government will defray the whole cost of sending out these regular delegates; but officers and members of institutes are expected to lighten, as far as possible, the expenses of delegates while in their respective districts.

(27) The foregoing rule applies to "regular delegations" sent out by the Department to attend "regular meetings." Should, however, any institute determine to hold "supplementary meetings," and desire speakers therefor, they must make application for the same to the Superintendent at the time of reporting the annual meeting. The Department will pay for the services of the supplementary speaker or speakers thus asked for, but the institute desiring their services must pay all the legitimate expenses of such speaker or speakers from the time they leave home till they return. When a delegation addresses supplementary meetings in more than one district the expenses will be divided equitably among the said institutes, and collected from the institutes by the Superintendent, or be deducted from their legislative grants.

(28) When supplementary meetings are held other than those asked for at the time of reporting the annual meeting, the institutes holding them must pay all the expenses of the speakers attending them, including remuneration.

If a meeting, whether regular or supplementary, has been asked for and granted, and the time and place thereof advertised in the annual bulletin issued by the Superintendent, and if such meeting is *not* held, the institute failing to hold it shall be required to pay the expenses notwithstanding.

(29) All requests of institutes for assistance to hold supplementary meetings shall be made through the secretaries of the respective district institutes to the Superintendent. Applications should state what subjects the speakers are desired to take up.

(30, 31) (These clauses specify particularly how the advertising for all meetings should be done.)

(32) (This clause specifies particularly the duties of the executive committee when once dates

of meetings, and the speakers and topics thereof, have been decided upon. Among other things, this rule specifies that at least one-half of the time of each meeting should be occupied by local talent.)

(33) The time allowed to speakers should be from five to thirty minutes. Each speaker should be limited to the time allotted to him: on the programme.

(35) At each meeting of the institute a committee should be appointed to canvass the audience for members.

#### VI. BOARD OF DIRECTORS.

(36) The board of directors shall have full control of the affairs of the institute. They shall arrange times and places of meetings when not otherwise arranged for, and shall direct the work and policy of the institute.

#### VII. EXECUTIVE COMMITTEE.

(37) The executive committee shall carry into effect the plan of work decided upon by the board of directors and arrange the details of the same.

#### VIII. NOTICES OF MEETINGS.

(38) (This clause provides how and when meetings of the directors or of the executive committee may be called and held.)

#### IX. DUTIES OF OFFICERS.

##### THE PRESIDENT.

(39) The president shall preside at all meetings of the board of directors and of the executive committee. In the absence of the president the vice-president shall preside.

##### THE SECRETARY.

(40) The secretary shall have the powers of a managing-director, acting under the control and with the approval of the executive.

(41-51) (These clauses specifically detail the secretary's duties. Among other things they provide (1) That all reports and returns required by the Superintendent shall be made in the manner specified, upon forms provided for the purpose; (2) That by the 20th of June in each year he shall send to the Superintendent a copy of the institute's annual report, a copy of the treasurer's report, and the name and address of each officer and director elected for the ensuing year; (3) That he shall report to the Superintendent on the 10th of January, in each year, the names and addresses of the members of the institute enrolled up to that date, and make similar reports on the 10th of each month following; (4) That at the close of each institute meeting he shall send to the Superintendent a detailed report of the meeting, in which report shall be stated, among other things, the name and address of each person who read a paper or gave an address, and a comment on its value, whether good, bad, or indifferent; and (5) That when possible he shall retain the manuscripts of all papers read at meetings by local members, so that he may when required furnish the Superintendent with the same. Each institute is required to forward at least two such papers each year, which may be published as the Superintendent may decide.)

##### THE TREASURER.

(52, 53) (These clauses detail in particular the duties of the treasurer which are the ordinary ones pertaining to such an office. The treasurer, however, is required to use such forms for cash books, receipt books, membership tickets, etc., as may be required by the Superintendent.)

W. J. McNAUGHTON, of Lancaster, is secretary of the Glengarry Institute, and an active and enthusiastic institute worker in every respect. When his institute was formed, in the fall of 1886, he was chosen its first secretary, and he has remained in the position ever since, and has worked it up until it is one of the best institutes in eastern Ontario. Mr. McNaughton was also on the board of directors of the Central Farmers' Institute so long as it was in existence. As a practical farmer his position has been recognized by his having been appointed by the Agricul-



W. J. McNaughton,

ture and Arts Association as one of the prize farm judges in the competition for 1890, and he is, at present, secretary of his own township plowing match association.—Mr. McNaughton's specialties in farming are milk production and pork production. He is, at present, milking fifty cows and feeding one hundred and twenty-five hogs, and he considers the combination of dairying and hog raising, as prices now are, the most profitable occupation that the farmer can give his attention to.

##### THE DIRECTORS.

(54, 55, 56) (These clauses specify the duties of directors. As far as possible the directors shall be representative of the various municipalities in the district, and for that purpose may have municipalities assigned to them by the board. The principal duties of directors who are not officers are: (1) To use all means to increase the institute membership in the municipalities of

which they are representative, and (2) to assist the executive to make meetings successful when these are held in the municipalities which they represent. Directors must attend to their duties, otherwise they are ineligible for re-election.)

#### GENERAL RULES.

(57, 58, 59) (The principal provision of these rules is that all institute moneys must be spent in

C. W. YOUNG, secretary of the Cornwall and Stormont Farmers' Institutes, is not a farmer, but is editor and proprietor of the *Cornwall Freeholder*. He is, however, an enthusiastic gardener and grower of small fruits, his hobby being intensive cultivation; and he has had some success as a breeder of fine poultry, and is president of the Cornwall Poultry Association. Mr. Young was instrumental in securing the formation of the Stormont Farmers' Institute, and after the death of its first secretary was elected to succeed him. He has now held the position for



C. W. Young.

a number of years. He also was the prime mover in establishing the Cornwall Farmers' Institute, and is its secretary as well. He thus has the honor of serving as secretary two important institutes. During the World's Columbian Exposition at Chicago, in 1893, Mr. Young acted as press agent for the Ontario Commission, and it was owing, in a large measure, to his efforts that the merits of the display made by Ontario in all departments became so well known to our own people and to the world at large.

the district in which the institute is operated, and be devoted (1) to defraying actual legitimate expenses, (2) to employing suitable persons as speakers or readers at institute meetings, (3) to assisting in circulating agricultural, horticultural, live stock, and dairy literature or periodicals among the members, or in establishing a circu-

lating agricultural library for the use of members, and (4) to remunerating the secretary for his services. Every officer and director is expected promptly to answer all official correspondence addressed to him by the Superintendent, and to furnish any information required relative to the affairs of the institute.)

#### QUORUM.

(60) At a duly advertised general meeting of members, either annual or otherwise, ten shall form a quorum. At a directors' meeting five shall be a quorum. At an executive committee meeting two shall be a quorum.

#### RELATION OF BOARD TO SUPERINTENDENT.

(61) The officers and directors shall as far as practicable act upon the recommendations of the Superintendent, and shall submit to him, through the secretary, all questions relating to the welfare of the institute, upon which advice may be required.

#### PUBLICATIONS TO WHICH MEMBERS ARE ENTITLED.

(62) Each member of an institute is entitled to receive a copy of the following publications issued by the Department of Agriculture:

1. Report of the Ontario Agricultural College and Experimental Farm.
2. Report of the Ontario Agricultural and Experimental Union.
3. Report of the Dairymen's Association of Eastern Ontario.
4. Report of the Dairymen's Association of Western Ontario.
5. Report of the Ontario Creameries' Association.
6. Report of Farmers' Institutes.
7. Reports of the Dominion Cattle, Sheep, and Swine Breeders' Associations.
8. Reports of the Poultry Associations (East and West).
9. Report of the Good Roads Association.
10. The Bulletins of the Agricultural College and Experimental Farm.

#### REQUIREMENT AS TO BLANK BOOKS AND FORMS.

(63) The blank books and forms used by the secretary-treasurer shall be those authorized by the Department of Agriculture. The membership books, mailing books, cash books, etc., and the blank forms for reports of meetings, financial statements, lists of members, etc., may be had from the Superintendent.

#### ORDER OF MEETINGS.

(65-68) (These rules provide specifically the order of business to be followed at all meetings other than the annual meetings, and also the rules under which the business of the institute meetings is to be conducted. The order of business at a general meeting, other than the annual, is as follows: (1) Calling the meeting to order by the president; (2) reading and disposing of communications; (3) reports of committees; (4) programme of the day and discussion; (5) question drawer; (6) adjournment.

EXPLANATIONS (OFFICIAL).  
MEETINGS.

The "five meetings" referred to in clause 23 may include, as well as the "annual," "regular," and "supplementary" meetings of the institute, meetings with the "travelling dairy," if held in the district under the auspices of the institute; also "picnics," if addresses on agricultural subjects are given, or if the point visited is one of agricultural interest, such as an experiment station, a noted farm, etc.; also "official meetings" called to meet the Superintendent. A meeting continuing two days may be counted as two meetings.

LEGISLATIVE GRANTS.

The legislative grants may be expected to be paid very soon after the annual reports of the secretary and treasurer, required by clauses 16, 47, 48, 49, and 52, have been sent to the Superintendent by the secretary. These reports are required to be sent in promptly by June 20th. When this is done by all the secretaries, the officers may expect to receive their legislative grants about July 1st.

ALFRED S. YARWOOD, of Picton, is the secretary of the very efficient Prince Edward Institute, considered, by those who know, one of the banner institutes of the province. Its membership runs up to 248, and its financial standing is first-class. Mr. Yarwood has been its secretary for six years. Mr. Yarwood owns a beautiful farm 1½ miles from Picton, and, though a general farmer, is working his way



A. S. Yarwood.

into small fruits. For a number of years past he has been growing strawberries both extensively and successfully; and along this line he has made a specialty of the old standard, "Wilson's Albany," and now has it growing pure, unmixed with any lower-grade but more productive variety. Mr. Yarwood is reeve of his township.

H. C. HOAR, Bowmanville, has been secretary of the West Durham Farmers' Institute for the last three years, and has his institute in fine shape. He is also an enthusiastic local worker in institute matters, and, as a speaker, has attended every institute meeting held in the county of Durham for the past five years. Although taking an ac-



H. C. Hoar.

tive interest in all public matters, he has never sought public office. In 1867 he took a course of lectures on agriculture in the University of Toronto, and has since devoted considerable time to agricultural studies. He has followed "mixed farming," rather than special farming, and has had his own farm since 1860.

CIRCULAR LETTERS.

The Superintendent's communications to institute officers are principally by circular letters. These circular letters always contain recommendations of a provincial nature. All the plans proposed may not suit every institute, but institute officers are expected to carry out the suggestions which are best suited to their respective districts. Very frequently questions asked by institute officers are answered by these circulars. When sending out a circular to secretaries, the contents of which should be known to the directors, the Superintendent always sends a copy to each director. He does this to lessen the secretary's work, and to help him and his directors.

When it is necessary for the directors to be called together to consider an important question, they should be supplied with the facts at least a week before they meet. When they come together thus advised they can discuss matters intelligently. If the Superintendent did not send copies of all circulars dealing with institute work to each director of an institute, the local secretary would have to do so. If the Superintendent does it, it saves the local secretary the trouble of doing so.

MEMBERSHIPS.

The department will, hereafter, cancel all membership lists on December 30th, each year. Secretaries should revise the membership lists



the first week of January and send to the Superintendent the new lists as early in the month as possible (see clause 48). It is recommended by the Superintendent that new members joining and paying their fees during September, October, and November shall be considered as paid-up members until the end of the succeeding year.

### SUGGESTIONS (OFFICIAL).

#### I. AS TO PAYMENT OF SECRETARIES AND OTHER OFFICERS.

There is no general system regarding the payment of secretaries and other officers. Some in-

GEORGE CUSHING, of Kenilworth, secretary of the East Wellington Institute, had the misfortune to have his course at the Ontario Agricultural College, which he had just entered, stopped short by a disastrous fire, which burned his father's barns and crops, and made it necessary for him to return home again. Despite this drawback, Mr. Cushing has, by observation, reading, and reflection, since pursued the studies which were thus interrupted, and is now looked upon as a most progressive farmer. His arm of



George Cushing.

one hundred and fifty acres is chiefly devoted to dairying. He has purebred Ayrshires, half-bred Holsteins, and Shropshire sheep, and most of the modern improvements which a good, up-to-date farm should have. He has been secretary of his institute since 1889, and, with the hearty co-operation of a good president and board of management, has worked it up so that it has a first-class standing and gets both legislative and county grants without any difficulty.

Institutes are paying an ample sum for services rendered; others are paying too little. This is a matter that must be left entirely to the local boards; yet it is desirable that, if possible, a uniform system be adopted throughout the province. The following plan is respectfully suggested:

If the institute has a membership of fifty, the secretary to receive \$10 annually and all legitimate expenses while attending meetings, whether of the institute, the directors, or the executive officers. In addition to this, to receive \$5 for

each additional fifty persons who join the institute. By this plan an institute with a membership of two hundred will pay its secretary the sum of \$25 net for his services. As a rule, the success or failure of an institute depends on the secretary. If an institute has a good secretary it will flourish; if the secretary is not up to the mark the institute will, sooner or later, go to the wall. Therefore the best available man should be chosen for this position, and he should be liberally dealt with.

Many of the presidents and directors are now doing a good deal of work for which they receive no remuneration, and they often have to pay their own expenses. It is not necessary for the directors to meet frequently; probably once or twice a year is frequent enough, namely, just before and just after the annual meeting. But the executive officers (see clauses 9, 37, and 55) should meet much more frequently; and, if the funds of the institute will allow it, they should be paid their actual expenses when attending meetings or engaged in institute work.

#### II. AS TO INCREASING THE MEMBERSHIP.

In order to increase the membership and promote the interests of the institute, each district should be canvassed annually, as provided in clause 54. It is suggested that, in order to meet the expenses of each director so engaged, a commission of, say, 25 per cent. be allowed on each subscription taken by him in the section or township he represents. The percentage of the commission may, of course, vary with local circumstances.

When expenses are paid otherwise than by commission, every care should be taken to secure economy.

#### III. AS TO ADVERTISING.

(The suggestions of the Superintendent as to the best methods of advertising so as to secure the utmost possible efficiency with the least possible expense are most complete and practical. As these suggestions mainly concern the institute secretaries, they are omitted here.)

#### IV. AS TO MEMBERSHIP BADGES, ETC.

Each person becoming a member should be given an annual membership ticket or badge, the latter being preferred. When badges are used each member should be requested to wear the same whenever he (or she) attends institute meetings. This will tend to advertise the institute, and will make more easy and effectual the work of those selected to canvass the meeting. (See clause 35 of Rules.)

#### V. AS TO INCREASED USEFULNESS.

Whenever possible, the institute should take the form of a farmers' club, and public meetings should be held in each township at least once a year, or more frequently if practicable.

### RULES GOVERNING DELEGATES.

#### Synopsis.

(1) Every person employed as a delegate is expected to become thoroughly acquainted with the Act and Rules and Regulations governing Farmers' Institutes.

(2) Each delegate is expected to study thoroughly the conditions and needs of the district to which he (or she) is sent as a speaker, and to prepare his (or her) address and paper accordingly.

(3) The person whose name is placed first on the list of delegates for a division is chairman of that delegation, and is expected wisely to direct and control the work of the delegation, and also the institute meetings to which it is sent.

(4) Each delegate is required to forward to the Superintendent a copy of at least one of his (or her) addresses (the one which has proved most acceptable to the hearers being preferred, or the one selected by the Superintendent); and, if possible, a synopsis of the debate thereon, and of the questions asked and replies made thereto, which will be published in the annual report of Farmers' Institutes, or elsewhere, as may be decided by the Superintendent. Heretofore some of the speakers have withheld their best addresses, not wishing them published, fearing that publication would detract from their future usefulness. This is a mistake. The publication of an able address increases the demand for the speaker, the public desiring to hear that particular address delivered.

(5) Each delegate is requested to do all in his or her power to secure full and free discussion after each paper or address has been delivered. Each delegation as a whole is also requested to procure and forward to the Superintendent the name and address of each local speaker or essayist at each meeting they attend, and to obtain all the information possible concerning such persons; also to inform the Superintendent concerning the peculiar needs of the district visited, as far as institute work is concerned. Also to forward a short report of each meeting. Was it successful? If not, why not? The Superintendent will also be pleased to receive from each delegate suggestions and advice regarding institute work in general, or in any section. How can the efficiency of this important department of organized agricultural effort be increased and made more valuable to the county? Each delegate is expected to give the Superintendent and the officers of institutes generally the benefit of his (or her) experience.

(6) (This clause specifies that a punctual, whole-hearted, and enthusiastic attendance at meetings to which they are appointed is expected of all delegates.)

(7) (This clause forbids long speeches, or the introduction of any matter prohibited by the rules governing institutes. See clauses 24 and 25 of Rules and Regulations. The chairman of each delegation and the officers of each institute are expected to see that nothing of this sort occurs. Institute speakers are expected to teach practical agriculture, and nothing else.)

(8-12) (These clauses specify in what manner the expenses of the members of the delegations are to be incurred and vouched for, and how they are to be paid by the Department. A necessary condition of payment is the sending to the Superintendent of the reports specified in clauses 4 and 5 above. "Supplementary speakers" are to furnish reports similar to regular speakers. Expenses are to be paid from the time of leaving home till return thereto, but economy is expected. The remuneration is to include a daily fee for the same

period, but Sundays are excepted from the reckoning.)

J. B. Muir, North Bruce, Ont., is a successful and enthusiastic farmer, who, when quite young, became convinced that an agricultural education would be of immense advantage to him in the successful management of a farm, and, therefore, made up his mind to take a course at the Ontario Agricultural College. This he did, and was graduated therefrom in 1885, winning the Governor-General's medal for general proficiency. At that time the Farmers' Institute system was in its infancy. Mr. Muir saw that there was an opportunity for institute work in his own county, and on returning home he entered heartily into the work, and was shortly after elected president of the North Bruce Institute, which office he still holds. During the past two winters Mr. Muir has been one of the delegates appointed by the Government to address regular institute meetings in different parts of the province, his special subject being "Hog-raising in Connection with



J. B. Muir.

the Dairy." Although the price of pork has not ruled high during the past two years, Mr. Muir maintains that his pigs have been paying for their board and leaving, besides, a small margin of profit. His principal features in feeding are (1) to give plenty of variety in food, for the reason that no one grain contains all the elements that are required in animal growth; (2) to give with the grain fed bulky foods besides, as roots and clover, for the reason that too highly concentrated foods injure digestion, and are, moreover, too costly; (3) to give plenty of exercise, for the reason that lack of exercise causes constipation and ill health; (4) to give access to earth and pure water at all times; (5) to give the hogs all the food they will eat without wasting. He maintains that when these rules are followed, and early maturing pigs are fed until they weigh 150 lbs. live weight, they should not cost more than three and one-half cents per pound, and he affirms that by making a specialty of dairying and hog-raising in connection with mixed farming larger returns per acre can be realized by the average farmer than by any other system.

(13) Each institute worker is to remember that thorough preparation is the key to success. All papers are to be carefully written and made short. Speakers are to ascertain the time limit assigned to them on the programme, and to keep to it. The papers and talks are to be illustrated, as far as possible, by means of blackboard work, charts, diagrams, models, specimens, etc. Only such subjects are to be chosen as to which the speakers are well and thoroughly informed, and these are to be enforced by deductions drawn from the speaker's own experience.

#### OBJECTS SOUGHT IN FRAMING RULES.

It will be noticed by the reader who has perused the foregoing "Rules and Regulations" and "Suggestions" that the Superintendent has, in framing them, had a distinct view the points which the experience of Dr. Mills, in his nine years of institute management, had shown him to be the ones that should be aimed at, namely, (1) the obtaining of a large, and wide, and active, and interested membership; (2) the securing of capable and energetic local officers; (3) the development and utilization, to the fullest possible extent, of local talent; (4) the securing of competent men, who would command the confidence of their hearers, to serve on the various delegations; (5) the free interchange of ideas by means of addresses, essays, discussions, etc.; and (6) the wide dissemination of these ideas, when found useful and practicable, among all the institute membership, by means of publications.

#### METHODS ADOPTED TO GET GOOD MEN FOR DELEGATIONS.

With reference, however, to the fourth point enumerated above, it is just to say that all the efforts of the Superintendent to attain the end desired are by no means fully represented in the foregoing "Rules" and "Suggestions." This point is one to which a great deal of the Superintendent's energy and attention have been directed. As soon as he took office he addressed a circular to the president and secretary of each of the following associations: The Fruit Growers' Association; the Entomological Society; the Dairymen's Associations of both Eastern and Western Ontario; the Creameries Association; the Dominion Cattle, the Dominion Sheep, and the Dominion Swine Breeders' Associations; the Poultry Associations (East and West); and the Beekeepers' Association. In this circular he said:

I am now preparing a list of speakers to address Farmers' Institutes, a copy of which will be sent to the officers of each institute in Ontario. Each speaker will be required to prepare four or five papers or addresses, three for day delivery, and one or two suitable to deliver at evening meetings. Will your officers select a number of gen-

tle men who are able and willing to engage in this work? Kindly enlist the services of your best men. When you send me the list of names, send me the particulars regarding each man, his name and address, and what his experience has been.

W. A. FURLONG, Nottawa, the secretary of the West Simcoe Farmers' Institute, was for many years a school teacher. But he has been also for many years a farmer, and found time, though a teacher, to till his farm so successfully that he was frequently a prize-winner in the fairs of his county and district. For ten years Mr. Furlong has been secretary of the West Simcoe Institute, and in conjunction with the president, Mr. Charles Lawrence, and an able board of directors, has been instrumental in making the institution a means of great good to the farmers of his district. The meetings have always been large and well attended; the bulletins, reports, etc., received from the



W. A. Furlong.

Government most carefully distributed; and the excursions undertaken by the institute to the O.A.C., Kinnoul Park, Georgian Bay Park, etc., largely attended, and productive of a fine socializing spirit among those taking part in them. A unique work of the institute was the running of a series of excursions for farmers from Collingwood to Chicago during the holding of the World's Fair in 1893. Mr. Furlong expects that the West Simcoe meetings for 1897 will be "rousing good ones." Mr. Furlong has for twelve years been a director, and is now the secretary, of the Great Northern Exhibition of Collingwood.

Do not send me the name of anyone simply because you desire to honor him. I want the names of practical, experienced, and successful men, only. Delegates will be suitably remunerated for their services. . . . I wish each association con-

nected with agricultural industry, that receives a government grant, to be fairly represented on the Institute staff, but I will hold each association responsible for the quality of the work done by its representatives. I trust you will give the Institute system your hearty support and co-operation.

JAMES SMITH, of Inglis' Falls, Ont., the secretary of the North Grey Institute, has the reputation of being one of the best institute secretaries in the province. His idea of the office is to labor to get (1) good men as directors; (2) a large and interested membership; (3) numerous supplementary meetings; and (4) numerous local speakers to take part at these meetings. The North Grey directors try to make their institute work cover every part of their riding, and hold one or more supplementary meetings in every municipality in their riding. Last year they held two regular and six supplementary meetings; this year they expect to hold two regular and eleven supplementary



James Smith.

meetings.—Mr. Smith is a farmer's son, and was a teacher; but he early went back to farming from choice. He has a fondness for stock, and purposes making a specialty of Shorthorns, of which breed he has now eighteen head. He has several times tried to build up a flock of purebred sheep, but three times has had his flock destroyed by dogs, and so would welcome (as most farmers would, we believe) a law that would secure to owners of sheep a sufficient money compensation when these have been destroyed, wantonly by dogs.

In reply to this circular letter, the Superintendent received a great many names and much valuable information as to the qualifications of the men designated. After further careful enquiry from every quarter as to the merits of the various speakers in view, the delegations for the season

1894-5 were selected. That was probably as much as could be done in this direction at that stage, the time for preparation being so short.

As soon, however, as the work of the delegations for 1894-5 was over, the Superintendent still further pushed his investigations in order to secure the best possible list for next year. Each person who had been on the delegations for the past season was asked to give the Superintendent every possible sort of information bearing on the end in view. Especially was he to report on any successful local speaker or essayist, who might be utilized in the larger work of the regular delegations. In this way the Superintendent hoped to be able to introduce to general institute work men who by their success in local efforts had shown their qualifications to undertake a larger sphere of influence.

To the end also of getting information as to the qualifications of speakers who had been already employed, a circular letter was sent to every officer and director of every local institute, asking for a confidential report on the merits of the delegates who had been previously sent to them; also to report confidentially on any speaker who had been employed on any delegation, whom, from any knowledge they might possess, they deemed unfitted for any reason to take part in institute work.

#### DELEGATES CHOSEN BECAUSE OF THEIR INSTITUTE RECORDS ONLY.

The meaning of all this is that the Superintendent aims to make the most exhaustive enquiry possible, both personally and by correspondence, before he finally fixes upon his list of speakers for any year. He desires also the officers of the local institutes to enter into his confidence, and work with him towards securing the end in view, namely, the selection of the best possible list of speakers obtainable. Delegates are selected because of their record as institute workers; political reasons, expediency, friendship, or influence, are never considered in the slightest degree. Nothing is considered but the ultimate success of the institute work. If the speakers finally selected are other than first-class, the Superintendent considers that the local officers and directors are largely to blame for it. None are chosen as speakers, either for regular or for special work, except such as have been recommended to the Superintendent by reliable parties, whose qualifications have afterwards been submitted to and passed upon by the local institute officers.

#### AVAILABLE SPEAKERS AS EXTRAS AND FOR SPECIAL MEETINGS.

From the foregoing it will be seen that an important part of the Superintendent's work is not

only the securing of good men to serve on the delegations sent out by the Department to attend both regular and supplementary meetings, but also to secure good men to serve as extra speakers at any of the above meetings, or to speak at any other meetings that local institutes may desire to hold. Each year, in the autumn, the Superintendent publishes a "List of Available Speakers" for the ensuing season, the list finally selected being the result of his enquiries and investigations as detailed above. The names of these speakers are arranged alphabetically, and opposite each name (for convenience in reckoning up what his travelling expenses will be if he is engaged) is given the electoral division in which the speaker resides. Below each name is given a list of subjects which the speaker is prepared to take up. Unless otherwise arranged between the officers and the speaker, institutes employing any one of these speakers are required to pay his (or her) travelling expenses from the time the speaker leaves home until he (or she) returns, together with a remuneration fee of \$2.50 a day for the same time, Sundays excepted. A copy of this list is sent to each officer and director of farmers' institutes throughout the province.

The list published by the Superintendent for the season 1895-6 contained 94 speakers (4 of them being women), all of whom were available as extra speakers, as described above. These, of course, were additional to the 22 speakers employed on the regular delegations. And all these 116 speakers were additional to the 9 members of the staff of the Ontario Agricultural College, who were employed that year. These 115 speakers were almost all of them practical men, actively engaged, *as a business*, in the industries they were chosen to speak about, and enjoying well-earned reputations for successful achievement in those industries. The titles of subjects which they were prepared to speak about were all given in full, and numbered 667, the subjects themselves embracing every phase of agricultural industry, in its various parts of stock-raising, fruit-growing, dairying, poultry-raising, and beekeeping, as well as general farm and garden work.

#### COMPARISON OF THE ONTARIO SYSTEM WITH OTHERS.

A very gratifying feature of the Farmers' Institute system of Ontario is the great measure of efficiency that it has attained in comparison with its cost. For the year ending June 30th, 1895, the total attendance at the institute meetings held during the year mounted up to 71,033. The only system exceeding it in this respect was that of New York, at which the attendance was

82,400. Ohio's attendance was 63,466, Wisconsin's, 50,882; Indiana's, 23,000; Maine's, 6,210; Georgia's, 4,625; California's, 3,000.

Ontario for that year held 303 meetings of

ROBERT McCULLOCH, Snelgrove, the secretary of the Peel Institute, is the right sort of man to have as a secretary. A thoroughly practical and progressive farmer himself, he believes in doing what he can to have *good farming a general thing* throughout the whole country, and so has thrown himself into institute work with an energy and a determination that will surely produce big results. Although secretary for only one year, the membership of his institute has already doubled. His practice is to keep the claims of the institute prominently before the public by explaining its objects and aims in the local press. His motto in institute work is, "Whatever is worth doing at all is worth doing well." The institute system, in his opinion, is bound to succeed if its objects and benefits are



R. McCulloch.

made known to the people. Mr. McCulloch follows dairying rather than general farming. His cows are all A. J. C. C.'s., or else F. H. grades. He has fifteen of them, and at one time or another he has owned some good milkers. Not long ago he owned Signal's Rosa May, the sweepstakes cow at the Industrial this year; and his present herd bull, Rosa May's Boy, is out of her. His imported cow, Jetsam, is the dam of many prize-winners. None but good cows who pay their way handsomely are allowed to stay in his herd. Mr. McCulloch's equipment for dairy work is good. He has a good, roomy basement stable, a good silo (for five years), and a good creamery apparatus, including an Alexandra separator run by tread power, and a Babcock tester.

from one to two days each; a number exceeding that of any other system. New York held 206 meetings of two days each; Ohio, 151 meetings of two days each; Pennsylvania, 149 meet-

ings of one and one-half days each; Wisconsin, 103 meetings of two days each; Indiana, 92 meetings of two days each; Michigan, 68 meetings of two days each; Maine, 46 meetings of one day each; Georgia, 25 meetings of one day each; and California 15 meetings of two days each.

The average total cost for holding each meeting in Ontario was for that year \$25.41. In Wisconsin the cost per meeting was \$132.04; in Virginia (only six meetings held altogether) \$100 per meeting; in Rhode Island (for only 20 meetings altogether) \$75 per meeting; in Michigan,

J. I. GRAHAM, of Vandeleur, has been secretary of the Centre Grey Farmers' Institute for nine years. This institute has steadily grown from the beginning, due, no doubt, to the fact that it has a good staff of officers. Mr. Graham has a farm of 180 acres, got principally by his own efforts. He pursues mixed farming, but finds most pleasure in fruit-growing. His farm, being situated in the far-famed Beaver Valley, is well adapted to fruit, and to fruit-farming he therefore devotes most of his attention. This valley is thought to be one of the best fruit-growing sections in the province, as it is especially famed for its apples and its peaches. For some years past over 50,000 barrels of winter apples have been shipped out from it each season. Mr. Graham's "hobby" leads him to grow a great many varieties on a few trees, and so experienced is he in varieties that there are few apples that he sees that he cannot name; but for market purposes he grows only a



J. I. Graham.

few varieties of winter apples, and these the best he can find. His orchard, which is of eight acres, is so situated that he can irrigate it whenever he pleases, which he finds to be of great benefit. Mr. Graham also devotes a good deal of attention to stock, and his herd is now mostly all thoroughbred Durham, the progeny of his first purchase of a Durham female.

JAMES S. MILLER, of Parry Harbor, went to the Parry Sound district in 1877 for the benefit of his health, having previously been a farmer in the county of Lambton. He took up land there, and has since followed dairy farming, and made a success of it. He believes that for that district dairying, if fairly well managed, pays better than any other branch of agriculture. Mr. Miller was always impressed with the idea that farmers would benefit themselves if they would frequently meet together and discuss matters appertaining to their calling. So when the



James S. Miller.

Farmers' Institutes were started, he did what he could to get one for the Parry Sound district. This he was successful in accomplishing in 1891. For the past three years he has been its president, and has been careful to attend every meeting punctually, no matter what the difficulty or hindrance was. In consequence largely of this fostering care on the part of Mr. Miller, the Parry Sound Institute is one of the few institutes in the northern parts of the province which are successful. We are happy to record the fact that Mr. Miller has been a constant subscriber to FARMING and to its predecessor, *The Live Stock Journal*, from the publication of the very first number.

\$73.53; in New York, \$72.82; in Ohio, \$69.04; in Maine, \$65.22; in Indiana, \$54.35; in Pennsylvania, \$52.34; in California, \$50; and in Georgia, \$20.

In Ontario for that year the cost to the Department of Agriculture for the Farmers' Institute system (including the superintendent's salary of \$1,000) was \$7,700. In New York the cost was \$15,000 (including the superintendent's salary of \$2,000; in Wisconsin, \$12,000 (including superintendent's salary of \$2,200); in Ohio, \$10,425 (exclusive of the superintendent's salary, who is paid extra); in Minnesota, \$10,000 (including the superintendent's salary of \$1,500 and assist-

ant's of \$1,000); in Pennsylvania, \$7,500 (including the superintendent's salary of \$3,000); in Indiana, \$5,000 (exclusive of superintendent's salary, the work being carried on by the Purdue University); in Iowa, \$5,000 (with no superintendent, nor any satisfactory results); in Michigan, \$5,000 (inclusive of superintendent's salary

JOHN STEELE, of Ramsay, Ont., is secretary of the North Lanark Farmers' Institute, and also of the North Lanark Agricultural Society, in both of which associations he has been one of the most active and energetic officers for years past. It is largely through his efforts, having been its secretary since its first organization in 1885, that the



John Steele.

North Lanark Farmers' Institute has rolled up the large membership which it has—the largest in the province. Mr. Steele is a very successful farmer, as was his father before him; and his farm is considered as one of the best in his county, and it has been got entirely by his own efforts.

of \$600—the work in this state is just beginning); in Maine, \$3,600 (inclusive of a superintendent's salary of \$1,500 and an assistant's of \$1,000); in Rhode Island, \$1,500 (exclusive of cost of superintendent); and in California \$1,000, in Virginia \$600, and in Georgia \$500 (in each of these three last cases exclusive of the cost of superintendence or lectures).

As to the remuneration paid to lecturers and speakers Ontario stands almost at the lowest point. The explanation is that the Farmers' Institute system of Ontario is largely a co-operative one. It is an organization of practical farmers,

fruit-growers, etc., or mutual helpfulness. The daily fee paid to speakers, \$2.50, is certainly modest enough; but that it is sufficient is seen from the fact that our very best farmers, stockmen, fruit-growers, etc., are proud to take part in the work for the remuneration given. In Rhode Island from \$10 to \$30 a day is paid; in Virginia from \$2 to \$20; in New York from \$5 to \$10; in California, \$9.50; in Wisconsin, \$5.00; in Ohio from \$4 to \$5; in Indiana, \$3.60; in Maine \$2.

#### WORK ACCOMPLISHED IN 1895-6.

In the season ending June 30, 1896, the number of meetings held was 666, extending from one to two days each. At these meetings 2,637 papers were read or addresses given. The total attendance at these meetings was 102,461, being an increase of attendance in one year of 31,428. The average attendance at these meetings throughout the province was 154. The average cost of these meetings was less than \$15. The enrolled membership (no member counted whose fees for the year were not paid) was 12,384, being an increase over the previous year of 1,565. The number of regular meetings provided with speakers was 181, the number of delegations assigned thereto being 11, and the number of speakers employed being 31, nine from the Ontario Agricultural College, and 22 others. The number of supplementary meetings provided with speakers was 140, the number of delegations assigned thereto being eight, and the number of speakers employed being 22, none being from the O.A.C. The number of speakers advertised by the Superintendent as being available as extra speakers or for additional meetings was, as stated before, 116.

#### LOCAL STATISTICS.

A few local statistics may be interesting, although they form no part of the scope of this paper.

North Lanark, of all the institutes in the province, has the honor of having the largest membership, its paid-up membership for the year ending June 30, 1896, being 348. Alex. McLean, Carleton Place, is the president, and John Steele, Almonte, is the secretary of this institute. North Middlesex, 285; North Grey, 282; and South Waterloo, 28, come next in order. J. W. Johnson, Sylvan, is the president, and S. P. Zavitz is the secretary of North Middlesex. George Donald, Kilsyth, and James Smith, Owen Sound, are the president and secretary of North Grey; while R. C. Tye, Haysville, and Andrew Chisholm, Galt, hold the corresponding positions for South Waterloo.

North Hastings held the largest number of meetings during the year, namely, 22. East Simcoe was next with 18; East York next with 17.

Middlesex, and also in North Middlesex, 64; in East Simcoe, 62; in South Ontario, 59; in North Grey, 57; in South Lanark, 56; and in West Lambton, 54.

CONCLUSION.

When the reader has carefully considered the organization and plan of working of the Farmers' Institute system of Ontario, as herein detailed, he

HENRY FILSON, Stella, is the president of the Amherst Island Institute. This institute, though organized only in 1895, has already done good work. One of its achievements has been the obtaining of a thoroughbred bull for the improvement of the stock of its members, and this has all been paid for out of institute funds. The Amherst Island farmers, so Mr. Filson reports, are taking a deep

WILLIAM IRWIN, of Marksville, is secretary of the institute Joseph's Island, District of Algoma. It may not be generally known that this part of our province, although only recently opened up, is already quite prosperous. Mr. Irwin located his farm in 1880. It was then a wilderness; there were no roads, there was no school, and there were few neighbors. Now they have good roads, good schools, and, last, but equally important, a good Farmers' Institute; and what was then a wild forest is now a well-developed, settled country. In their institute management on St. Joseph's Island they have introduced some novel features. When the regular meetings are held a free supper is provided, so that those coming from a distance can remain for the evening meetings without discomfort. They also hold annual picnics, to serve the purpose of getting all the farmers on the island to know one another, and thus be better able to advance their interests by acting in concert whenever necessary. Mr. Irwin firmly believes that this district is destined to be a great agricultural country, and he is as firm a believer in the idea that the Farmers' Institute system of the country is bound to



H. Filson.

interest in the institute meetings, and already acknowledge much benefit derived from the addresses and discussions which they hear and take part in thereat.—Mr. Filson came from Ireland in 1860, and now has a good farm of 200 acres, got, as he says, by hard work, and he knows no other way to succeed. He is one who believes that although farmers have many difficulties to contend with, yet if they would only stand shoulder to shoulder, and ask for and maintain their rights, their business would be as profitable as any in the country, and in this FARMING thoroughly agrees with him. Mr. Filson, like so many other institute men, is an active member of our volunteer force; he joined it in 1866, and has been connected with it ever since, being a member of the 47th Battalion.



Wm. Irwin.

North Lanark had, of course, the largest total attendance. East Simcoe came next with 3,014; East Middlesex following with 2,900; and North Perth next with 2,750.

In Welland Institute the number of papers read or addresses given was 81; in North Hastings also the number was 81; in South Waterloo the number was 72; in Parry Sound, 66; in East

work a great revolution for good by the dissemination of practical agricultural knowledge. He has been secretary of his own institute since its first organization—in 1893. Mr. Irwin does what he can himself to build up the agriculture of his own district by getting and keeping pure-bred sires in cattle, sheep, and swine, all of which he allows his neighbors to use.



will, we think, have no hesitation in believing with us that this system is destined to develop the agricultural industry of Ontario into something far higher, far more productive of profit, and, therefore, of comfort and happiness to those who take part in it, than anything we can now conceive of. The heightening of intelligence, the increasing of practical knowledge and skill, among the members of any craft, is a sure and positive way of bettering the output of that craft, whatever it may be—of improving its quality, of increasing its quantity, and of decreasing the cost at which it is produced. No more potent means of heightening the intelligence, and of increasing the practical knowledge and skill of the farmers of Ontario, could possibly be devised than the institute system which is now organized among them. Of course it is not all-sufficient. General education is also needed; the definite technical and scientific instruction which is given at the Ontario Agricultural College, the Dairy Schools,

and elsewhere, is needed. But, for the farmer, the educational value of the institute system transcends in importance all other methods of education, because it is the education which he gets for himself, in the inspiration he receives, and the practical lessons he obtains, from contact with his fellow farmer.

And because no other industry in our province possesses a means of self-help and of self-education that can at all compare with that possessed by Ontario farmers in their institute system, we are justified in saying, as we did in the opening sentence of this paper, that an influence is at work which is destined to raise the condition of Ontario agriculture until it shall become, not merely the most important industry of our province (which it now is), but also intrinsically the most prosperous, and the most conducive to the happiness and well-being of those who follow it, of all the industries that it is possible for our citizens to pursue.

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## LETTER FROM GREAT BRITAIN.

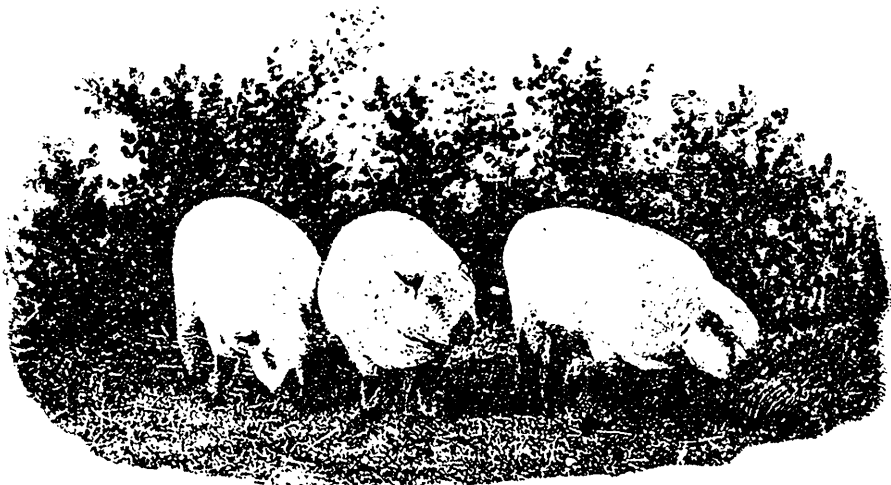
(From Our Own Correspondent.)

### SHOW SHEEP.

In a letter addressed to one of the United States leading agricultural papers a writer asks the question, "Can we grow our own show sheep?"

This letter was somewhat amusing to read for

several reasons, principally, however, because the writer seems to think that because in a few instances States-bred sheep have been able to secure first prizes or sweepstakes over imported sheep—under which term I am proud to see he includes Canada (Ontario) and England as one



Three Unbeaten Shearling Shropshire Ewes,

Winners for 1896 of the first prizes at the Bath and West of England Show, the R.A.S.E. Show at Leicester, and the Shropshire and West Midland Show. Bred and exhibited by W. F. Inge, Thorpe Hall, Tamworth, England. [See FARMING for August, 1896, p. 710.] These ewes also had an unbeaten record as ewe lambs. They were purchased by Robert Miller, Brougham, Ont.

—this always ought to be done and can be done. To prove this he quotes that the cattle men have been able to produce show herds that have won all along the line.

This may be the cause, and no doubt it is so ; but I would ask the question, Have these States-bred cattle been pitted against a similar lot of Ontario cattle or of imported English cattle ?

However, we will leave the cattle side and turn to sheep. Why, I ask, if these show sheep can be produced at home, were they not present at the New York State Fair, where most, if not all, the prizes went to imported sheep, *i.e.*, to those bred either in England or in Canada? I guess that the reason was because it was thought the best policy not to come ; for I have but little doubt that the result would have been the same.

My own opinion is that it will be many years before any country outside of England will be able to do without her show sheep ; for nowhere in the world can be found such specimens as are prepared for show there. It is perfectly true that sometimes the English-bred sheep are beaten, but when this happens it is generally because the best are left at home, for the simple reason that they are of more value here than anywhere else.

As to which country can produce the best show sheep we may apply another test. Dr. H. Davidson, in a most plucky way, brought over here a grand lot of sheep, and they, I believe, although rightly and worthily commended, failed to get a prize. On the other hand, the Pagharn Harbour Company, Selsey, England, showing at the New York State Fair, carried all before them except when beaten by other English sheep sold either by Mr. E. Ellis or themselves ; thus proving for the present at any rate that England holds the lead.

LINCOLN RAM SALE.

This sale was a grand one all round. Record prices were made by both Messrs. H. Dudding and J. Pears, both breeders selling a sheep each at the grand price of \$1,750, whilst the former breeder (who, I am pleased to note, carries in FARMING a regular advertisement) made for fifteen rams the grand average of over \$510 each. Messrs. S. E. Dean & Sons (who also, I am glad to see, are regular advertisers with you) were the buyers of Mr. H. Dudding's grand ram, and to them belongs the honor of being the first to pay the high figure of \$1,750 for an English Lincoln ram.

Messrs. J. R. & R. R. Kirkham, in conjunction with Mr. E. J. Cartwright, were the purchasers of the other \$1,750 ram, bred by Mr. J. Pears, and a truly grand sheep he was.

It should be remembered that these two rams were respectively second and third at the Royal Show, and the first-prize ram on that occasion, bred by and owned by Messrs. R. & W. Wright, of Nolton, has been reserved by them for use at home. What he would have made at the sale it is, of course, impossible to say, but we know as a fact that many very high prices have been refused for him.

The demand was persistent and strong throughout the whole sale, as will be seen by the tabulated averages sent herewith, the general average for 356 rams (all that were offered were sold) being \$143 each.

		AVERAGES.					
Consignor.	No.	Highest price in guineas.	Lowest price in guineas.	Average	Total		
		£ s. d.				£ s. d.	
Mr. H. Dudding ..	15	350	40	102 4 0	1,533	0 0	
Mr. J. Pears.....	17	350	24	72 14 0	1,235	17 0	
Mr. S. E. Dean & Sons.....	14	100	32	55 10 0	777	0 0	
Messrs. Wright...	12	105	28	52 3 0	625	16 0	
Mr. T. Casswell...	19	115	27	42 11 0	808	10 0	
Mr. T. Brown....	12	85	20	35 5 0	423	0 0	
Mr. H. Goodyear.	10	130	10	35 3 7	351	16 0	
Mr. Taylor Sharpe	12	52	18	34 9 6	413	14 0	
Mr. W. Roe....	6	45	17	30 2 6	180	2 0	
Mr. G. T. Melbourn	25	45	11	24 9 8	612	3 0	
Mr. J. T. & A. W. Needham.....	8	28	18	22 19 4½	183	15 0	
Sir J. H. Thorold, Bart.....	25	40	10	20 11 0	518	14 0	
Messrs. C. Clarke & Sons.....	24	34	10	18 14 6	449	8 0	
Mr. J. B. Nelson..	10	20	11	17 17 0	128	10 0	
Col. V. H. Grantham .....	10	20	10	15 2 6	151	3 6	
The late W. Martin	25	30	8½	14 11 2	218	8 0	
Mr. E. H. Cartwright .....	10	16	11½	14 5 6	142	15 0	
Mr. G. Marris....	10	15	11	13 8 9	134	8 0	
Mr. C. F. Hookham.....	15	15	6	12 12 0	189	0 0	
Mr. T. T. Havercroft.....	10	17	6½	11 19 6	119	14 0	
Mr. W. Seagrave.	10	13½	7	11 1 6	110	15 6	
Mr. W. Oxley....	6	13	6	10 13 6	64	1 0	
Mr. A. Hack.....	15	16	6½	9 16 8	147	10 6	
Mr. Herbert Mackinder.....	20	12	6	8 6 3	166	8 6	
Mr. R. L. Dunn ..	5	9	6	7 4 11	36	4 6	
Mr. C. F. W. Underwood.....	13	8	5½	6 15 0	87	13 6	
Mr. T. S. Pearson Gregory.....	8	7½	5½	6 9 11	51	19 6	
		356	Averaged	28 13 8	10,211	6 6	

And in order to further impress your readers with the confidence that our home breeders have got in the future of the trade we may just mention

that the members of the Lincoln Society purchased for use in their own flocks no less than 120 of the rams that were sold, paying for them an average price of \$211.50 each.

#### OTHER RAM SALES.

Lord Polwarth's rams, at the Kelso ram sales, sold well, but the average was lower than last year, being \$176, as against \$248 last year; the highest price ram being, however, a record one, namely, \$1,050, purchased by Mr. Ridlay.

Mr. Wallace's Auchinbairn lot met with a grand sale, the average being \$178 per head.

The Perth sales of Blackfaced rams have gone off well, Mr. Howatson making the capital

The Kentish or Romney Marsh sheep are evidently coming to the front, and, in a small way, bid fair to compete with the Lincolns for the Buenos Ayres and New Zealand trade.

During the last month (September) the secretary of the Kent Sheep Breeders' Association reported no less than twenty-five export certificates being sent out, and we notice that one breeder, Mr. F. Neame, of Macknade, Faversham, Kent, has sold a lot of ten shearling rams at \$110 each, thus showing that these sheep have a value of more than ordinary price to those breeders who, having once tested their merits, come for them again and again.



Three Southdown Wethers. Typical and Registered.

Winners of the first prize at the Birmingham Fat Stock Show, bred, owned, and exhibited by E. Mathews, Chequers Mead, Potter's Bar, Middlesex, England. [See FARMING 1896, p. 262.]

average of \$126.50, with the highest price of \$675 to Mr. Dun Waters, of Craigton.

Messrs. Cadzon averaged \$73.50 per head, \$285 being the top price.

The Lothian ram sales were well attended, and a general good demand was found for all the best of the rams.

#### SHEEP EXPORT TRADE.

The export trade to Buenos Ayres for Lincoln rams still continues, and we hear of many more enquiries.

#### CANADIAN PRODUCTS SHOULD BE ADVERTISED AS SUCH.

In view of the prospect of an increased trade with your country it is most essential and necessary that every effort, not only on the part of your producers, but also of your government, should be made to see that Canadian produce is sent here as such, and sold as such. Strange though it may seem, hardly ever can one in this country find produce from your country sold as Canadian. The writer travels all over England,

generally being in a fresh place three or four times every week, and the same thing occurs everywhere—American this or American that, but never Canadian anything. It has been told me that this is a small matter to you, hardly

being worth talking about; but to my mind it is of paramount importance that everything you export should be sold for what it is, namely, "Canadian." Hence the reason why these words are written.

## THE CENTRAL CANADA EXHIBITION.

*Specially reported for "Farming."*

The Central Canada Exhibition was held this year beginning the 17th September and closing on the 26th.

It is now just twenty-one years since the efforts of the late Hon. James Skead, the late Ira Morgan, Esq., and others secured for Ottawa the first Provincial Exhibition, which was then held under the auspices of the Board of Agriculture and Arts. Even in those days the grounds were fairly good, and quite picturesque; but they have been very much improved in recent years, especially during the last year.

Under the management of the able president, William Hutchison, M. P., well seconded by Ex-Warden Charles Mohr and G. W. Kidd, M. P., vice-presidents, and a large and influential Board of Directors, of which Mr. E. McMahon is secretary, the Ottawa fair of this year has been a splendid success. The mayor and aldermen of Ottawa were active in their help, and gave valuable aid and assistance to the directors. Best of all, the citizens turned out in large numbers, and, by their personal presence, did much to make the show the success it was. Much good work has been

done in improving the horse rings, enlarging the grounds, putting up new buildings, and otherwise making the whole exhibition one of the best appointed in Canada. The work of improvement has been done under the personal supervision of the president.

### BUILDINGS.

The new cattle sheds are worthy of special mention. Convenient in size, with ample central passages, well lighted and well ventilated, they are excellent and comfortable, and the directors have had ample accommodation provided for the attendants above the stalls. This is a boon much appreciated by the stockmen, and an improvement which they have year after year urged upon the directors of the Toronto Industrial Fair, but so far without success. Ottawa, however,



E. McMahon, Ottawa,  
Secretary Central Canada Exhibition.

has led the way in this matter, and it is to be hoped that Toronto will follow with a reform so much needed.

Not only were good buildings provided, but ample bedding and other conveniences were supplied, and everything was done in a courteous way to meet the reasonable wants of the exhibitors. Ottawa has looked both to the comfort of the cattle and the cattlemen, and has to-day the

best fair buildings anywhere in Canada for the comfort and convenience of exhibitors and their live stock.

#### JUDGES AND JUDGING

Most of the judging was done in the forenoon. Beginning at an early hour allowed the work to be well over before the daily one o'clock parade, which was a pleasing feature of the show, and of which we give in our frontispiece two very pleasing and characteristic illustrations. These parades included all of the most noted prize-winners, both in light horses, heavy horses, and cattle. The parade was over before any of the performances began in front of the grand stand.

There were too few judges. Here, perhaps, the directors have room for improvement. It is



H. D. Smith, Compton, Que.,  
Exhibitor of Purebred Herefords, at Toronto, Montreal,  
and Ottawa Exhibitions, 1896.

seldom that an expert judge can be secured who is competent to pass upon several different breeds of either horses or cattle. It is hardly fair to ask men to judge animals whose whole experience of a particular breed has been gained from seeing them at the fairs, and who never owned, bred, or handled any of the particular breed he is set to judge. Economy in this regard is not to be commended. Better far pay a little more, and get a man who knows the breed he is judging, and cannot plead that he makes mistakes through ignorance. These remarks do not apply especially to Ottawa, as other fairs sin in the same way, but Ottawa is, perhaps, unique in asking a judge to

officiate in two rings at the same time, and in keeping one lot of exhibitors waiting while he takes a run to the other ring to give his advice in a totally different class.

#### The Exhibit in the Main Building.

The main building is not modern, but is comfortable, and was well filled with interesting exhibits. There were a good many sale counters, but these were not so painfully aggressive as one sometimes encounters. The most attractive and notable exhibit in the building was that made by the E. B. Eddy Company (Limited). They occupied the central space, and made a splendid display illustrative of the process of paper making. There was shown a specimen of a spruce tree, samples of logs, of chips the various stages of manufacture, the partially finished product, and then immense rolls of paper ready for the printing press, some of which were miles in length. Various specimens of tissue and fancy papers, paper bags, paper pails, all in pyramids tastefully built, were on exhibition, and also a general assortment of matches and woodenware as manufactured by the firm.

#### Dairy Products.

A small very well arranged dairy building has been built, and fitted with all the modern appliances. The shelving is well arranged to show the cheese on exhibition. The cheese exhibit was good, and showed a marked improvement in style and finish over that seen in former years. The Ottawa district is famed for its dairy product, but the first place went to the Attwood Cheese Factory, Perth county.

A refrigerator has been placed in the building to hold the butter and more perishable products, where they can be seen through glass and kept clean and nice. Mrs. Marion Brook got the gold medal for the best dairy butter, winning first in two classes. There was a large and good exhibit of dairy butter, but creamery butter was not a representative exhibit. It is a mistake for creamery owners not to show specimens of the best that can be made.

In both these classes a new method has been adopted in the awarding of the prize money. The butter is all scored; all butter scoring over 90 is prize butter, and the money is divided in proportion to the number of points gained over 90. Butter scoring 95 would get five times as much prize money as that scoring 91. The whole dairy exhibit now occupies a prominent position on the grounds.

#### Horses.

The exhibit of horses was good. After the Toronto fair was over there was a division, some going west to London and others east to Montreal. The best horses from both these latter fairs were gathered here for the final contest, with some local animals added. These latter were several times winners.

In *Thoroughbreds* the aged stallion class was a good one. First went to the Montreal winner, Redfellow, owned by Dawes & Co., Lachine. W. C. Edwards & Co. had second for June Day, the winner last year, and the horse that then made such a sensation in the daily parade by appearing with a long string of his get of foals following. Goddard, owned by Graham Bros., Claremont, the winner of the sweepstakes at Toronto, had to be content with third place. Janbert was the winner for stallion and three of his get. He is owned by Charles Moore, Ottawa.

The younger sections in *Thoroughbreds* were not all filled. The Manitoba stables, Carberry, Manitoba, showed a good lot. They won first for two-year-old stallion, and first, second, and third for two-year-old fillies. H. Alexander, Ottawa, showed a very promising yearling colt, and T. C. Bate had the winner for three-year-old fillies.

*Coach and Carriage.*—In carriage stallions the Toronto winner, Kaiser Wilhelm, was first. This fine specimen of a German coach horse is owned by J. P. Thompson, Woodstock, Ontario. He is a fine bay, a big horse with square quarters, good action, and a taking style. There were several very good carriage teams shown, and many young animals of good merit. In the teams a gray and a chestnut, a high-standing showy pair, owned by E. Skead, Ottawa, were first, and a bay and a brown, shown by W. C. Edwards, M.P., were second.

*Standard-breds and Roadsters.*—In standard-breds there was a good class, well filled, and containing several notable animals. Alex. McLaren, Buckingham, showed Duke of Arklund (16.2), who is strong in Wilkes blood, and can show a 2.30 gait.

The *Roadsters* were a large class, but not so uniform as the standard-breeds. Ambrosia, with a record of 2.15 $\frac{1}{2}$ , by a son of Red Wilkes, was a winner in his class, as also for stallion and his get. He is owned by J. M. Morgan; is a well-made trotter, and has a good gait. Ansonia, by Jay Gould, dam by Black Hawk, is a nice dark brown. J. Kennedy, Ottawa, got the gold medal for best roadster team; a nicely matched pair of bays, the mare 15.2, and the gelding 15.3. For best mare Graham Bros., Claremont, won with Mayflower, the Toronto winner.

**Hackneys.**—The Hackney contest was between Graham Bros., of Claremont, and Mr. Cochrane's Hillhurst Farm exhibit, Hillhurst, Que. The former won in the aged class, and the latter in most of the others. These horses have all been described before. Graham Bros.' Royal Standard won the sweepstakes from Mr. Cochrane's Barthelemy Performer after a close contest. Princess Dagmar kept her place as best mare which she won for Mr. Cochrane at Toronto and Montreal. The Hackneys had a foremost place in the admiration of the spectators at the horse parades.

**Hunters and Saddle Horses.**—E. S. Skead had first for a fine chestnut saddle horse, well schooled and well ridden, almost perfection in manners. *Hunters* were not as good a class as might be expected in Ottawa. There were some creditable mounts, but many lacked style, were awkward in manner, slouchy in gait, and carried a wonderful length of tail. *Ponies* were a small class; there were one or two fair ones, but none of surpassing excellence.

**Heavy Draught Horses.**—In the heavy draught classes there was a very good show of *Clyde* and *Clyde crosses*. It was almost a *Clyde* show throughout, the others being either absent altogether or only making the contrast more striking by the fewness of their numbers. The best display in this class was made by the MacKay Milling Company, with four teams of their heavy work horses, all bays with white markings. They won for teams in the Canadian-bred class. In the class for purebred teams Graham Bros. were first and R. Ness, of Howick, Quebec, second, with the granddaughter of Macgregor. In the aged stallion class there was a fine display. Graham Bros.' The Royal Standard won first and the sweepstakes; R. Ness was second with Lawrence Again. These were followed by Arbitrator, Meridian, and McMorland, all big, heavy, useful horses with plenty of substance. Meridian, by Macgregor, owned by William Allan, Aylmer Road, got the third place. He is a big dark-brown. Mr. E. B. Eddy's Arbitrator was a well-made animal, fancied by many, while his rival was a more rangy animal, and was placed before him. In the younger class Graham Bros. were first and J. G. Clark second. In yearling colts James I. Davidson & Son had the winner in Pride of Balsam, whose lines our photographer has shown. The same firm had the sweepstakes mare and first-prize foal in Boydston Lass and her foal by Tofty, Boydston Yet. They also won first and sweepstakes female with the two-year-old filly, Boydston Lass 7th, by Westfield Stamp. R. Ness won second place with his nice dark little mare, Roseleaf. D. & O. Sorby won first for Grandeur, for stallion and his get, first and second for three-year-old mares, and first and third for yearling fillies.

Altogether the *Clyde* class was an excellent one. In the *Canadian-bred* class the Toronto winner, Samson, was placed first, but many preferred the Lanark *Clyde* Association's horse, Ashburn Hero, by Tannahill. In two-year-olds R. Ness showed a very nice colt by his horse, Lawrence Again; Thomas Miller, Manotick, being second with Invader. The young stock in this class was mostly shown by local breeders. Many of the animals showed care in breeding and rearing, and a few had excellent quality.

The *General Purpose* class was distinctly *Clyde* in character, and many of the winners had one or more *Clyde* crosses. William Allan won with a team bred from Pride of Fenwick. The sweepstakes mare was an animal of good *Clyde* style, bay with very little white, named Nellie, owned by Frederick Richardson, Billings' Bridge. She won first in her class and first for her foal.

#### Cattle: Beef Breeds.

There was a fine exhibit of beef cattle. The best herds from Toronto had gone to Montreal, and the awards there had been of a very "mixed" character in some of the classes, so that the final contest at Ottawa became very interesting to the owners, who hoped there to have their ruffled feelings soothed by seeing the old winners to the front. This happened in most cases, but not in all.

**Durhams.** In this class J. & W. Russell, Richmond Hill, had the best of the fray. Some of his rivals thought he got too much of the best of it. He won first for his white bull, Lord Stanley, and first and second for cows. He also got diploma for best female for his yearling heifer,

Coral, bred by John Miller, Markham. James Leask, Greenbank, got first and sweepstakes for his fine roan two-year-old bull, Moneyfuffel Lad. J. & P. Crerar, Shakespear, had second for their roan bull, and expected a better than third ticket for their three-year-old cow, Ruby Hill 2nd. James I. Davidson & Son had the prize two-year-old heifer, Village Beauty 7th. W. C. Edwards & Co., Rockland, had a clear winner in the splendid roan bull calf, Banker, of which our artist has secured a capital likeness. James Yule, Elder's Mills, won first for his yearling bull, Grand Gloster, delineated in this number. R. & S. Nicholson, Sylvan, had several prizes for young animals.

**Herefords** were championed by H. D. Smith, Compton, Que., who had the largest share of the prizes, D. M. Wilson, Moe's River, Que., and Fleming & Co., Weston, Ont., coming in for several prizes.

**Polled Angus** were much the same as at Montreal. James Bowman, Guelph, got five firsts and the medal. D. M. Wilson also showed several good animals in this class, as did also W. W. Ogilvie, Lachine Rapids, whose Royal Blackbird, of Craigston, forms one of our illustrations.

**Galloways** were well represented by the herds of John Sibbald, Annapolis, who captured three firsts, and D. McCrae, Guelph, who got the gold medal for the best herd and sweepstakes for best male and best female. The veteran bull, Canadian Borderer, shown in our October



W. H. McNish, Lyn, Ont.,  
Exhibitor of Purebred Guernseys, at Toronto and Ottawa  
Exhibitions, 1896.

number, was first in his class. The two-year-old heifer Semiramis E., obtained the diploma for best female.

In *Devons*, W. J. Rudd, of Eden Mills, was the only exhibitor. James Leask and James Yule had most of the prizes in the *Grade classes*, and the former took several of the prizes for *Fat cattle*. James Bowman, Guelph, also won in this class.

#### Cattle: Dairy Breeds.

**Ayrshires** easily led the dairy breeds in numbers and excellence. Some half-dozen herds were out, and amongst them were several new lots. The Ayrshires are more than holding their own in the dairy districts of the Ottawa Valley. J. Yuill & Son, of Carleton Place, came in first for aged bulls, and second and third for yearlings. They also got first for young heifer calves, second for older ones, and several minor prizes. They got the sweepstakes prize for their aged bull, a winner as a calf at Chicago. R. G. Steacy, Lyn, Ont., got second for his aged bull, second for two-year-olds, first and third for three-year-old cows, third for cows, and the gold medal for best herd. Wm. Stewart & Son, Menie, had first for two-year-old bull, first for bull calf, and first for heifer calf, second for a three-year-old cow and two-year-old heifer. They also got second for herd. Reid & Co., Hintonburg, Ottawa, had a fine herd. They got first for yearling bull, first for best cow, and

diploma for best female of any age. J. G. Clark, Ottawa, had a good herd, but had to be content with a few prizes for his young stock. D. Drummond, Petite Cote, Montreal, had here to be content with a few seconds and thirds after winning many firsts elsewhere with some of his animals.

The exhibit altogether was very creditable to the Ayrshire breeders.

**Holsteins** were much the same as at Montreal. Joseph Fletcher, Oxford Mills, had in a fresh herd and got one first and three seconds. C. J. Gilroy, Glen Buell, Ont., got the best of the contest with five firsts, a sweepstakes diploma for his cow, and the gold medal for his herd. G. W. Clenions, St. George, had also five firsts and three seconds, and A. Hoover, jr., Emery, one first and two seconds.

**Jerseys**.—In this class the diploma for best bull went to the yearling owned by Wm. Wicks, New Toronto. J. H. Smith & Sons, Highfield, Ont., got the bulk of the prize money, with W. A. Reburn, Ste. Anne de Bellevue, and Captain Wm. Rolph, Markham, following.

**Guernseys**.—W. H. & C. H. McNish had some twenty head, and Butler & Sons, Dereham Centre, about half as many. The latter got some four firsts, and the former the balance in the ordinary list, but the latter captured the herd prize and the gold medal.

The *grault dairy cattle* made a fine show. The contest was close, and eagerly watched by crowds of spectators. J. G. Clark, Ottawa, carried off the honors. He had a lot of beautiful cattle bred from Durham stock crossed with an Ayrshire bull. One of these is represented in our illustration.

#### Sheep.

Sheep were nearly all western stock. The exhibit was not large, but very select, and contained the pick of the animals that had been at Toronto, London, and Montreal. Most of the breeds were represented by a flock only, almost the only exception being the *Southdowns* shown by John Jackson & Sons, Abingdon, and R. Shaw & Son, Glanford Station. *Shropshires* were represented by John

Campbell, Woodville; *Oxford Downs* by Smith Evans, Gourck; *Hampshires* by John Kelly, Shakespeare; *Dorset Horns* by J. A. McGillivray, Woodbridge; *Martins* by Robert Shaw & Sons; *Leicesters* by John Kelly; *Lincolns* by Gibson & Walker, Denfield; and *Cotswolds* by C. T. Garbutt, Claremont.

#### Swine.

The swine exhibit was quite similar, nearly all being made by western men. It is unfortunate that local breeders do not bring out more of their stock. Something should be done to get them out, even if special prizes confined to the Ottawa district be added to the list to do it. *Berkshires* were shown by George Green, Fairview, and *Yorkshires* by Joseph Featherston, M.P. In this class J. G. Clark, Ottawa, was a winner of three second prizes. *Suffolks* were also shown by Joseph Featherston, M.P., and by R. Dorsey, Burnhamthorpe; *Chester Whites* by H. George & Sons, Crampton, W. Butler & Sons, Dereham Centre, and D. DeCoursey, Bornholm. *Poland-Chinas* were shown by W. & H. Jones, Mount Elgin, who also showed *Duroc-Jersey Reds* with Wm. Butler & Sons. H. George & Sons had *Tamworths*. The show was an excellent one as far as the quality of the stock went, the only drawback being the lack of competition.

#### Poultry.

The poultry exhibit was an excellent one, and a very large number of fowls were shown. The Experimental Farm made a nice exhibit in their special building, and had a display outside on a wagon which led the daily parade.

The whole exhibition was a credit to the city of Ottawa and to the officers and directors, who merit just praise for doing everything in their power for the comfort and convenience of the exhibitors and the many visitors.

## MEETINGS OF FARMERS' INSTITUTES, 1896-7.

### SUPERINTENDENT'S ANNOUNCEMENT (ABBREVIATED)

The Farmers' Institute system in the Province of Ontario is now eleven years old. The first meetings were held in 1885; since then the annual growth has been remarkable. In 1885, 12 meetings were held; in 1886, 26; in 1887, 40; in 1888, 60; in 1889, 60; in 1890, 75; in 1891, 95; in 1892, 112; in 1893, 119; in 1894, 133; in 1895, 303; and, in 1896, 666 meetings were held, and many requests for assistance for the holding of other meetings were received which could not be granted.

The total attendance at the various sessions of the Farmers' Institute meetings for each year since they were established has been as follows: in 1885, 2,808; in 1886, 6,034; in 1887, 9,360; in 1888, 14,040; in 1889, 14,040; in 1890, 17,550; in 1891, 22,230; in 1892, 26,208; in 1893, 27,840; in 1894, 31,122; in 1895, 71,033; and in 1896, 102,461.

We are accomplishing a greater work at less cost per meeting than any other province or state in America. A full report of the work of each local institute will be found in the Annual Report of the Superintendent of Farmers' Institutes for 1895-6, which will soon be issued. The local officers as a body are to be congratulated on the efficiency of their work, and I extend to them my hearty thanks for the very enthusiastic support and assistance I have received from them, without which the work now accomplished could not have been done. The Department of Agriculture is leaving no stone unturned in order to make the Farmers' Institute system all that it should be and all that it is destined to be.

#### DELEGATES, SPEAKERS, ETC.

Notice is hereby directed to the fact that the names of some of the delegates, as published in the following

list, are preceded by a star (\*), others by a dagger (†). This indicates that these delegates will attend only the meetings in their division that are marked in like manner. See Division 5. Professor J. H. Reed's name is preceded by a star (\*), and a star (\*) is set before the first ten meetings. This indicates that Professor Reed will attend only these meetings. Mr. Elmer Lick's name has a dagger (†) attached to it, and this indicates that Mr. Lick will attend only the meetings before which a dagger (†) is placed. When neither a star nor a dagger is placed before the name of a speaker, such a one will attend all the meetings in a division. Thus Mr. Mungo McNabb will attend all the meetings in Division 5. Where speakers are changed in other divisions, the same system is followed. Officers are requested not to advertise persons as speakers who will not attend their meetings.

The time required to deliver each address will vary from fifteen to thirty minutes, according to the requirements of the programme.

It is the policy of the Department to send only two speakers on a deputation, and in some cases only one, but it has been found necessary to transgress this rule in several instances this season. First, because some of the divisions are very large, and for this reason the work is too heavy for two men. Second, because in some instances several of the institutes in a division have asked for speakers on special subjects, and it has been thought wise to grant their request. Third, because it was deemed best, in some instances, to introduce speakers on special topics, and thus awaken an interest in a subject where little or none now exists.

The greatest care is exercised in choosing speakers.

The services of specialists are obtained as far as possible—men who have been eminently successful in special lines, or those who are well qualified to explain profitable methods not generally followed.

In some cases the delegates may not be prepared to discuss the subjects the local officers deem of greatest interest. In such cases the officers should employ additional persons to deliver addresses of the character they desire. These additional speakers may be chosen from the "List of Available Speakers," published in the "Institute Report," or elsewhere. This list has been very carefully prepared, and the attention of institute officers is respectfully called to it.

Many farmers look upon each delegate as a professor of the Ontario Agricultural College, or a representative of the government. This is a mistake, and one that should be corrected. Only those who are teachers in the Ontario Agricultural College, and who go out on institute work (ten in all), are in any sense representatives of the Department and of the college. The others are practical and successful farmers, as above stated, and although they are prudent, capable, and worthy men, the Department or the college is in no way responsible for their statements, nor are they responsible in any sense for the acts of either the college or the Department.

*When not otherwise stated, at a one-day meeting the delegates will assist local talent during the afternoon and evening; at a two-day meeting they will assist at an afternoon and an evening meeting the first day, and at a morning and an afternoon meeting the second day. Morning meetings will open promptly at 10.30; afternoon meetings at 1.30; evening meetings at 7.30. All meetings should be opened at the time advertised, whether the house is well filled or not. Delegates and officers are expected to carry out this provision.*

If, from sickness or any other cause, a delegate who is advertised in this bulletin cannot fulfil his engagements, another person competent to discuss similar subjects will be sent in his place. But every precaution will be taken to prevent the necessity of changes. When changes are necessary, substitutes will be chosen from among the list of reserve speakers attached to the list of regular and supplementary meetings.

The Department defrays the cost of sending regular delegates to regular meetings; but officers, directors, and members of institutes are expected to lighten, as far as possible, the expenses of the delegates, by meeting them at the railway station and conveying them, free of expense, to the place of meeting, and returning them again to the station or forwarding to the next place of meeting.

Supplementary speakers are sent at the request of officers to assist local talent to hold supplementary meetings. The Department will pay for the services of such supplementary speakers, but institutes requiring the services of the same shall pay all legitimate expenses from the time said person or persons leave home until they return thereto. (See clause 27 of Rules and Regulations.) The expenses thus incurred will be equitably divided between the institutes visited, and collected from each by the Superintendent. Institutes which render suitable assistance in the matter of keeping down expenses will be given due credit. Delegates are requested to make a careful note of this fact and report accordingly when making their returns.

The regular delegates and supplementary speakers have a heavy task before them. Institute officers are urged to render them all the assistance in their power.

When a popular programme is desirable for an evening meeting, as it is in many places, the officers are re-

spectfully requested to furnish this by employing suitable talent.

The professors of the Ontario Agricultural College have annually addressed the institutes throughout the province for over a decade. They do this work during their holidays, and for it they receive no remuneration.

#### OFFICERS AND DIRECTORS.

Institute officers and other interested parties are urged to make themselves familiar with the Act and Rules governing Farmers' Institutes, and to conduct the respective institutes as nearly as possible on the lines there laid down. A revised copy of the Act, etc., is bound in the front of the secretary's minute book, and may also be found in the "Institute Report" for 1895-6, a copy of which will be mailed to each member throughout the province. Attention is especially directed to clauses 23 to 35. The attention of each secretary is called to clauses 49 and 50.

The very low price of farm produce leads us to believe that never before was earnest study of the best methods so necessary as now. The institutes are conducted by practical farmers upon practical lines. All should attend and add their mite to the general fund of information.

Institute officers should hold meetings of farmers and business men, at points where meetings are to be held, at least four weeks before the said meeting convenes, for the purpose of engaging a hall and providing an evening programme; also to secure some of the best farmers to read papers on branches of farming in which they excel, and two or three ladies to give papers on some phases of home life or domestic economy. Well managed, these 450 institute meetings should give large returns.

Let it constantly be borne in mind that one of the chief aims of the institute work is the development of local talent and the bringing of the rank and file into close touch with the most successful local men and their methods. Do not depend altogether on the delegates; if home talent is not developed the chief benefit of the institute system is lost sight of.

Business and professional men are cordially invited to co-operate with the farmers in making these meetings instructive and successful. It is reasonable to expect them to do so, for the success of all classes depends on that of the farmer. The more prosperous the farmer, the more prosperous are all others.

Institute officers are urged to do all in their power to forward the interests of their local institute, and to make such suggestions to me as they think are in their interest. I am always glad to receive suggestions and advice, and am grateful to the sender, but I respectfully request local officers not to interfere, directly or indirectly, with the affairs or conduct of neighboring or distant institutes. Each local institute is quite capable, with the aid of the Department and the Superintendent, of conducting its own affairs. Interference by outsiders accomplishes no good purpose, but invariably does much harm.

The officers and directors of each local institute are responsible for the success of the work only in their respective institute districts. I, as Superintendent, am responsible for the work throughout the province.

Let us, by systematic and thorough work, unite to make the season of 1896-7 more successful than heretofore. The hearty support and enthusiastic effort of each officer and each director is necessary in order to accomplish this. *Let progress be the watchword of one and all.*

F. W. HODSON.

Ontario Agricultural College, Guelph.



## I. REGULAR MEETINGS.

List of Meetings to be Held, and the Delegates Therefor.

## DIVISION I.

Delegates.—Thos. McMillan, Seaforth; W. S. Fraser, Bradford.

1. Brussels (Town Hall)...	E. Huron	Jan.	5
2. Dunganon. W. Huron	.....	"	6,7
3. Kincardine (Town Hall)...	C. Bruce	.....	" 8
4. Holyrood (Township Hall)...	S. Bruce	.....	" 9
5. Teeswater (Town Hall)...	S. Bruce	.....	" 11
6. Wroxeter (Town Hall)...	E. Huron	.....	" 12
7. Clifford (Town Hall)...	Union	.....	" 13
8. Mildmay (Town Hall)...	Union	.....	" 14
9. Paisley (Town Hall)...	C. Bruce	.....	" 15
10. Port Elgin (Town Hall)...	W. Bruce	.....	" 16
11. Tara (Vandusen's Hall)...	W. Bruce	.....	" 18
12. Elmwood... S. Grey	.....	"	19
13. Durham (Town Hall)...	S. Grey	.....	" 20
14. Kentworth (Township Hall)...	E. Wellington	.....	" 21
15. Moorefield (Township Hall)...	W. Wellington	.....	" 22
16. Drayton (White's Hall)...	W. Wellington	.....	" 23
17. Alma (Town Hall)...	C. Wellington	.....	" 25

The meetings to be held in North Bruce will be announced at a later date.

## DIVISION II.

Delegates.—H. L. Hutt, B.S.A., Horticulturist, Ontario Agricultural College, Guelph; L. Patton, Oxford Mills; R. Harcourt, B.S.A., Assistant Chemist, Ontario Agricultural College, Guelph.

1. Brucefield... S. Huron	.....	Jan.	5
2. Exeter (Town Hall)...	S. Huron	.....	" 6
3. Ailsa Craig (Town Hall)...	N. Middlesex	.....	" 7
4. Parkhill (Town Hall)...	N. Middlesex	.....	" 8
5. Arkona (Showler's Hall)...	E. Lambton	.....	" 9
6. Petrolia (Town Hall)...	W. Lambton	.....	" 11
7. Bridgen (Hane's Hall)...	W. Lambton	.....	" 12
8. Mt. Bridges (Township Hall)...	W. Middlesex	.....	" 13
9. Coldstream (Town Hall)...	N. Middlesex	.....	" 14
10. Ilderton... E. Middlesex	.....	"	15
11. Lambeth (Masonic Hall)...	E. Middlesex	.....	" 16
12. St. Marys (Town Hall)...	S. Perth	.....	" 18, 19
13. Kintore... N. Oxford	.....	"	20
14. Embro (Town Hall)...	N. Oxford	.....	" 21
15. Norwich (Town Hall)...	S. Oxford	.....	" 22
16. Mt. Elgin (Town Hall)...	S. Oxford	.....	" 23

## DIVISION III.

Delegates.—J. Hoyes Panton, M.A., F.G.S., Professor of Natural History and Geology, Ontario Agricultural College, Guelph; Wm. Smith, Columbus.

1. Appin (Township Hall)...	W. Middlesex	Jan.	5
2. Calro... E. Lambton	.....	"	6
3. Thamesville (Town Hall)...	E. Kent	.....	" 7
4. Chatham (Town Hall)...	W. Kent	.....	" 8
5. Windsor (Unity Hall)...	N. Essex	.....	" 9
6. South Woodlee (Town Hall)...	N. Essex	.....	" 11
7. Kingsville (Town Hall)...	S. Essex	.....	" 12, 13
8. Valetta (Town Hall)...	W. Kent	.....	" 14
9. Ridgetown... E. Kent	.....	"	15
10. West Lorne (Township Hall)...	W. Elgin	.....	" 16
11. Shedden... W. Elgin	.....	"	18
12. Aylmer (Town Hall)...	E. Elgin	.....	" 19, 20
13. Courland (Town Hall)...	N. Norfolk	.....	" 21
14. Langton (Town Hall)...	S. Norfolk	.....	" 22
15. Delhi (Opera House)...	N. Norfolk	.....	" 23
16. Victoria (Lecture Room)...	S. Norfolk	.....	" 25
17. Waterford (Opera House)...	N. Norfolk	.....	" 26

## DIVISION IV.

Delegates.—A. McNeill, Windsor; A. J. Reynolds, Danforth; D. Z. Gibson, Willow Grove.

1. Fraeilton (Village Hall)...	N. Wentworth	Jan.	5
2. Rockton (Township Hall)...	N. Wentworth	.....	" 6
3. Ancaster (Town Hall)...	S. Wentworth	.....	" 7
4. Jordan (Zimmerman's Hall)...	Lincoln	.....	" 8
5. Orange Hall (Grantham Township)...	Lincoln	.....	" 9

6. Pelham Centre (Town Hall)...	Monck	Jan.	11
7. Port Robinson (Coulter's Hall)...	Wolland	"	12
8. Ridgeway (Town Hall)...	Wolland	"	13
9. Dunville (Opera House)...	Monck	"	14
10. South Cayuga... Haldimand	.....	"	15
11. Chesapeake... Haldimand	.....	"	16
12. Glanford (Town Hall)...	S. Wentworth	"	18
13. Mt. Pleasant (Marquis Hall)...	S. Brant	"	19
14. Burford (Barnes Hall)...	S. Brant	"	20
15. St. George (Public Library)...	N. Brant	"	21, 22

## DIVISION V.

Delegates.—\*J. H. Reed, V.S., Professor of Veterinary Science, Ontario Agricultural College, Guelph; †Elmer Lick, Oshawa; Mungo McNabb, Cowal; D. W. Beadle, M.A., 303 Crawford street, Toronto.

* 1. Elmira... N. Waterloo	.....	Jan.	5
* 2. Winterbourne... N. Waterloo	.....	"	6
* 3. New Dundee (Kohlenbrenner's Hall)...	S. Waterloo	.....	" 7
* 4. Shakespeare (Temperance Hall)...	N. Perth	.....	" 8
* 5. Millbank (Weir's Hall)...	N. Perth	.....	" 9
* 6. Crosshill... N. Waterloo	.....	"	11
* 7. Mitchell (Town Hall)...	S. Perth	.....	" 12
* 8. Bright... N. Oxford	.....	"	13
* 9. Hespeler (Royal Templar's Hall)...	S. Waterloo	.....	" 14
† 10. Guelph (City Hall)...	S. Wellington	.....	" 15, 16
† 11. Grand Valley (Joint Meeting)...	E. Wellington and Dufferin	.....	" 18
† 12. Shelburne (Town Hall)...	Dufferin	.....	" 19
† 13. Flesherton (Township Hall)...	C. Grey	.....	" 20
† 14. Owen Sound (Y.M.C.A. Hall)...	N. Grey	.....	" 21

## DIVISION VI.

Delegates.—Alf. Brown, Picton; A. W. Peart, B.A., Burlington; \*J. B. Reynolds, B.A., Lecturer in Agricultural Physics, Ontario Agricultural College, Guelph; †E. Glendinning, Manila.

* 1. Postville (Town Hall)...	Halton	Jan.	5
* 2. Stewarton (Town Hall)...	Halton	.....	" 6
* 3. Erin (Blue Ribbon Hall)...	C. Wellington	.....	" 7
* 4. Schomberg (Temperance Hall)...	N. York	.....	" 8
* 5. Bond Head (Orange Hall)...	S. Simcoe	.....	" 9
* 6. Everett... W. Simcoe	.....	"	11
* 7. Thornbury (Town Hall)...	C. Grey	.....	" 12
* 8. Meaford... N. Grey	.....	"	13
* 9. Stayner... W. Simcoe	.....	"	14
† 10. Orillia (Opera House)...	E. Simcoe	.....	" 15
† 11. Midland, Joint Meeting... E. and C. Simcoe	.....	"	16
† 12. Randolph... C. Simcoe	.....	"	18
† 13. Thornton (Orange Hall)...	S. Simcoe	.....	" 19
† 14. Newmarket (Town Hall)...	N. York	.....	" 20

## DIVISION VII.

Delegates.—A. McNeill, Windsor; Thos. A. Duff, Toronto; Andrew Elliot, Galt.

1. Woodbridge (Orange Hall)...	W. York	Dec.	1
2. Weston (Eagle Hall)...	W. York	.....	" 2
3. Malton... Peel	.....	"	3
4. Cooksville... Peel	.....	"	4
5. Agincourt (Temperance Hall)...	E. York	.....	" 5
6. Unionville (Victoria Hall)...	E. York	.....	" 7
7. Uxbridge (Market Hall)...	N. Ontario	.....	" 8
8. Woodville (Town Hall)...	W. Victoria	.....	" 9
9. Beaverton (Alexandria Hall)...	N. Ontario	.....	" 10
10. Lindsay (Town Hall)...	W. Victoria	.....	" 11
11. Fenslon Falls (Dickson's Hall)...	E. Victoria	.....	" 12
12. Bobcaygeon (Town Hall)...	E. Victoria	.....	" 14
13. Peterborough (Council Chamber)...	W. Peterborough	.....	" 15
14. Lakeside (Town Hall)...	W. Peterborough	.....	" 16
15. Millbrook (Town Hall)...	E. Durham	.....	" 17
16. Bethany (Town Hall)...	E. Durham	.....	" 18
17. Blackstock... W. Durham	.....	"	19
18. Port Perry (Town Hall)...	S. Ontario	.....	" 21
19. Pickering (Dale's Hall)...	S. Ontario	.....	" 22

## DIVISION VIII.

Delegates.—Geo. Harcourt, B.S.A., Toronto; R. F. Holtermann, Brantford.

1. Bowmanville (Council Chamber)...	W. Durham	.....	Dec, 1
2. Orono (Township Hall)...	W. Durham	.....	" 2

3. Cold Springs (Town Hall)...W. Northumberland.....	Dec. 3
4. Grafton...W. Northumberland.....	" 4
5. Frankford (Sweetman's Hall)...W. Hastings.....	" 5
6. Wallbridge (Town Hall)...W. Hastings.....	" 7
7. Bloomfield (Town Hall)...Prince Edward.....	" 8
8. Ameliasburg (Town Hall)...Prince Edward.....	" 9
9. Lonsdale...E. Hastings.....	" 10
10. Napanee (Town Hall)...Lennox.....	" 11
11. Centreville (Town Hall)...Addington.....	" 12
12. Tamworth (Town Hall)...Addington.....	" 14
13. Madoc (Town Hall)...N. Hastings.....	" 15
14. Plainfield (A.O.U.W. Hall)...E. Hastings.....	" 16
15. Stirling (Whitty's Hall)...N. Hastings.....	" 17
16. Norwood (Town Hall)...E. Peterborough.....	" 18
17. Warkworth (Town Hall)...E. Northumberland.....	"19,21
18. Keene (Town Hall)...E. Peterborough....	" 22

DIVISION IX.

'Delegates.—H. H. Dean, B.S.A., Professor of Dairy Husbandry, Ontario Agricultural College, Guelph; Captain James Sheppard, Queenston.

1. Bath (Town Hall)...Lennox.....	Dec. 1
2. Emerald (Cheese Factory)...Amherst Island.....	" 2
3. Stella (Town Hall)...Amherst Island.....	" 3
4. Cataract (Town Hall)...Frontenac.....	" 4
5. Joyceville (Joyce's Hall)...Frontenac.....	" 5
6. Lansdowne (Town Hall)...S. Leeds.....	" 7
7. Mallorytown (Oddfellows' Hall)...Brockville.....	" 8
8. Lyn (School House)...Brockville.....	" 9
9. Delta (Town Hall)...S. Leeds.....	" 11
10. North Augusta (Pardee's Hall)...S. Grenville.....	" 12
11. Spencerville (Town Hall)...S. Grenville.....	" 14
12. Wales (Connelly's Hall)...Stormont.....	" 15
13. Cornwall Centre (Township Hall)...Cornwall.....	" 16
14. St. Andrew's (School House)...Cornwall.....	" 17
15. Lancaster (McRae's Hall)...Glengarry.....	" 18
16. Alexandria (Queen's Hall)...Glengarry.....	" 19
17. South Finch (Campbell's Hall)...Stormont.....	" 21

DIVISION X.

Delegates.—John McMillan, M.P., Seaforth; D. E. Smith, B.A., Brampton.

1. Lanark (Town Hall)...N. Lanark.....	Dec. 1
2. Perth (Town Hall)...S. Lanark.....	" 2
3. Perth's Falls (Town Hall)...S. Lanark.....	" 3
4. Merrickville (Town Hall)...N. Grenville.....	" 4
5. Mountain Station...Dundas.....	" 5
6. Chesterville (Town Hall)...Dundas.....	" 7
7. Vankleek Hill (Town Hall)...Prescott.....	"9,10
8. Rockland (Town Hall)...Russell.....	"11,12
9. Stittsville (Butler's Hall)...Carleton.....	" 14
10. Richmond (Town Hall)...Carleton.....	" 15
11. Carleton Place (Town Hall)...N. Lanark.....	" 16
12. Almonte (Town Hall)...N. Lanark.....	" 17
13. Pembroke (Town Hall)...N. Renfrew.....	" 18
14. Stafford (Town Hall)...N. Renfrew.....	" 19
15. Renfrew (Temperance Hall)...S. Renfrew.....	"21,22

DIVISION XI.

Delegates.—T. G. Raynor, B.S.A., Rosehall; Jos Yull, Carleton Place.

1. Gravenhurst...S. Muskoka.....	Nov. 17
2. Uffington...S. Muskoka.....	" 18
3. Bracebridge (Town Hall)...S. Muskoka.....	" 19
4. Port Carling (Victoria Hall)...Port Carling.....	" 20
5. Utterson (Utterson Hall)...C. Muskoka.....	"21,23
6. Aspdin (Clifton Hall)...N. Muskoka.....	" 24
7. Huntsville (Court House)...N. Muskoka.....	" 25
8. Ravenscliffe (Patron's Hall)...N. Muskoka.....	" 26
9. Emerald (Orange Hall)...E. Parry Sound.....	" 27
10. Sprucedale...E. Parry Sound.....	" 28
11. S. S. No. 2, Foley...W. Parry Sound.....	" 30
12. Parry Sound...W. Parry Sound.....	Dec. 1
13. Hemlock...W. Parry Sound.....	" 2
14. McKellar...W. Parry Sound.....	" 3
15. Dunchurch...W. Parry Sound.....	" 4

10. Magnetawan (Orange Hall)...E. Parry Sound.....	Dec. 5
17. Burk's Falls (Council Chamber)...E. Parry Sound.....	" 7
18. Sundridge (Orange Hall)...E. Parry Sound.....	" 8
19. South River...E. Parry Sound.....	" 9
20. Powassan...E. Parry Sound.....	" 10
21. Sault Ste. Marie (Turner's Hall)...C. Algoma.....	" 12
22. Tarantarus School House...C. Algoma.....	" 14
23. West Korah and Base Line School Houses...C. Algoma.....	" 15
24. Richard's Landing (Temperance Hall)...St. Joseph.....	" 16
25. Marksville (Town Hall)...St. Joseph.....	" 17
26. Gauth Ka Wang School House...St. Joseph.....	" 18
27. Tenby Bay (School House)...St. Joseph.....	" 19
28. Mountain (School House)...St. Joseph.....	" 21
29. Jocelyn (Kent's Hall)...St. Joseph.....	" 22
30. Thessalon (Kertch's Hall)...E. Algoma.....	" 23
31. Sowerby (K.O.T.M. Hall)...E. Algoma.....	" 26
32. Iron Bridge (Orange Hall)...E. Algoma.....	" 28
33. Manitoulin Island, Gore Bay, Long Bay, Manitowaning, Shegumagan, Little Current, Mindemoya, Tehkummah, and Green Bay, from.....	" 29 until completed.

II. SUPPLEMENTARY MEETINGS.

List of Meetings to be Held, and Delegates Therefor.

DIVISION I.

Delegates.—L. Patton, Oxford Mills; James Mo. Ewing, Drayton; \*E. Morden, Niagara Falls South; †M. Burrell, St. Catharines.

* 1. Chatham...N. Grey.....	Feb. 2
* 2. Bognor...N. Grey.....	" 3
* 3. Lot 16, Con. 9, Schoolhouse...N. Grey.....	" 4
* 4. Kirvan's Schoolhouse...N. Grey.....	" 5
* 5. Annan (Schoolhouse)...N. Grey (Aft.).....	" 6
* 6. Leith...N. Grey (Evening).....	" 6
* 7. Kemble (Schoolhouse)...N. Grey.....	" 8
* 8. Hepworth...N. Grey.....	" 9
* 9. S.S. No. 8, Derby (Schoolhouse)...N. Grey.....	" 10
*10. Kileyth (Township Hall)...N. Grey.....	" 11
*11. Desboro (Township Hall)...N. Grey.....	" 12
*12. Burgoyne (Harkness Hall)...W. Bruce.....	" 13
*13. Southampton (Town Hall)...W. Bruce.....	" 15
*14. Malcolm (Patron Hall)...S. Bruce.....	" 16
*15. Chesley (Town Hall)...C. Bruce.....	" 17
*16. Gammis (Private Hall)...C. Bruce.....	" 18
*17. Ripley (Town Hall)...C. Bruce.....	" 19
*18. Belmore (Town Hall)...S. Bruce.....	" 20
*19. Lakelet (Temperance Hall)...Union.....	" 22
*20. Ayton...Union.....	" 23
*21. Fordwich (Forester's Hall)...E. Huron.....	" 24
*22. Belgrave (Forester's Hall)...E. Huron.....	" 25
*23. Leadbury (Jones' Hall)...E. Huron.....	" 26
*24. Londesboro...W. Huron.....	" 27
*25. Atwood (Agricultural Hall)...N. Perth.....	Mar. 1
*26. Milverton (Grosche Hall)...N. Perth.....	" 3

The meetings to be held in North Bruce will be announced at a later date.

DIVISION II.

Delegates.—†Lieut.-Col. D. McCrae, Guelph; E. Thompson, St. Catharines; Nelson Monteith, B.S.A., Stratford; \*W. O. Shearer, Bright.

* 1. Hensall...S. Huron.....	Feb. 2
* 2. Dashwood...S. Huron.....	" 3
* 3. Kirkton (Aberdeen Hall)...S. Perth.....	" 4
* 4. Russeldale (Public Hall)...S. Perth.....	" 5
* 5. Bornholm (Public Hall)...S. Perth.....	" 6
† 6. Sebringville (Forester's Hall)...S. Perth.....	" 8
† 7. St. Paul's (Township Hall)...S. Perth.....	" 9
† 8. Harrington (Town Hall)...N. Oxford.....	" 10
† 9. Belmont (Masonic Hall)...E. Middlesex.....	" 11
*10. Nilstown (Masonic Hall)...E. Middlesex.....	" 12
*11. Thorndale (Harding Hall)...E. Middlesex.....	" 13
*12. Bryanstown (Temperance Hall)...E. Middlesex.....	" 15
*13. Granton...N. Middlesex.....	" 16
*14. Lucan (Town Hall)...N. Middlesex.....	" 17
*15. West McGillivray...N. Middlesex.....	" 18
*16. Beechwood (Patron's Hall)...N. Middlesex.....	" 19
*17. Lobo (Forester's Hall)...N. Middlesex.....	" 20
*18. Adelaide (Town Hall)...N. Middlesex.....	" 22

119. Warwick (Town Hall)...	E. Lambton	Feb. 23
120. Uttoxeter (Orange Hall)...	E. Lambton	" 24
121. Inwood (Masonic Hall)...	E. Lambton	" 25
122. Alvinston (Town Hall)...	E. Lambton	" 26
123. Oil Springs (Smith's Hall)...	W. Lambton	" 27
124. Rutherford (Township Hall)...	W. Lambton	Mar. 1
125. Wilkesport (Shaw's Hall)...	W. Lambton	" 3
126. Courtwright (Stewart's Hall)...	W. Lambton	" 3
127. Sarnia (Town Hall)...	W. Lambton	" 4

DIVISION III.

Delegates.—Thos. McMillan, Seaforth; W. W. Hilborn, Leamington.

1. Port Rowan (Masonic Hall)...	S. Norfolk	Feb. 2
2. Walsh (Town Hall)...	S. Norfolk	" 3
3. Port Dover (Town Hall)...	S. Norfolk	" 4
4. Eden (Afternoon)...	E. Elgin	" 5
5. Calton (Evening)...	E. Elgin	" 5
6. Sparta (Afternoon)...	E. Elgin	" 6
7. Yarmouth Centre (Evening)...	E. Elgin	" 6
8. Middlemarch (Grange Hall)...	W. Elgin	" 8
9. Dutton (Opera House)...	W. Elgin	" 9
10. Rodney (Township Hall)...	W. Elgin	" 10
11. Newbury... W. Middlesex		" 11
12. Glencoe (Thomson Hall)...	W. Middlesex	" 12
13. Napier (Township Hall)...	W. Middlesex	" 13
14. Melbourne (Masonic Hall)...	W. Middlesex	" 15
15. Delaware (Township Hall)...	W. Middlesex	" 16
16. Bothwell (Town Hall)...	E. Kent	" 17
17. Highgate (Township Hall)...	E. Kent	" 18
18. Blenheim (Township Hall)...	E. Kent	" 19
19. Dresden... E. Kent		" 20
20. Croton (Croton Hall)...	E. Kent	" 22
21. Eberts (Township Hall)...	W. Kent	" 23
22. Dover Centre (Private Hall)...	W. Kent	" 24
23. Walkerville (Separate School)...	N. Essex	" 25
24. Maidstone (New Village Hall)...	N. Essex	" 26
25. Amherstburg (Town Hall)...	S. Essex	" 27
26. Essex (Peck's Hall)...	S. Essex	Mar. 1
27. Cottam (Town Hall)...	S. Essex	" 2
28. Ollinda (Grange Hall)...	S. Essex	" 3
29. Blytheswood (Grange Hall)...	S. Essex	" 4
30. Romney (Township Hall)...	W. Kent	" 5

DIVISION IV.

Delegates.—A. W. Peart, B.A., Burlington; T. H. Mason, Strarfordville.

1. Glenmorris (Township Hall)...	N. Brant	Feb. 2
2. Moyle (Schoolhouse)...	N. Brant	" 3
3. Tranquillity (Schoolhouse)...	N. Brant	" 4
4. Cainsville (Orange Hall)...	N. Brant	" 5
5. Onondaga (Township Hall)...	N. Brant	" 6
6. Jerseyville... S. Wentworth		" 8
7. Stony Creek (Squire Hall)...	S. Wentworth	" 9
8. Binbrook (Temperance Hall)...	S. Wentworth	" 10
9. Campden (Fry's Hall)...	Lincoln	" 11
10. Virgil (Virgil Hall)...	Lincoln	" 12
11. Niagara Falls South (Town Hall)...	Welland	" 13
12. Willoughby (Town Hall)...	Welland	" 15
13. Crowland (Town Hall)...	Welland	" 16
14. Humberstone (Town Hall)...	Welland	" 17
15. Marshville (Town Hall)...	Monck	" 18
16. St. Ann's (Orange Hall)...	Monck	" 19
17. Attercliffe Station (Cheese Factory)...	Monck	" 21
18. Canfield (Grange Hall)...	Haldimand	" 22
19. Springvale... Haldimand		" 23
20. Indian Reserve (Council House)...	S. Brant	" 24
21. Scotland (Foster's Hall)...	S. Brant	" 25
22. Bealton (Bealton Hall)...	N. Norfolk	" 26
23. Windham Centre (Town Hall)...	N. Norfolk	" 27
24. Springfield (Town Hall)...	S. Oxford	Mar. 1
25. Burgessville (Town Hall)...	S. Oxford	" 2
26. Beachville (Town Hall)...	S. Oxford	" 3

DIVISION V.

Delegates.—T. G. Raynor, B.S.A., Rosehall; \*A. C. Hallman, New Dundee; †R. S. Stephenson, Ancaster.

* 1. Hamburg (Wm. Tell Hall)...	S. Waterloo	Feb. 2
* 2. Baden (Township Hall)...	S. Waterloo	" 3
* 3. Haysville (Village Hall)...	S. Waterloo	" 4
* 4. Strasburg (Strasburg Hall)...	S. Waterloo	" 5
* 5. Roseville (Stuerner's Hall)...	S. Waterloo	" 6

* 6. Ayr (McGeorge's Hall)...	S. Waterloo	Feb. 8
* 7. Galt (Fraser's Hall)...	S. Waterloo	" 9
* 8. Brantford (Village Hall)...	S. Waterloo	" 10
* 9. Kirkwall (Village Hall)...	N. Wentworth	" 11
* 10. Bullock's Corners (Township Hall)...	N. Wentworth	" 12
* 11. Watford (Township Hall)...	N. Wentworth	" 13
* 12. Kilbride (Temperance Hall)...	Halton	" 15
* 13. Brookville (Town Hall)...	Halton	" 16
* 14. Aberfoyle (Town Hall)...	S. Wellington	" 17
* 15. Marden (Schoolhouse)...	S. Wellington	" 18
* 16. Centre Inn (Township Hall)...	S. Wellington	" 19
* 17. Ennottville (Mechanics' Institute Hall)...	C. Wellington	" 20
* 18. Fergus (Town Hall)...	C. Wellington	" 22
* 19. Brlwood (Town Hall)...	C. Wellington	" 23
* 20. Arthur (Town Hall)...	E. Wellington	" 24
* 21. Damascus (Township Hall)...	E. Wellington	" 25
* 22. Conn (Orange Hall)...	E. Wellington	" 26
* 23. Mount Forest (Town Hall)...	E. Wellington	" 27
* 24. Palmerston (Town Hall)...	W. Wellington	Mar. 1
* 25. Glen Allen (Bruce's Hall)...	W. Wellington	" 2

DIVISION VI.

Delegates.—J. B. Ewing, Hartford; Capt. Jas. Sheppard, Queenston; Jos. E. Gould, Uxbridge.

1. Queensville (Soule's Hall)...	N. York	Feb. 2
2. Belhaven... N. York		" 3
3. Churchill (Orange Hall)...	S. Simcoe	" 4
4. Cookstown (Temperance Hall)...	S. Simcoe	" 5
5. Fenville... S. Simcoe		" 6
6. Shanty Bay... E. Simcoe		" 8
7. Hawkestone... E. Simcoe		" 9
8. Rugby... E. Simcoe		" 10
9. Jarrett's Corners... E. Simcoe		" 11
10. Sparrow Lake (Schoolhouse)...	E. Simcoe	" 12
11. Severn Bridge (Cleland Hall)...	E. Simcoe	" 13
12. Thompkins' School House...	E. Simcoe	" 15
13. Coldwater... E. Simcoe		" 16
14. Vasey... E. Simcoe		" 17
15. Crossland... C. Simcoe		" 18
16. Edenvale... C. Simcoe		" 18
17. New Lowell... W. Simcoe		" 19
18. Creamore... W. Simcoe		" 20
19. Duntroon... W. Simcoe		" 22
20. Ravenna (Township Hall)...	C. Grey	" 23
21. Walter's Falls (Oddfellows Hall)...	C. Grey	" 25
22. Kimberly (Union Hall)...	C. Grey	" 26
23. Maxwell (Orange Hall)...	C. Grey	" 27
24. Dunnalk (Town Hall)...	C. Grey	Mar. 1
25. Horning's Mills (A.O.U.W. Hall)...	Dufferin	" 2

DIVISION VII.

Delegates.—\*Wm. Rennie, Farm Superintendent, O.A.C., Guelph; †Simpson Rennie, Milliken; W. J. Palmer, Toronto; T. C. Wheatly, Blackwell.

* 1. Oaledon East... Peel		Jan. 5
* 2. Inglewood... Peel		" 6
* 3. Brampton (Times Hall)...	Peel	" 7, 8
* 4. Islington (Town Hall)...	W. York	" 9
* 5. Maple (Masonic Hall)...	W. York	" 11
* 6. Wexford... E. York		" 12
* 7. Malvern (Mammoth Hall)...	E. York	" 13
* 8. Goodwood (Town Hall)...	N. Ontario	" 14
* 9. Zephyr (New Hall)...	N. Ontario	" 15
* 10. Canunilton (Town Hall)...	N. Ontario	" 16
* 11. Brechin (McGrath Hall)...	N. Ontario	" 18
* 12. Oakwood (Township Hall)...	W. Victoria	" 19
* 13. Valentic (Orange Hall)...	W. Victoria	" 20
* 14. Blackstock... W. Durham		" 21
* 15. Hayden (Schoolhouse)...	W. Durham	" 22
* 16. Solina (Sons' Hall)...	W. Durham	" 23
* 17. Orono (Township Hall)...	W. Durham	" 25
* 18. Kendal (Temperance Hall)...	W. Durham	" 26
* 19. Oshawa (Town Hall)...	S. Ontario	" 27
* 20. Whitby (Council Chamber)...	S. Ontario	" 28
* 21. Columbus (Town Hall)...	S. Ontario	" 29
* 22. Myrtle (Temperance Hall)...	S. Ontario	" 30
* 23. Greenbank (Town Hall)...	S. Ontario	Feb. 1
* 24. Epsom... S. Ontario		" 2
* 25. Clarendon... S. Ontario		" 3
* 26. Whitevale (Wilson's Hall)...	S. Ontario	" 4

DIVISION VIII.

Delegates.—\*G. E. Day, B.S.A., Agriculturist, O.A.C., Guelph; G. C. Caston, Craighurst; †A. Rawlings, Forest; J. E. Meyer, Kossuth.

* 1. Pontypool (Orange Hall)... E. Durham...	Jan. 5
* 2. South Monaghan, joint meeting... E. Durham and W. Peterborough.....	" 6
* 3. Garden Hill (Orange Hall)... E. Durham.....	" 7
* 4. Baltimore... W. Northumberland.....	" 8
* 5. Rosemeath (Town Hall)... W. Northumberland.....	" 9
* 6. Castleton (Town Hall)... E. Northumberland.....	" 11
* 7. Brighton (Town Hall)... E. Northumberland.....	" 12
* 8. Wooler (Town Hall)... E. Northumberland.....	" 13
* 9. Harder's School House... W. Hastings.....	" 14
+10. Turner's School House... W. Hastings.....	" 15
+11. Gilbert's School House... W. Hastings.....	" 16
+12. Conaseon (Kilip's Hall)... Prince Edward.....	" 18
+13. Wellington (Music Hall)... Prince Edward.....	" 19
+14. Waupos (Town Hall)... Prince Edward.....	" 20
+15. Milford (Town Hall)... Prince Edward.....	" 21
+16. Cherry Valley (Town Hall)... Prince Edward.....	" 22
+17. Demorestville (Town Hall)... Prince Edward.....	" 23
+18. Shannonville (A.O.U.W. Hall)... E. Hastings.....	" 25
+19. Tweed (Town Hall)... E. Hastings.....	" 26
+20. Warsaw (Agricultural Hall)... E. Peterborough.....	" 28
+21. Westwood (Town Hall)... E. Peterborough.....	" 29
+22. Bridgewater (Town Hall)... W. Peterborough.....	" 30
+23. North McRaghan (Town Hall)... W. Peterborough.....	Feb. 1
+24. Dunsford... E. Victoria.....	" 2
+25. Cambray... E. Victoria.....	" 3

Dates of supplementary meetings to be held in N. Hastings will be announced later.

DIVISION IX.

*Delegates.*—Lieut.-Col. D. McCrae, Guelph; Milton Everetts, Smith's Falls.

1. Emerald (Cheese Factory)... Amherst Island.....	Jan. 5
2. Stella (Town Hall)... Amherst Island.....	" 6
3. Odessa (Town Hall)... Lennox.....	" 7
4. South Frederickburg (Town Hall) Lennox.....	" 8
5. Selby (Town Hall)... Lennox.....	" 9
6. Sydenham (Town Hall)... Frontenac.....	" 11
7. Sunbury (Town Hall)... Frontenac.....	" 12
8. Heeley's Bay... S. Leeds.....	" 13
9. Elgin... S. Leeds.....	" 14
10. Westport (Town Hall)... S. Leeds.....	" 15
11. Athens (Town Hall)... Brockville.....	" 16
12. Fairfield East (Forester's Hall)... Brockville.....	" 18
13. Maitland (Workman's Hall)... S. Grenville, afternoon.....	" 19
14. Prescott (Victoria Hall)... S. Grenville, evening.....	" 19
15. Cardinal... S. Grenville.....	" 20
16. Lunenburg... Stormont.....	" 21
17. Harrison's Corners (Schoolhouse)... Cornwall.....	" 22
18. Cornwall (Court House)... Cornwall.....	" 23
19. Monckland (Truax' Hall)... Stormont.....	" 25
20. Moose Creek (Gogon's Hall)... Stormont.....	" 26
21. Maxville (Public Hall)... Glengarry.....	" 27
22. Quilches (McCormick's Hall)... Glengarry.....	" 28
23. North Lancaster (Mrs. McDonald's Hall) Glengarry.....	" 29
24. Summerstown (Creamery)... Glengarry.....	" 30

DIVISION X.

*Delegates.*—O. A. Zavitz, B.S.A., Experimentalist, O.A.C., Guelph; Thos. A. Duff, Toronto; \*F. C. Harrison, Bacteriologist, O.A.C., Guelph.

*1. Maberly (Town Hall)... S. Lanark.....	Jan. 5
*2. Balderson (Schoolhouse)... S. Lanark.....	" 6
*3. Franktown... S. Lanark.....	" 7
*4. Easton's Corners (Town Hall)... N. Grenville.....	" 8
*5. Toledo (Town Hall)... N. Grenville.....	" 9
*6. Oxford Mills (Town Hall)... N. Grenville.....	" 11
*7. Iroquois (Town Hall)... Dundas.....	" 12
*8. North Williamsburg... Dundas.....	" 13
*9. Hawkesbury (Town Hall)... Prescott.....	" 14
10. L'Orignal (Schoolhouse)... Prescott.....	" 15
11. South Indian (Town Hall)... Russell.....	" 16

12. Marsh Corners (Town Hall)... Carleton.....	Jan. 19
13. Carp (Town Hall)... Carleton.....	" 20
14. Stewartville (Town Hall)... S. Renfrew.....	" 21
15. Calabogie (School Hall)... S. Renfrew.....	" 22
16. Dacro... S. Renfrew.....	" 23
17. Pakenham (Agricultural Hall)... N. Lanark.....	" 25
18. Clayton... N. Lanark.....	" 26
19. Middleville (Town Hall)... N. Lanark.....	" 27
20. McDonald's Corners... N. Lanark.....	" 28

RESERVE LIST OF SPEAKERS.

(1) Henry Arkell, Teeswater. (2) W. H. Casselman, Chesterville. (3) Andrew Elliot, Galt. (4) V. Ficht, Orillia. (5) J. I. Graham, Vandeleur. (6) John I. Hobson, Mossboro. (7) D. G. Hamner, Burford. (8) A. P. Ketchen, Brucefield. (9) J. B. Muir, North Bruce. (10) S. Nicholson, Sylvan. (11) James Tolton, Walkerton. (12) A. K. Yuill, Carleton Place. (13) Mrs. Joseph Yuill, Carleton Place. (14) Mrs. M. J. Rogers, Kimsale. (15) Mrs. J. L. Smith, Whitby.

ALPHABETICAL LIST OF INSTITUTES, WITH PLACES AND DATES OF MEETINGS.

The number printed after each place of meeting indicates the Division to which that meeting belongs. Meetings in Divisions 7, 8, 9, 10, and 11 will, when held in December, be Regular Meetings, and when held in January be Supplementary Meetings; but no Supplementary Meetings will be held for Division 11. Meetings in Divisions 1, 2, 3, 4, 5, 6, will, when held in January, be Regular Meetings, and when held in February be Supplementary Meetings.

1. ADDINGTON—	
Centreville, 8.....	December 12
Tamworth, 8.....	" 14
2. ALGOMA, CENTRE—	
Sault Ste. Marie, 11.....	" 12
Tarentarus Schoolhouse, 11.....	" 14
West Korah and Base Line Schoolhouses, 11.....	" 15
3. ALGOMA, EAST—	
Thessalon, 11.....	" 23
Sowerby, 11.....	" 26
Iron Bridge, 11.....	" 28
4. AMHERST ISLAND—	
Emerald, 9.....	" 2
Stella, 9.....	" 3
Emerald, 9.....	January 5
Stella, 9.....	" 6
5. BRANT, NORTH—	
St. George, 4.....	" 21, 22
Glenmorris, 4.....	February 2
Moyls, 4.....	" 3
Tranquillity, 4.....	" 4
Cainsville, 4.....	" 5
Onondaga, 4.....	" 6
6. BRANT, SOUTH—	
Mount Pleasant, 4.....	January 19
Burford, 4.....	" 20
Indian Reserve, 4.....	February 24
Scotland, 4.....	" 25
7. BROCKVILLE—	
Mallorytown, 9.....	December 8
Lyn, 9.....	" 9
Athens, 9.....	January 16
Fairfield East, 9.....	" 18
8. BRUCE, CENTRE—	
Kincardine, 1.....	January 8
Paisley, 1.....	" 15
Chesley, 1.....	February 17
Glamis, 1.....	" 18
Ripley, 1.....	" 19
9. BRUCE, SOUTH—	
Holyrood, 1.....	January 9
Teeswater, 1.....	" 17
Malcolm, 1.....	February 16
Belmore, 1.....	" 20
10. BRUCE, WEST—	
Port Elgin, 1.....	January 16
Tara, 1.....	" 18
Burgoyne, 1.....	February 13
Southampton, 1.....	" 15

NOTE.—The meetings to be held in North Bruce will be announced at a later date.

11. CARLETON—				Bognor, 1.....	February
Stittsville, 10.....	December	14	Lot 16, Con. 9, Schoolhouse, 1.....	"	5
Richmond, 10.....	"	15	Kirvan's Schoolhouse, 1.....	"	6
March Corners, 10.....	January	19	Annan, 1, afternoon.....	"	6
Carp, 10.....	"	20	Leith, 1, evening.....	"	8
12. CORNWALL—			Kemble, 1.....	"	9
Cornwall Centre, 9.....	December	16	Kepworth, 1.....	"	10
St. Andrews, 9.....	"	17	School Section No. 8, Derby, 1.....	"	11
Harrison's Corners, 9.....	January	22	Kilsyth, 1.....	"	12
Cornwall, 9.....	"	23	Desboro, 1.....	"	12
13. DUFFERIN—			26. GREY, SOUTH—		
Grand Valley, 5.....	"	18	Elmwood, 1.....	January	19
Shelbourne, 5.....	"	19	Durham, 1.....	"	20
Horning's Mills, 6.....	March	2	27. HALDIMAND—		
14. DUNDAS—			South Cayuga, 4.....	"	15
Mountain Station, 10.....	December	7	Cheapside, 4.....	"	16
Chesterville, 10.....	"	8	Canfield, 4.....	February	22
Iroquois, 10.....	January	12	Springvale, 4.....	"	23
North Williamsburg, 10.....	"	13	28. HALTON—		
15. DURHAM, EAST—			Postville, 6.....	January	5
Millbrook, 7.....	December	17	Stewarton, 6.....	"	6
Bethany, 7.....	"	18	Kilbride, 5.....	February	15
Pontypool, 8.....	January	5	Brookville, 5.....	"	16
South Monaghan, 8.....	"	6	29. HASTINGS, EAST—		
Garden Hill, 8.....	"	7	Lonsdale, 8.....	December	10
16. DURHAM, WEST—			Plainfield, 8.....	"	16
Bowmanville, 8.....	December	1	Shannonville, 8.....	January	25
Orono, 8.....	"	2	Tweed, 8.....	"	26
Blackstock, 7.....	"	19	30. HASTINGS, NORTH—		
Blackstock, 7.....	January	21	Madoc, 8.....	December	15
Hayden, 7.....	"	22	Stirling, 8.....	"	17
Solina, 7.....	"	23	NOTE.—Supplementary meetings will be arranged later.		
Orono, 7.....	"	25	31. HASTINGS, WEST—		
Kendal, 7.....	"	26	Frankford, 8.....	December	5
17. ELGIN, EAST—			Wallbridge, 8.....	"	7
Aylmer, 3.....	"	19, 20	Harder's Schoolhouse, 8.....	January	14
Eden, 3, afternoon.....	February	5	Turner's Schoolhouse, 8.....	"	15
Calton, 3, evening.....	"	5	Gilbert's Schoolhouse, 8.....	"	16
Sparta, 3, afternoon.....	"	6	32. HURON, EAST—		
Yarmouth Centre, 3, evening.....	"	6	Brussels, 1.....	"	5
18. ELGIN, WEST—			Wroxeter, 1.....	"	12
West Lorne, 3.....	January	16	Fordwich, 1.....	February	24
Shedden, 3.....	"	18	Belgrave, 1.....	"	25
Middlemarch, 3.....	February	8	Leadbury, 1.....	"	26
Dutton, 3.....	"	9	33. HURON, SOUTH—		
Rodney, 3.....	"	10	Brucefield, 2.....	January	5
19. ESSEX, NORTH—			Exeter, 2.....	"	6
Windsor, 3.....	January	9	Hensall, 2.....	February	2
South Woodlee, 3.....	"	11	Dashwood, 2.....	"	3
Walkerville, 3.....	February	25	34. HURON WEST—		
Maidstone, 3.....	"	26	Dungannon, 1.....	January 6, 7	
20. ESSEX, SOUTH—			Londesboro, 1.....	February	27
Kingsville, 3.....	Jan. 12, 13		35. KENT, EAST—		
Amherstburg, 3.....	February	27	Thamesville, 3.....	January	7
Essex, 3.....	March	1	Ridgetown, 3.....	"	15
Cuttam, 3.....	"	2	Bothwell, 3.....	February	17
Olinda, 3.....	"	3	Highgate, 3.....	"	18
Blytheswood, 3.....	"	4	Blenheim, 3.....	"	19
21. FRONTENAC—			Dresden, 3.....	"	20
Cataraqui, 9.....	December	4	Croton, 3.....	"	22
Joyceville, 9.....	"	5	36. KENT, WEST—		
Sydenham, 9.....	January	11	Chatham, 3.....	January	8
Sunbury, 9.....	"	12	Valetta, 3.....	"	14
22. GLENGARRY—			Eberts, 3.....	February	23
Lancaster, 9.....	December	18	Dover Centre, 3.....	"	24
Alexandria, 9.....	"	19	Romney, 3.....	March	5
Maxville, 9.....	January	27	37. LAMBTON, EAST—		
Quiglies, 9.....	"	28	Cairo, 3.....	January	6
North Lancaster, 9.....	"	29	Arkona, 2.....	"	9
Summerstown, 9.....	"	30	Warwick, 2.....	February	23
23. GRENVILLE, SOUTH—			Uttoxeter, 2.....	"	24
North Augusta, 9.....	December	12	Inwood, 2.....	"	25
Spencerville, 9.....	"	14	Alvinston, 2.....	"	26
Maitland, 9, afternoon.....	January	19	38. LAMBTON, WEST—		
Prescott, 9, evening.....	"	19	Petrolia, 2.....	January	11
Cardinal, 9.....	"	20	Bridgen, 2.....	"	12
24. GREY, CENTRE—			Oil Springs, 2.....	February	27
Thornbury, 6.....	"	12	Rutherford, 2.....	March	1
Flesherton, 5.....	"	20	Wilkesport, 2.....	"	2
Ravenna, 6.....	February	24	Courtright, 2.....	"	3
Walter's Falls, 6.....	"	25	Sarnia, 2.....	"	4
Kimberley, 6.....	"	26	39. LANARK, NORTH—		
Maxwell, 6.....	"	27	Lanark, 10.....	December	1
Dundalk, 6.....	March	1	Carleton Place, 10.....	"	16
25. GREY, NORTH—			Almonte, 10.....	"	17
Meaford, 6.....	January	13	Fakenham, 10.....	January	25
Owen Sound, 5.....	"	21	Clayton, 10.....	"	26
Chatsworth, 1.....	February	2	Middleville, 10.....	"	27
			McDonald's Corners, 10.....	"	28

<b>LANARK, SOUTH—</b>			
Perth, 10.....	December	2	
Smith's Falls, 10.....	"	3	
Maberly, 10.....	January	5	
Balderson, 10.....	"	6	
Franktown, 10.....	"	7	
<b>LEEDS, N. AND GRENVILLE, N.—</b>			
Merrickville, 10.....	December	4	
Kemptville, 10.....	"	5	
Easton's Corners, 10.....	January	8	
Toledo, 10.....	"	9	
Oxford Mills, 10.....	"	11	
<b>42. LEEDS, SOUTH—</b>			
Lansdowne, 9.....	December	7	
Delta, 9.....	"	11	
Seeley's Bay, 9.....	January	13	
Elgin, 9.....	"	14	
Westport, 9.....	"	15	
<b>43. LENNOX—</b>			
Bath, 9.....	December	1	
Napanee, 8.....	"	11	
Odessa, 9.....	January	7	
South Fredericksburg, 9.....	"	8	
Selby, 9.....	"	9	
<b>44. LINCOLN—</b>			
Jordan, 4.....	"	8	
Orange Hall, 4.....	"	9	
Camden, 4.....	February	11	
Virgil, 4.....	"	12	
<b>45. MANITOULIN ISLAND—</b>			
Gore Bay, 11.....	December	29	
Long Bay, 11.....	"		
Manitowaning, 11.....	"		
Sheguiandah, 11.....	until		
Little Current, 11.....	"		
Mindemoya, 11.....	completed.		
Tehkummah, 11.....	"		
Green Bay, 11.....	"		
<b>46. MIDDLESEX, EAST—</b>			
Ilderton, 2.....	January	15	
Lambeth, 2.....	"	15	
Belmont, 2.....	February	11	
Nilestown, 2.....	"	12	
Thorndale, 2.....	"	13	
Bryanston, 2.....	"	15	
<b>47. MIDDLESEX, NORTH—</b>			
Ailsa Craig, 2.....	January	7	
Parkhill, 2.....	"	8	
Coldstream, 2.....	"	14	
Granton, 2.....	February	16	
Lucan, 2.....	"	17	
West McGillivray, 2.....	"	18	
Beechwood, 2.....	"	19	
Lobo, 2.....	"	20	
Adelaide, 2.....	"	22	
<b>48. MIDDLESEX, WEST—</b>			
Appin, 3.....	January	5	
Mount Brydges, 2.....	"	13	
Newbury, 3.....	February	11	
Glencoe, 3.....	"	12	
Napier, 3.....	"	13	
Melbourne, 3.....	"	15	
Delaware, 3.....	"	16	
<b>49. MONCK—</b>			
Pelham Centre, 4.....	January	11	
Dunville, 4.....	"	14	
Marshville, 4.....	February	18	
St. Ann's, 4.....	"	19	
Attercliffe Station, 4.....	"	20	
<b>50. MUSKOKA, CENTRE—</b>			
Utterson, 11.....	Nov.	21, 23	
<b>51. MUSKOKA, NORTH—</b>			
Aspden, 11.....	"	24	
Huntsville, 11.....	"	25	
Ravenscliffe, 11.....	"	26	
<b>52. MUSKOKA (Port Carling)—</b>			
Port Carling, 11.....	November	20	
<b>53. MUSKOKA, SOUTH—</b>			
Gravenhurst, 11.....	"	17	
Uffington, 11.....	"	18	
Bracebridge, 11.....	"	19	
<b>54. NORFOLK, NORTH—</b>			
Courtland, 3.....	January	21	
Delhi, 3.....	"	23	
Waterford, 3.....	"	26	
Bealton, 4.....	February	26	
Windham Centre, 4.....	"	27	
<b>55. NORFOLK, SOUTH—</b>			
Langton, 3.....	January	22	
Victoria, 3.....	"	25	
Port Rowan, 3.....	February	2	
Walsh, 3.....	"	3	
Port Dover, 3.....	"	4	
<b>56. NORTHUMBERLAND, EAST—</b>			
Warkworth, 8.....	Dec.	19, 21	
Castleton, 8.....	January	11	
Brighton, 8.....	"	12	
Wooler, 8.....	"	13	
<b>57. NORTHUMBERLAND, WEST—</b>			
Cold Springs, 8.....	December	3	
Grafton, 8.....	"	4	
Baltimore, 8.....	January	8	
Roseneath, 8.....	"	9	
<b>58. ONTARIO, NORTH—</b>			
Uxbridge, 7.....	December	8	
Beaverton, 7.....	"	10	
Goodwood, 7.....	January	14	
Zephyr, 7.....	"	15	
Cannington, 7.....	"	16	
Brechin, 7.....	"	18	
<b>59. ONTARIO, SOUTH—</b>			
Port Perry, 7.....	December	21	
Pickering, 7.....	"	22	
Oshawa, 7.....	January	27	
Whitby, 7.....	"	28	
Columbus, 7.....	"	29	
Myrtle, 7.....	"	30	
Greenbank, 7.....	February	5	
Epsom, 7.....	"	1	
Claremont, 7.....	"	3	
Whitevale, 7.....	"	4	
<b>60. OXFORD, NORTH—</b>			
Bright, 5.....	January	13	
Kintore, 2.....	"	20	
Embros, 2.....	"	21	
Livingston, 2.....	February	10	
<b>61. OXFORD, SOUTH—</b>			
Norwich, 2.....	January	22	
Mt. Elgin, 2.....	"	23	
Springford, 4.....	March	1	
Burgessville, 4.....	"	2	
Beachville, 4.....	"	3	
<b>62. PARRY SOUND, EAST—</b>			
Emsdale, 11.....	November	27	
Sprucedale, 11.....	"	28	
Magaretawan, 11.....	December	5	
Burk's Falls, 11.....	"	7	
Sundridge, 11.....	"	8	
Scuth River, 11.....	"	9	
Powassan, 11.....	"	10	
<b>63. PARRY SOUND, WEST—</b>			
S.S. No. 2, Foley, 11.....	November	30	
Parry Sound, 11.....	December	1	
Hemlock, 11.....	"	2	
McKellar, 11.....	"	3	
Dunchurch, 11.....	"	4	
<b>64. PEEL—</b>			
Malton, 7.....	"	3	
Cooksville, 7.....	"	4	
Caledon East, 7.....	January	5	
Inglewood, 7.....	"	6	
Brampton, 7.....	"	7, 8	
<b>65. PERTH, NORTH—</b>			
Shakespeare, 5.....	"	8	
Millbank, 5.....	"	9	
Atwood, 1.....	March	1	
Milverton, 1.....	"	2	
<b>66. PERTH, SOUTH—</b>			
Mitchell, 5.....	January	12	
St. Marys, 2.....	"	18, 19	
Kirkton, 2.....	February	4	
Russeldale, 2.....	"	5	
Bornholm, 2.....	"	6	
Sebringville, 2.....	"	8	
St. Paul's, 2.....	"	9	
<b>67. PETERBOROUGH, EAST—</b>			
Norwood, 8.....	December	18	
Keene, 8.....	"	22	
Warsaw, 8.....	January	28	
Westwood, 8.....	"	29	
<b>68. PETERBOROUGH, WEST—</b>			
Peterborough, 8.....	December	15	
Lakefield, 8.....	"	16	
South Monaghan, 8.....	January	6	
Bridgeworth, 8.....	"	30	
North Monaghan, 8.....	February	1	
<b>69. PRESCOTT—</b>			
Vankleek Hill, 10.....	Dec.	9, 10	
Hawkesbury, 10.....	January	14	
L'Original, 10.....	"	15	
<b>70. PRINCE EDWARD—</b>			
Bloomfield, 8.....	December	8	
Amcliasburg, 8.....	"	9	
Consecon, 8.....	January	8	

Wellington, 8.....	January	19	Crowland, 4.....	February	16
Waupoos, 8.....	"	20	Humberstone, 4.....	"	17
Milford, 8.....	"	21	86. WELLINGTON, CENTRE—		
Cherry Valley, 8.....	"	22	Erin, 6.....	January	7
Demorestville, 8.....	"	23	Alua, 1.....	"	25
71. RENFREW, NORTH—			Ennotville, 5.....	February	20
Pembroke, 10.....	December	18	Fergus, 5.....	"	22
Stafford, 10.....	"	19	Belwood, 5.....	"	23
72. RENFREW, SOUTH—			87. WELLINGTON, EAST—		
Renfrew, 10.....	"	21, 22	Grand Valley, 5.....	January	18
Stewartville, 10.....	January	21	Kenilworth, 1.....	"	21
Calahogie, 10.....	"	22	Arthur, 5.....	February	24
Dacre, 10.....	"	23	Damascus, 5.....	"	25
73. RUSSELL—			Conn, 5.....	"	26
Rockland, 10.....	Dec. 11, 12		Mount Forest, 5.....	"	27
South Indian, 10.....	January	16	88. WELLINGTON, SOUTH—		
74. SIMCOE, CENTRE—			Guelph, 5.....	Jan. 15, 16	
Midland, 6.....	"	16	Aberfoyle, 5.....	February	17
Randolph, 6.....	"	18	Marden, 5.....	"	18
Crossland, 6.....	February	16	Centre Inn, 5.....	"	19
Edensvale, 6.....	"	19	89. WELLINGTON, WEST—		
75. SIMCOE, EAST—			Moorefield, 1.....	January	22
Orillia, 6.....	January	15	Drayton, 1.....	"	23
Midland, 6.....	"	16	Palmerston, 5.....	March	1
Shanty Bay, 6.....	February	8	Glen Allan, 5.....	"	2
Hawkestone, 6.....	"	9	90. WENTWORTH, NORTH—		
Rugby, 6.....	"	10	Freleton, 4.....	January	5
Jarrett's Corners, 6.....	"	11	Rockton, 4.....	"	6
Sparrow Lake, 6.....	"	12	Kirkwall, 5.....	February	11
Severn Bridge, 6.....	"	13	Bullock's Corners, 5.....	"	12
Tompkins' Schoolhouse, 6.....	"	15	Waterdown, 5.....	"	13
Coldwater, 6.....	"	16	91. WENTWORTH, SOUTH—		
Vasey, 6.....	"	17	Ancaster, 4.....	January	7
76. SIMCOE, SOUTH—			Glanford, 4.....	"	18
Bond Head, 6.....	January	9	Jerseyville, 4.....	February	8
Thornton, 6.....	"	10	Stony Creek, 4.....	"	9
Cnrchill, 6.....	February	4	Binbrook, 4.....	"	10
Cookstown, 6.....	"	5	92. YORK, EAST—		
Penville, 6.....	"	6	Agincourt, 7.....	December	5
77. SIMCOE, WEST—			Unionville, 7.....	"	7
Everett, 6.....	January	11	Wexford, 7.....	January	12
Stayner, 6.....	"	14	Malvern, 7.....	"	13
New Lowell, 6.....	February	20	93. YORK, NORTH—		
Creemore, 6.....	"	22	Schomberg, 6.....	January	8
Dunroon, 6.....	"	23	Newmarket, 6.....	"	20
78. STORMONT—			Queensville, 6.....	February	2
Wales, 9.....	December	15	Belhaven, 6.....	"	3
South Finch, 9.....	"	21	94. YORK, WEST—		
Lunenburg, 9.....	January	21	Woodbridge, 7.....	December	1
Monkland, 9.....	"	25	Weston, 7.....	"	2
Moose Creek, 9.....	"	26	Islington, 7.....	January	9
79. ST. JOSEPH ISLAND—			Maple, 7.....	"	11
Richard's Landing, 11.....	December	16	SPEAKERS' SUBJECTS.		
Marksville, 11.....	"	17	BEADLE, D.W., M.A., 303 Crawford street, Toronto:		
Gaush Ka Wang Schoolhouse, 11.....	"	18	"The Stinking and the Loose Smut of Wheat; the Loose Smut of Oats; Barley, Rye, and Corn Smuts," illustrated with drawings of smutted heads and implements used in the Jensen hot-water treatment; "Clover Insects, Root-Borer, and Grasshoppers, Seed-Midge, Head-Caterpillar, Cut-Worms, and Grasshoppers," illustrated with drawings; "Cabbage Butterfly and Root-Maggot, Grain Plant-Louse (with drawings), Potato-Scab and Potato-Rot"; "The Apple Tree: Planting, Pruning, and Marketing," with illustrations. Evening Subjects: "Parasites Injuring Fruit Trees and Fruits, and the Injuries they Produce, Portrayed by the Magic Lantern"; "The Importance and Benefits of Spraying, Explained and Illustrated with the Magic Lantern"; "Insect Friends; the Importance of Being Able to Recognize Them"; "Pictures of the Carpet Beetle by the Magic Lantern; its Habits Explained, and Best Way of Getting Rid of the Pest"; "Insects Injuring Fruit Trees and Fruits," with portraits by the magic lantern.		
Jocelyn, 11.....	"	22	BROWN, ALFRED, Picton (Prince Edward):		
80. UNION—			"Lambs for Profit"; "Clover and Short Rotation"; "The Cheapest Way of Keeping Up Fertility"; "Sweet Corn <i>versus</i> Flint and Dent Varieties"; "Experiments Necessary for Selection of Best Varieties of Grains and Grasses"; "Farmer's Vegetable Garden"; "Growing Potatoes and Preventing Diseases of Same"; "New Onion Culture"; "Hot-Beds"; "The Farmer's Fruit Garden: Strawberries, Raspberries, Gooseberries, Grapes"; "Spraying, Pruning, and Grading for Market"; "How to Retain Moisture in Surface Soil"; "Planting and Care of Shade Trees and Windbreaks"; "Selecting Poultry for Winter Layers"; "Packing and Marketing Eggs"; "Educate Young People by Practical Experience"; "Ontario Agricultural College."		
Clifford, 1.....	January	12			
Mildmay, 1.....	"	14			
Lakelet, 1.....	February	22			
Ayton, 1.....	"	23			
81. VICTORIA, EAST—					
Fenelon Falls, 7.....	December	12			
Bobcaygeon, 7.....	"	14			
Dunford, 8.....	February	2			
Cambray, 8.....	"	3			
82. VICTORIA, WEST—					
Woodville, 7.....	December	9			
Lindsay, 7.....	"	11			
Oakwood, 7.....	January	19			
Vaentina, 7.....	"	20			
83. WATERLOO, NORTH—					
Elmira, 5.....	"	5			
Winterbourne, 5.....	"	6			
Crosshill, 5.....	"	11			
84. WATERLOO, SOUTH—					
New Dundee, 5.....	"	7			
Hespeler, 5.....	"	14			
Hamburg, 5.....	February	2			
Baden, 5.....	"	3			
Haysville, 5.....	"	4			
Strasburg, 5.....	"	5			
Roseville, 5.....	"	6			
Ayr, 5.....	"	8			
Galt, 5.....	"	9			
Branchton, 5.....	"	10			
85. WELLAND—					
Port Robinson, 4.....	January	12			
Ridgeway, 4.....	"	13			
Niagara Falls South, 4.....	February	13			
Willoughby, 4.....	"	15			

BURRELL, M., St. Catharines (Lincoln):

"Insects and their Relation to the Farmer and Fruit Grower"; "Stone Fruits and Some of their Pests"; "Theory and Practice of Horticulture"; "Superstitions of the Farm"; "Ethics of the Market"; "The Mental and Moral Atmosphere of the Farm Home."

GASTON, G. C., Craighurst (Simcoe):

"The Best Varieties of Orchard Fruits, and How to Grow Them, Special Reference being made to Top-Grafting on Hardy Stock"; "Best Varieties of Small Fruits, and the Modes of Cultivation"; "Rotation on the Farm." Evening Subjects: "Horticulture on the Farm"; "The Ontario Agricultural College"; "Lights and Shadows of Farm Life."

DUFF, THOS. A., Toronto:

"Poultry, and its Relation to the Farm"; "Method of Caring For, Feeding, and Housing Poultry"; "Fertile *versus* Infertile Eggs"; "Poultry and Fruit Combined"; "Care of Eggs and Methods of Marketing Same so as to Obtain the Best Profit Therefrom"; "Market Poultry"; "The Requirements of the English Market"; "Co-operate with Your Buyer"; "The Value of Farmers' Institutes"; "Diseases of Poultry and Simple Cures"; "Canada, Our Home."

DAY, G. E., B.S.A., Agriculturist, O.A.C., Guelph:

"Management of Dairy Cattle"; "Feeding Standards and Composition of Foods" (illustrated with chart); "Selection and Stock Breeding"; "Soiling and Soiling Crops"; "Corn and the Silo"; "Manures"; "Management and Breeding of Pigs." Evening Subjects: "Invisible Plants"; "Ontario Agricultural College."

DEAN, H. H., B.S.A., Professor of Dairy Husbandry, O.A.C., Guelph:

"The Dairy Cow: How to Know Her and How to Get Her"; "Feed and Care of the Dairy Herd"; "Care of Milk for Cheese Factory and Creamery"; "Cream Separator"; "How to Divide Money Among Patrons of Creameries and Cheese Factories Equitably"; "The Value of Dairy By-Products, Whey, Buttermilk, and Skim-milk." Evening Subjects: "Farm Buttermaking"; "Food Economy in the Home"; "Dairying in Europe"; "Some Needs of the Dairy Market, and How to Fill Them"; "The Ontario Agricultural College."

EVERETTS, MILTON, Smith's Falls (N. Grenville):

"Feeding and Care of the Dairy Cow"; "Care of Milk and the Relation of the Farmer to the Dairy Industry"; "The Relation of the Patron to the Cheesemaker"; "The Work Done by the Inspectors"; "The Farm and City: Which Produces the Best Men?"

EWING, J. B., Dartford (E. Northumberland):

"Care and Management of Swine"; "The Hog as an Adjunct to the Dairy"; "Care and Management of Sheep"; "Corn Culture"; "Clover Culture"; "Dairying Twelve Months in the Year"; "Our Fodder Crops." Evening Subjects: "The Training and Education of Boys for the Farm"; "Topics of the Times."

ELLIOTT, ANDREW, Galt (S. Waterloo):

"The Dairy Farm" illustrated; "The Necessity of Feeding a Balanced Ration to Dairy Cows"; "Soiling Dairy Cows"; "The Silo and Silage"; "Growing and Feeding Turnips"; "Sheep Breeding for Profit"; "Should We Increase our Flocks of Sheep?"; "Sheep *versus* Dogs"; "The Hog for the Market." Evening Subjects: "Economy"; "Give the Children a Chance."

FRASER, W. S., Bradford (Simcoe):

"Clover Growing and Curing"; "Beef-Rings Among the Farmers"; "Tree Planting for Shade and Windbreak"; "Hog Raising"; "Sheep Raising for Profit"; "Corn and the Silo"; "Underdraining." Evening Subjects: "Buttermaking on the Farm"; "Farmers' Needs."

GOULD, JOS. E., Uxbridge (N. Ontario):

"The Value of Ensilage"; "Cultivation of Corn"; "How to Construct a Cheap Silo"; "Feeding and Care of Dairy Cows"; "Dairying *versus* Grain Farming"; "Care of Farm Implements."

GLENDINNING, H., Manilla (Victoria):

"The Growing and Marketing of Grain"; "The Growing and Marketing of Red and Alsike Clover Seed"; "Weeds on the Farm"; "The Farmer's Fruit and Vegetable Garden"; "Dehorning"; "Why Farmers' Sons and Daughters Leave the Farm."

GIBSON, D. Z., Willow Grove (Haldimand):

"Value of Humus in the Soil"; "Some Wastes About the Farm; the Knowledge and Observation Necessary to Prevent Them"; "Benefits from a Rotation of Crops"; "Principles of Breeding." Evening Subjects: "The Farmer as a Citizen"; "The Ontario Agricultural College"; "Cultivation of the Mind."

HUTT, H. L., B.S.A., Horticulturist, O.A.C., Guelph:

"The Proper Management of an Orchard"; "Growing Small Fruits"; "Potato Culture"; "The Farmer's Vegetable Garden." Evening Subjects: "A Talk to Farmers' Sons"; "The Care of Flowers and House Plants"; "The Ontario Agricultural College."

HARCOURT, R., Assistant Chemist, O.A.C., Guelph:

"Wood-ashes: Their Importance on the Farm"; "Experiments in Curing Hay"; "Drainage: Its Importance to Farmers"; "How to Improve the Fertility of the Farm"; "Rotation of Crops"; "Feeding of Hogs." Evening Subject: "Ontario Agricultural College."

HARCOURT, PROF. GEORGE, B.S.A., Toronto:

"Fodder Corn and the Silo" (with chart); "Winter Dairying" (with chart); "Dairy Farming" (with chart); "Care of Milk for Cheese Factories"; "Buttermaking"; "Raising Calves for the Dairy"; "Stock Breeding"; "Stock Feeding" (chart); "Rotation of Crops" (chart); "How to Obtain a Good Dairy Herd" (chart); "Recent Experiments in Sheep Feeding" (chart); "How to Control the Moisture in the Ground" (chart). Evening Subjects: "The Future Farmer"; "Leakages on the Farm"; "The Ontario Agricultural College."

HOLTERMANN, R. F., Brantford (S. Brant):

"The Advantages of Beekeeping on the Farm"; "The Advantages of Beekeeping in a New Country"; "How to Succeed as an Apiarist"; "Bees in Relation to Plant Life"; "The Wonders of the Honey Bee"; "Poultry on the Farm"; "The Ontario Agricultural College."

HILLBORN, W. W., Leamington (S. Essex):

"Underdraining"; "The Farmer's Garden"; "Cultivation of the Orchard"; "Destroying Injurious Insects and Fungi in the Orchard." Evening Subjects: "Small Fruits"; "The Farmer's Garden"; "House Plants."

HALLMAN, A. C., New Dundee (S. Waterloo):

"Cultivation of Fodder Corn, and the Silo"; "Practical Hints on Swine Husbandry"; "The Breeding and Care of Dairy Cattle"; "Winter Care of Idle Horses."

HARRISON, F. C., B.S.A., Bacteriologist, O.A.C., Guelph:

"Sources of Bacterial Contamination in Milk, and Methods of Prevention"; "Tuberculosis of Cattle: Prevention, Detection, and Means of Eradication"; "Pure Culture Starters for Butter"; "Milk Supply for Cities and Towns"; "Formation, Cataloguing, and Choice of Books for Farmers' Institute Libraries"; "Practical Results of Bacteriology"; "Water Supply for Farm and Household"; "Assimilation of Nitrogen by Leguminous Plants."

LICK, ELMER, Oshawa (S. Ontario):

"How to Control the Moisture in the Soil"; "Feeding Dairy Cattle"; "The Silo"; "Corn and Clover, the Best Crops for the Stock Raiser"; "Growing Apples." Evening Subjects: "Agricultural Education"; "Co-operation Among Farmers"; "The Institute System."

MEYER, J. E., Kossuth (S. Waterloo):

"How to Keep Poultry so as to Obtain the Greatest Return"; "How to Compound Rations to Obtain the Best Results in Feeding Our Animals," illustrated; "The Different Breeds of Poultry: Their Uses, Characteristics, and Adaptability to the Farm"; "The Incubator and Brooder, and Their Relation to Poultry Culture." Evening Subjects: "A Few Thoughts on How to Succeed in Life"; "What is Education, and What Part Does it Play in Making Successful Farmers?"

MASON, THOS. H., Stratfordville (E. Elgin):

"Hog-raising"; "The Care and Food of Dairy Cattle"; "Sheep-raising"; "Buttermaking." Evening Subjects: "The Outlook for the Ontario Farmer"; "Ontario Agricultural College."

MONTRICK, NELSON, B.S.A., Stratford (Perth):

"Underdraining"; "Growing and Saving Corn"; "Cultivation of the Soil"; "Feeding Cattle for Export." Evening Subjects: "Ontario Agricultural College"; "Farming as a Profession"; "Tree Planting"; "Country Roads."

MORDEN, E., Niagara Falls South (Welland):

"Profitable Fruit Culture"; "Small Fruits for Profit"; "Currants: Varieties and Culture"; "Raspberry Culture"; "Best Market Varieties of Fruit"; "The Farmer's Fruit Garden"; "The Common Insects Injurious to Fruits"; "Will the Coming Farmers Study Science?"; "Our Public Roads." Evening Subjects: "How to Beautify Our Farms"; "How to Arrange Lawns"; "Best Hardy Shrubs and Evergreens"; "Wind-break for Use and Beauty."

MCCRAE, LIEUT.-COL. D., Guelph:

"Horse-breeding"; "Cattle-feeding"; "Rotation of Crops"; "Sheep-breeding and the Wool Trade"; "Clover Culture"; "Our Best Grasses"; "Rye and Rape."



Evening Subjects: "Country Homes"; "Our Farm Life."

McMILLAN, THOS., Seaforth (E. Huron):

"Breeding and Feeding Beef Cattle"; "Corn-growing and the Silo"; "Land Drainage"; "Care and Application of Manure"; "Cultivation of the Soil for Grain and Root Crops"; "Dehorning and its Advantages"; "Breeding and Feeding Heavy Draught Horses." Evening Subjects: "Making Our Way in Life"; "Farm Life: Its Conditions and Requirements."

McEWING, JAS., Drayton (W. Wellington):

"Farm Fertilizers"; "The Necessity of Systematic and Thorough Work"; "Rotation in Cropping"; "Why We Should Underdrain." Evening Subjects: "Common Sense Education"; "The Gospel of Home Influence."

McMILLAN, JOHN, M.P., Seaforth (E. Huron):

"Cultivation of Corn"; "Preparing Corn for the Silo"; "Cultivation of the Soil for Roots or Grain Crops"; "Farmers' Institutes"; "Underdraining"; "Care of the Manure Heap"; "How to Apply Manure to the Land"; "Breeding, Feeding, and Exporting Beef Cattle to Britain"; "The Benefits of Dehorning"; "The Breeding and Care of Heavy Draught Horses"; "Farm Implements." Evening Subjects: "Make Home Attractive"; "Why Boys Leave the Farm."

McNEILL, A., Windsor (Essex):

"How and When to Spray for Insects and Fungous Diseases"; "Apple Culture"; "Every Farmer His Own Mason, or How to Use Concrete in Farm Structure," illustrated with plans; "Fruit-growing as a Specialty, or with General Farming"; "Underdraining." Evening Subjects: "The Education of the Farmer"; "The Social Side of Farm Life"; "Some Insect Friends and Foes," illustrated with charts and specimens; "The Ontario Agricultural College."

McNABB, MUNGO, Cowal (Elgin):

"Beef Production"; "Sheep Breeding and Management"; "Underdraining"; "Corn-growing"; "Country Roads." Evening Subjects: "Fertility"; "Boys on the Farm."

PATTON, L., Oxford Mills (N. Grenville):

"Care of Milk for Butter and Factories"; "Dairying as Compared with Other Branches of Farming, From a Financial Standpoint"; "Can Winter Dairying be Made Profitable?"; "How to Divide Money Among Patrons of Cheese Factories Equitably"; "Buttermaking on the Farm"; "The Importance of Fodder Crops in the Cheap Production of Butter and Cheese"; "Selection and Care of Dairy Cattle"; "Maintaining the Fertility of the Farm." Evening Subjects: "Beautifying the Farm"; "The Farmer of the Future"; "The Value of Education to the Farmer."

PANTON, J. HOYES, M.A., F.G.S., Professor of Natural History and Geology, O.A.C., Guelph:

"Water in Relation to Farm Crops"; "Weeds"; "Spraying, Why, When, and How"; "Soil in Relation to Plants"; "Nitrogen in Agriculture"; "Insect Foes"; "A Wheat Grain"; "The Microscope in Agriculture." Evening Subjects: "The Sun in Relation to Life"; "Shifting the Landmarks in Agriculture"; "How to Teach Science in Rural Schools"; "The Origin and Formation of Soil."

PEARCE, A. W., B.A., Burlington (Halton):

"Apple and Grape Culture"; "Underdraining"; "Mixed Farming"; "Fertilization of Fruit Blossoms"; "Injurious Insects and Fungi, and How to Combat Them." Evening Subjects: "Leaks on the Farm"; "Agricultural Education."

PALMER, W. J., Toronto:

"Milk: Its Characteristics, Peculiarities, and General Use"; "Our Local Markets and How to Supply Them"; "Business Methods as Applied to Dairy Farming"; "Management of Home Dairy." Evening Subjects: "The Present Outlook for Young Men"; "Some Facts in City Life"; "The Ontario Agricultural College."

REYNOLDS, A. J., Danforth (York):

"Silo and Ensilage"; "Cultivation of the Soil"; "Weeds"; "Growing Clover"; "Summer and Winter Dairying"; "Farm Implements"; "Farming, Past and Present"; "Selection of a Home."

REED, J. H., V.S., Professor of Veterinary Science, O.A.C., Guelph:

"Breeding Horses for Profit"; "The Laws of Breeding"; "The Ordinary Diseases of the Stomach of the Ox which the Farmer Should Understand"; "The Mare and Her Foal"; "Feeding Horses"; "The Preventive of Parturient Apoplexy (commonly called Milk Fever) in Cows." Evening Subjects: "The Education of the Horse"; "The Essential Elements of Contagious Diseases"; "The Ontario Agricultural College."

REYNOLDS, J. B., B.A., Lecturer in Agricultural Physics, O.A.C., Guelph:

"Agricultural Physics"; "Injurious Insects"; "Farm Bookkeeping"; "The Education Needed by the Farmers of this Province."

RAYNOR, T. G., B.S.A., Rosehall (Prince Edward):

"Selection and Cross-breeding of Animals"; "Foods"; "Our Fodder Crops"; "The Dairy Cow"; "Common Diseases of Domestic Animals"; "Planting and Care of an Orchard"; "Improving an Impoverished Farm"; "Clover Culture"; "Special Fertilizers"; "Injurious Insects and Parasitic Plants on the Farm"; "Swine Breeding and Feeding"; "Management of Poultry"; "The Pea Crop"; "Corn Growing and the Silo"; "Improvement of our Country Roads"; "Underdraining." Evening Subjects: "Tillage"; "Farming as an Occupation"; "Agricultural Education"; "The Ontario Agricultural College."

RENNIE, WM., Farm Superintendent, O.A.C., Guelph:

"Clover Culture"; "Culture of Field Roots"; "Rotation of Crops"; "Ridding the Land of Weeds"; "Stock Feeding"; "Increasing Fertility and Cultivating the Soil"; "Corn Culture"; "Beautifying the Farm."

RENNIE, SIMPSON, Milliken (York):

"Underdraining"; "Cultivation Required for Potatoes and Field Roots"; "Destruction of Weeds"; "Buying and Feeding Cattle for the British Market"; "Autumn Cultivation of the Soil"; "Mistakes in Farming." Evening Subjects: "Our Country, Past and Present"; "Agriculture in Public Schools"; "Ontario Agricultural College."

RAWLINGS, A., Forest (W. Lambton):

"Growing Corn"; "Growing Clover and Grasses"; "Root Growing"; "How to Make Money in Farming"; "When to Buy Cattle and When to Sell Them"; "Winter Care of Beef Cattle"; "Summer Care of Beef Cattle."

SMITH, WM., Columbus (S. Ontario):

"Breeding and Care of Heavy Horses"; "Cultivation of the Soil in Spring and Fall"; "Elements of Success in Farming"; "Breeding and Care of Sheep."

SHEPPARD, CAPT. JAS., Queenston (Lincoln):

"Country Roads"; "Grapes, Growing and Pruning"; "Small Fruits for Home and Market"; "The Cultivation of Tomatoes for Home and Market"; "Propagating Fruits, Grafting, Budding, etc., Illustrated and Demonstrated." Evening Subjects: "Four Reasons for Cultivating the Soil"; "Agriculture in the Public Schools."

SMITH, D. E., B.A., Brampton (Peel):

"The Feeding of Dairy Cattle"; "Cott. Cultivation, Ensilage, and the Silo"; "Characteristics, Selection, and Development of the Dairy Cow"; "Essentials of Successful Breeding"; "Convenience, Construction, and Ventilation of Cow Stables"; "Underdraining"; "Buttermaking." Evening Subjects: "City versus Country Life as an Education"; "How to Spend a Winter Evening on the Farm."

SHEARER, W. C., Bright (N. Oxford):

"The Experience of a Practical Dairyman"; "Feeding Hogs"; "The Value of Succulent Food for Live Stock"; "How to Obtain a Profitable Dairy Herd"; "The Best Varieties of Peas and Oats"; "Experiments in Growing Roots"; "Potato Growing."

STEVENSON, R. S., Ancaster (N. Brant):

"Breeding and Rearing Dairy Cattle"; "Feeding Dairy Cows"; "Selecting Dairy Cows"; "How to Choose a Bull for Service in the Dairy Herd."

THOMPSON, R., St. Catharines (Lincoln):

"Cultivation of the Soil"; "How Cultivation Benefits the Growing Crops"; "Cultivation of Fruit Trees and Small Fruits"; "Growing and Marketing Fruits"; "City versus Country Life"; "Root Growing"; "Corn Growing"; "Pea Growing"; "Swine Breeding and Feeding"; "Underdraining."

WHEATLY, T. C., Blackwell (W. Lambton):

"The Importance of Ridding our Farms of Weeds, and How Best to Accomplish it" (illustrated); "Some of the Newer Weeds Threatening Us, and How to Prevent Them Spreading" (illustrated); "The Farmer's Vegetable Garden"; "Farm Accounts and How to Keep Them"; "How to Beautify the Home"; "The Ontario Agricultural College"; "Our Native and Introduced Grasses, with Specimens" (illustrated).

YUILL, JOS., Carleton Place (S. Lanark):

"Fodder Corn and Silo"; "Management of Dairy Cattle"; "Profits of Winter Dairying"; "Points of a

Dairy Cow"; "Care and Application of Manure"; "How to Enrich an Impoverished Farm"; "Sheep Husbandry"; "Swine Breeding"; "Underdraining." Evening Subjects: "Buttermaking"; "What Should We Teach Our Sons and Daughters?";

ZAVITZ, C. A., B.S.A., Experimentalist, O. A. C., Guelph  
"The Science and the Practice of Underdraining";

"Practical Methods for Improving the Fertility of Our Farms"; "Improvement of the Plants of the Farm"; "Importance of Fodder Crops in the Production of Meat and Milk"; "The Cultivation of Corn, Potatoes, and Field Roots"; "The Best Varieties of Wheat, Barley, Peas, and Oats in Seven Years' Experiments." Evening Subjects: "The Influence of the Ontario Agricultural College"; "Co-operative Experiments in Agriculture Throughout Ontario for Ten Years."

## QUARANTINE REGULATIONS

### AND RECIPROCAL ARRANGEMENTS FOR THE FREE TRANSMISSION OF UNITED STATES AND CANADIAN LIVE STOCK ACROSS THE BORDER WHEN INTENDED FOR EXPORT TO GREAT BRITAIN.

The points raised in the above heading are of the greatest importance to farmers. Is there any benefit to be gained by retaining in their full severity our present quarantine regulations? and do we act wisely in maintaining a duty regulation which hinders us from having the freest choice of routes, and therefore the freest competition in freight rates, when we wish to export our surplus live stock to Great Britain? These questions should at once be settled; and settled in a way that will prove of advantage to our breeders of live stock, both purebred stock and common stock.

There happens to be, we are glad to say, no great want of unanimity among stockmen, both breeders and exporters, as to what should be done with regard to our quarantine regulations. It is agreed on all hands that the quarantine regulations should at once be relaxed so as to allow of the immediate transit across the border of purebred animals when bought or sold for breeding purposes. With respect to common cattle there is not quite the same unanimity of opinion, but the balance of judgment is in favor of relaxing the regulations in their favor also. The argument is that, even with a duty to pay, it is oftentimes profitable to send stockers, and even fat cattle, across the border for sale, and that no unnecessary hindrances should exist to prevent this being done, whenever it is advisable to do so.

As to the other question, namely, the obtaining of a reciprocal arrangement by which either United States or Canadian cattle may be taken across the border at any point free of duty and conveyed *in bond* to any seaport when intended for export to Britain, there does not seem to be any substantial divergence of opinion at all. This arrangement would certainly have the effect of opening up our live-stock products to larger operations on the part of exporters at Portland, Boston, New York, Baltimore, and other points; and it would also give our exporters the advantage of a greater choice of routes, and of greater competition in freight rates. We should be sorry to see any arrangement entered into which would hurt our own shipping industry; nor do we believe the proposed arrangement would do so. On the other hand, its effect would be a great development in beef production, and, in consequence, a greater and more constant supply of beef and beef cattle for export, which would therefore result in a larger and steadier volume of freight for trans-oceanic carriage. In short, the effect would be as advantageous to our own ocean carriers, who, for some years past, have suffered from irregularity in their freight supply, as it would be to our beef-producers.

To get unmistakably at the opinion of practical and experienced men in these matters, FARMING

during the past month sent a letter of enquiry to a number of our most prominent breeders, selecting a fair representation of the different live-stock industries in which our farmers are engaged. This letter propounded five questions—the first three relating to quarantine regulations, and the last two to the obtaining of reciprocal arrangements by which cattle could be sent duty free across the American frontier at any point when intended for shipment to Britain. The letter of enquiry, the questions and the answers, are all given below.

It will be seen that the breeders of beef cattle are, as a whole, very strongly in favor of the changes proposed; but that the breeders of dairy cattle are not quite so strong. We regret this want of unanimity, for we cannot imagine a greater boon to our dairy interests than that our beef cattle industry should be abundantly prosperous. When this industry is prosperous, the whole country will be more prosperous, and therefore a greater quantity of dairy products will be required for home consumption. More than this: When beef and beef cattle are constituting a large part of our export trade to Britain, shipping facilities and freight rates and trading arrangements generally will be more advantageous to exporters all round, and the producers of butter and cheese will, of course, share in the benefit, as well as the producers of beef and beef cattle.

#### LETTER OF ENQUIRY.

Office of FARMING,  
Toronto, October 15th, 1896.

DEAR SIR,—The questions propounded on the accompanying return post-card are of the utmost practical interest at the present time. There are a great many who would answer all the questions affirmatively. Many, perhaps, would not go so far. We wish to get the opinions of leading men in our agricultural and live-stock industries, and to publish their opinions in FARMING, so that our legislators at Ottawa may know exactly what the real opinion of the country is in regard to these matters. Will you, therefore, kindly answer the questions proposed according to your convictions, and send the return card to us at the earliest possible date? We wish to publish the questions and answers in our November number.

Yours respectfully,

THE EDITORS OF "FARMING."

#### QUESTIONS.

##### I.

QUARANTINE REGULATIONS AS BETWEEN THE UNITED STATES AND CANADA.

Question 1.—Do you think it advisable to do

away wholly with quarantine detention of cattle at the American frontier?

*Question 2.*—If so, would you do away with it in the case of common cattle as well as of thoroughbred cattle; or would you do away with it in the case of thoroughbred cattle only?

*Question 3.*—Would you be in favor of an International arrangement by which cattle (of any sort) could be shipped across the frontier (either way) at any customs port, without quarantine detention for any length of time at all, upon certification of a clean bill of health by a competent V.S. (appointed at each port for the purpose of making such examinations)?

## II.

RECIPROCAL ARRANGEMENTS FOR THE TRANSMISSION FREE OF DUTY OF UNITED STATES AND CANADIAN CATTLE WHEN INTENDED FOR EXPORT TO GREAT BRITAIN.

*Question 4.*—If the United States would grant admission free of duty of our cattle into their territory when intended for export to Great Britain by way of United States ports, would you be in favor of granting, in return, admission, free of duty, of their cattle into our territory when intended for similar export?

*Question 5.*—Would you be in favor of a similar reciprocal arrangement with respect to horses, sheep, and swine?

## ANSWERS.

1. Hon. John Dryden, Minister of Agriculture; breeder of Shorthorns and Shropshires.
  - 1, Yes. 2, Yes. 3, Yes. 4, Yes. 5, Yes.
2. Dr. James Mills, President of the O.A.C., Guelph.
  - 1, Yes, for thoroughbred animals, on presentation of proper certificates. 2, Thoroughbred cattle only. 3, Yes, with certificates as to locality and animals, but only for thoroughbreds. 4, Yes, on examination and presentation of proper certificates. 5, Yes, for sheep and horses; not for swine.
3. F. W. Hodson, Superintendent of Farmers' Institutes, Guelph; also Secretary Dominion Cattle, Sheep and Swine Breeders' Associations, and Secretary Provincial Fat Stock Show.
  - 1, Yes. 2, Yes, all cattle. 3, Yes, decidedly. 4, Yes. 5, Yes.
4. Henry Wade, Provincial Registrar of Live Stock, Toronto.
  - 1, Yes, with permission to put it on again immediately whenever necessary. 2, With all cattle. 3, Yes. 4, Yes. 5, Yes.
5. G. E. Day, B.S.A., Agriculturist, O.A.C., Guelph.
  - 1, No. 2, Purebred cattle only. 3, Yes, in addition to sworn certificate from local V.S. regarding health of animals in district. 4, Yes. 5, Yes.
6. D. & O. Sorby, Guelph, breeders and importers of Clydes and Hackneys.
  - 1, Yes, with proper inspection. 2, Both, if inspected. 3, Only with local inspection as well. 4, Yes. 5, Horses and sheep only; not swine.
7. D. McCrae, Guelph, breeder of Galloways, also of Clydes and Cotswolds.
  - 1, Yes, with proper inspection, etc. 2, Both, under conditions. 3, Yes, but more inspection would be needed. 4, Yes. 5, Yes, for horses and sheep; swine need careful inspection and isolation.
8. W. C. Edwards, M.P., Rockland, breeder of Shorthorns and Ayrshires; also of Clydes, Thoroughbreds, Jerseys, Shropshires, and Berkshires.
  - 1, Yes. 2, Yes. 3, Yes. 4, Yes. 5, Yes.
9. Joshua Legge, Brockville, late President of the Ontario Agriculture and Arts Association.
  - 1, Yes. 2, Yes, all cattle. 3, Yes, by a reciprocity treaty. 4, Yes, it would be of great benefit to Ontario. 5, Yes, just what we want.
10. James S. Smith, Maple Lodge, ex-M.P.P., breeder of Shorthorns.
  - 1, Yes. 2, With all cattle. 3, Yes. 4, Yes. 5, Yes.
11. R. Gibson, Delaware, breeder of Shorthorns and Shropshires; late President Dominion Shorthorn Association.
  - 1, Yes. 2, Entirely, but would impose duty on commercial cattle. 3, Yes. 4, Yes. 5, Sheep and horses; not swine.
12. John I. Hobson, Mosboro, breeder of Shorthorns; President of Dominion Cattle Breeders' Association.
  - 1, Yes. 2, Yes, with all cattle. 3, Yes. 4, Yes. 5, Yes.
13. Albin Rawlings, Forest, breeder of Shorthorns, and an extensive grazer; late President of Agriculture and Arts Association.
  - 1, Yes. 2, Yes, for all cattle as long as Britain schedules our cattle. 3, Yes. 4, Yes, our ocean freights would be lower. 5, For horses and sheep; not swine.
14. D. D. Wilson and John A. Wilson, Seaforth, breeders of Shorthorns.
  - 1, Yes, with certain restrictions. 2, Yes, with certain restrictions. 3, Not unless accompanied by a certification of a clean bill of health from a competent V.S., setting forth that animal, shipment, and locality of purchase are all free from contagious diseases, and with a law also that restrictions should be at once enforced again if an outbreak of contagious disease should occur. 4, Yes, with certain restrictions. 5, Yes.
15. John Idington, Stratford, breeder of Shorthorns.
  - 1, Yes, subject to regulation that in case of future outbreaks detention and tuberculin test should again be enforced. 2, Yes. 3, Yes, except to insist in the case of thoroughbred cattle upon tuberculin test. 4, Yes. 5, Yes.
16. John Miller, Markham, breeder of Shorthorn cattle.
  - 1, Yes. 3, Yes. 4, Yes, for export. 5, Yes, if for export.
17. J. C. Snell, Edmonton, breeder of Shorthorns, Jerseys, Cotswolds, Berkshires, etc.; Vice-President Dominion Cattle Breeders' Association; late President Dominion Shorthorn Association; late President Agriculture and Arts Association, etc.
  - 1, Yes, subject to veterinary inspection. 2, Yes, for all cattle. 3, Yes. 4, Yes. 5, Yes, with proper safeguards as to health, etc.
18. D. Alexander, Bridgen, breeder of Shorthorns.
  - 1, Yes, wholly. 2, Yes, and common cattle also. 3, Yes, decidedly. 4, Yes, certainly. 5, Sheep and swine precarious.
19. W. J. Biggins, Clinton, breeder of Shorthorns.
  - 1, No. 2, In case of thoroughbreds only. 3, No. 4, No. 5, Yes.
20. James I. Davidson, Balsam, ex-M.P., breeder of Shorthorns and Clydesdales.
  - 1, Yes. 2, Both kinds. 3, Yes. 4, Yes. 5, Yes.
21. C. M. Simmons, Ivan, breeder of Shorthorns and fat cattle, also Berkshires.
  - 1, I certainly do, provided we have inspection at port of entry. 2, For all neat cattle also. We want more freedom of trade. 3, Certainly. We want no one-sided policy. It would favor both sides by making sales more regular. 4, I would. 5, Yes, for horses; sheep and swine only with thorough inspection.
22. H. D. Smith, Compton, Quebec, breeder of Hereford cattle, Yorkshires and Tamworths.
  - 1, No, registered stock only, and these only with certificate of clean bill of health by competent V.S. in locality where the cattle come from, stating further that the locality is free from disease. 2, Answered in No. 1. 3, No. 4, Yes, with inspection. 5, Yes, with inspection.
23. W. S. Lister, Middlechurch, Manitoba, breeder of Shorthorns.
  - 1, Not altogether. 2, Purebred only. 3, Certainly, under rigid inspection. 4, Yes, with proper safeguards. 5, Yes, with proper safeguards.
24. David Milne, Ethel, breeder of Shorthorns.
  - 1, Yes. 2, Yes, all cattle. 3, Yes. 4, Yes. 5, Yes.
25. J. & W. B. Watt, Salem, breeders of Shorthorns.
  - 1, We do think so. 2, For thoroughbred cattle only. 3, We would be favorable. 4, We think it desirable. 5, We think so if properly inspected.
25. John Sibbald, Annapolis, breeder of Galloways.
  - 1, Yes. 2, Yes, both thoroughbred and common. 3, Yes. 4, Yes. 5, Yes.
27. A. M. & R. Shaw, Brantford, breeders of Galloways.
  - 1, If a clean bill of health is produced. 2, Both. 3, A clean bill of health at shipping point and local V.S. inspection at destination are all that is necessary. 4, Yes. 5, Yes, with a clean bill.
28. E. Gaunt & Sons, St. Helens, breeders of Shorthorns.
  - 1, Yes, if a clean bill of health is shown. 2, Yes, if the same privilege were granted to us in return. 3, Yes. 4, Yes. 5, Yes.
29. J. P. Phin, Hespeler, breeder of Shorthorns and Shropshires.
  - 1, Yes, conditionally. 2, Both kinds. 3, Yes. 4, Yes, subject to inspection. 5, Yes.
30. W. W. Ballantyne, Stratford, breeder of Shorthorns and Ayrshires.
  - 1, Yes, as long as the United States have a clean bill

- of health. 2, Do away with it for all cattle. 3, Yes. 4, Yes. 5, Yes.
31. Dr. F. C. Sibbald, Sutton, Ont., breeder of Shorthorns.  
1, No, except in the case of thoroughbreds. 2, Yes, in case of thoroughbreds. 3, No. 4, Yes. 5, Yes.
32. Captain T. E. Robson, Ilderton, breeder of Shorthorns.  
1, Yes. 2, Yes. 3, Yes. 4, Yes. 5, Only horses and sheep; not swine.
33. D. H. Russnell, Stouffville, breeder of Shorthorns and fat cattle.  
1, I certainly do. 2, Yes, all classes. 3, Without quarantine examination, but would have examination by competent V.S. 4, I would. 5, Yes, all kinds of stock.
34. J. M. Gardhouse, Highfield, breeder of Shires, Shorthorns, and Leicesters.  
1, Yes. 2, Thoroughbreds only. 3, Yes. 4, Yes. 5, Yes.
35. W. J. Rudd, Eden Mills, Ont., breeder of Devons.  
1, Yes, if the Americans do. 2, Thoroughbreds only. 3, Yes. 4, Yes. 5, Yes.
36. John Isaac, Markham, breeder of Shorthorns.  
1, Yes. 2, Do away with it for all cattle. 3, Yes. 4, Yes. 5, Yes.
37. John Davidson, Ashburn, breeder of Clydes and Shorthorns.  
1, Yes. 2, Both kinds. 3, Yes. 4, Yes. 5, Yes.
38. Morris, Stone & Wellington, Fonthill, breeders of Shires.  
1, No, thoroughbreds only. 2, Thoroughbreds only. 3, No. 4, Yes. 5, Yes.
39. William Stewart, Lucasville, breeder of Polled Angus cattle.  
1, Yes, if examined by competent V.S. 2, In both cases, but particularly thoroughbreds. 3, Yes. 4, Yes. 5, With horses and sheep only; would detain swine for twenty days.
40. James Bowman, Guelph, breeder of Polled Angus cattle.  
1, No, thoroughbreds only. 2, In case of thoroughbreds only, and would have a short quarantine for them. 3, No. 4, Think it would be more loss than gain to us. 5, No.
41. James Tolton, Walkerton, Vice-President Winter Fat Stock Show; President Dominion Swine Breeders' Association; breeder of Oxfords.  
1, Yes, if the animals and point of departure are free from disease. 2, Yes, upon same conditions as in answer to question 1. 3, Yes, if assured that the district of departure is free of contagious disease. 4, Yes, upon certificate of clean bill of health. 5, Yes.
42. E. E. Martin, Canning, breeder of Berkshires.  
1, No, only with thoroughbreds. 2, Thoroughbreds only. 3, No. 4, No. 5, Yes, but for pure breeds only.
43. Wm. Donaldson, South Zorra, breeder of Shorthorns and Shropshires.  
1, No. 2, Admit thoroughbreds only after a V.S. inspection. 3, No. 4, No, it would block our exports. 5, No.
44. T. A. Cox, Brantford, breeder of Berkshires.  
1, No, thoroughbreds only. 2, Thoroughbred cattle only. 3, Yes. 4, Yes. 5, Yes.
45. John Jackson, Abingdon, breeder of Southdowns, ex-President Dominion Sheep Breeders' Association.  
1, Yes. 2, Thoroughbreds only. 3, Yes. 4, Yes, to pass through in bond. 5, Yes.
46. Daniel Brims, Athelstan, Quebec, breeder of Clydesdales, Shorthorns, and Shropshires.  
1, No. 2, No. 3, Yes. 4, No. 5, No.
47. John Campbell, Woodville, breeder of Shropshires, also Shorthorns.  
1, Yes, under present conditions. 2, With all cattle when certificates of health are provided from districts of production. 3, Yes, when properly guaranteed V.S. certificates are shown by both breeders and dealers. 4, Yes. 5, Yes, from districts where stock is healthy.
48. James Rennie, Wick, breeder of Shorthorns and fat cattle.  
1, Yes. 2, Yes, all kinds of cattle. 3, Yes. 4, Yes. 5, Yes.
49. R. G. Steacy, Lyn, breeder of Ayrshires.  
1, No, thoroughbred stock only. 2, Only in case of thoroughbred stock. 3, Yes. 4, Yes. 5, Yes.
50. G. W. Clemons, St. George, Ont., breeder of Holsteins; Secretary of the Holstein-Friesian Association of Canada.  
1, Yes. 2, Yes. 3, Yes. 4, Yes. 5, Not as regards swine.
51. David Benning, Williamstown, Ont., breeder of Ayrshires.  
1, No, thoroughbreds only. 2, Thoroughbred only. 3, Yes. 4, Yes, with certificate of health. 5, Yes, on same conditions.
52. William Subring, Sebringville, breeder of Holsteins.  
1, Yes. 2, Thoroughbred only. 3, Yes. 4, Yes. 5, Yes.
53. J. H. Smith, Highfield, breeder of Jerseys.  
1, Yes. 2, Would let in both kinds. 3, Yes. 4, Yes. 5, Yes.
54. William Relph, Markham, breeder of Jerseys.  
1, Yes. 2, Thoroughbred cattle only. 3, Yes, by all means. 4, Yes. 5, Yes.
55. Wm. Butler, Dereham Centre, breeder of Guernseys and Jerseys.  
1, No. 2, I would quarantine cattle thirty days. 3, I would not. 4, No. 5, Would favor arrangement for horses and sheep; not swine or cattle.
56. R. S. Stevenson, Ancaster, breeder of Holsteins.  
1, No, thoroughbreds only. 2, Thoroughbreds only. 3, Yes. 4, Yes. 5, Yes.
57. W. S. Hawkshaw, Glanworth, breeder and importer of Shropshires.  
1, No. 2, No. 3, Yes, but must first have a clean bill of health for one year from the State. 4, Yes. 5, Yes.
58. E. Pannabecker, Hespeler, breeder of Holsteins.  
1, Yes. 2, Thoroughbred only. 3, Yes. 4, Yes. 5, (Not answered.)
59. D. E. Smith, Churchville, breeder of Holsteins.  
1, I do not. 2, (Not answered.) 3, I would not favor it. 4, Yes. 5, Yes, horses and sheep and swine.
60. Alex. Hume, Burnbrae, breeder of Ayrshires.  
1, No, thoroughbreds only. 2, In case of thoroughbred cattle only. 3, (Not answered.) 4, Yes. 5, No.
61. B. Mallory, Frankford, breeder of Holsteins.  
1, No, thoroughbreds only. 2, Thoroughbred only. 3, No. 4, No. 5, If the above, yes.
62. A. Terrill, Wooler, breeder of Ayrshires.  
1, No. 2, (Not answered.) 3, Yes. 4, Yes. 5, Yes.
63. W. H. McNish, Lyn, breeder of Guernseys.  
1, No. 2, Would not do away with it for either sort. 3, No. 4, Yes. 5, Yes.
64. Major J. A. McGillivray, M.P., Uxbridge, breeder of Jerseys, Dorsets, and Tamworths.  
1, No. 2, I would not do away with it altogether with either, but would shorten the time in both cases. 3, No, there should be some detention. 4, Yes, with proper safeguards to prevent fraud. 5, Yes.
65. D. Drummond, Petite Cote, Quebec, breeder of Ayrshires.  
1, Yes. 2, Thoroughbred only. 3, Yes. 4, Yes. 5, Yes.
66. W. M. Smith, Fairfield Plains, breeder of Ayrshires, Merinos, and Poland-Chinas.  
1, Yes. 2, Thoroughbred cattle only. 3, Yes. 4, Yes. 5, Yes.
67. R. H. Harding, Thorndale, breeder of Dorsets and Chester Whites.  
1, No. 2, (Not answered.) 3, (Not answered.) 4, Yes, unless contagious disease is known to exist in the exporting district. 5, Yes, for horses and sheep; not swine.
68. Arthur Johnston, Greenwood, breeder of Shorthorns and Clydesdales; President of Dominion Shorthorn Breeders' Association.  
1, Yes, if you mean on both sides. 2, Yes, in case of all kinds of cattle. 3, Yes. 4, Yes, in bond. 5, Yes.
69. D. McLachlan, Petite Cote, Quebec, breeder of Ayrshires.  
1, Yes, as regards thoroughbred cattle. 2, Only thoroughbred. 3, Yes, but only for purebred, and if the United States do the same. 4, Yes, for shipment. 5, No.
70. Herbert Wright, Guelph, President of Guelph Fat Stock Club.  
1, I do. 2, With all cattle. 3, I would. 4, Yes. 5, Yes.
71. J. G. Clark, Woodroffe Dairy Farm, Ottawa, breeder of Ayrshires, etc., writes:  
"With regard to your question re quarantine regulations between Canada and the United States, I think with the very excellent facilities and experience of veterinarians in detecting and diagnosing disease in live stock, the present regulations might be so modified as to greatly reduce the cost to stock owners and importers. I do not think we could reasonably expect to maintain our high standing as regards the health of the live stock of our country if quarantine detention were wholly done away with."



## FARMING

AN ILLUSTRATED MONTHLY MAGAZINE DEVOTED TO FARMING  
IN ALL ITS BRANCHES.

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Editorial,	

**Crowded Out.**—We regret that much interest-  
ing matter has been crowded out of this issue,  
although our number of pages is twenty more than  
usual.

**American Clydesdale Association.**—The  
eighteenth annual meeting of the American Clydes-  
dale Association will be held at the Sherman House,  
Chicago, Wednesday, November 13, 1896, at eight  
p.m.

**Farmers' Institute Speakers.**—We propose  
in our December number to give a series of interest-  
ing biographical sketches of all the Institute speakers  
who go out this year (1896-7). These sketches will  
all be illustrated by portraits.

**American Aberdeen-Angus Breeders' As-  
sociation.**—The regular annual meeting of the  
members of the American Aberdeen-Angus Breeders'  
Association will be held at the Leland Hotel, Chi-  
cago, Ill., on Wednesday, November 11, 1896, at  
7-30 p.m.

**Our October Number.**—Amongst the host of  
purely voluntary expressions of commendation re-  
ceived by us with reference to the October number  
of FARMING was one from the United States De-  
partment of Agriculture at Washington. Words of  
praise from such high authority cannot, of course,  
but be very gratifying to us.

**Our December Number.**—Our December  
number will be a very attractive one. Besides the  
special feature, namely, the illustrated account of the  
Ontario Agricultural College, we have arranged for  
a large number of very practical articles on timely  
farm topics. A number of these articles will be  
enlivened by very interesting illustrations.

**Fall Catalogue.**—John S. Pearce & Co., London, have just issued their handsome fall catalogue. It is a good one, and each of our readers should have a copy. A postal card will procure one.

**Cannot Do Without It.**—Mr. Robert Shaw, of Kemble, is one of those gentlemen who not only appreciate a good thing, but wants his neighbors to participate in it. He sends us in his own and other subscriptions with the remark, "I cannot do without FARMING at all, as I like it better than any other paper I take."

**Cats and Dogs.**—Attention is called to the advertisement of Peirce Bros., of Winchester, N.H., which appears in the columns devoted to poultry advertisements. In addition to their prize-winning Games, Game Cochins, and Bantams, they offer Boston terrier dogs and Angora cats of the most aristocratic strains. The breeding of blue-blooded cats seems likely to become a fashionable fad.

**Caution.**—S. Vessot & Co., of Terrebonne, Que., ask us to caution intending purchasers against cheap and inferior imitations of their grinder. Messrs. Vessot & Co. claim that the market has been flooded of late with such imitations, and that it behooves those interested to use all due caution lest they should be induced to buy worthless machines. The *genuine* Joliette Grinder is not manufactured by any other firm.

**Do You Admire Flowers?**—If so, you cannot fail to be pleased with the offer made in another column by Messrs. John S. Pearce & Co., of London. The flowering bulbs which are included in their advertisement will make a most beautiful collection, and are remarkably cheap at the price asked for them. The writer paid more for not much more than half the quantity at one of Toronto's large departmental stores the other day.

**A Reliable Business House.**—Enterprise and fair dealing cannot fail to bring such business houses as the People's Wholesale Supply Co. into favor, and it is little wonder that under the able management of Mr. R. Y. Manning the company is daily gaining in popularity. From personal dealings we have found "The People's" to be a thoroughly reliable house, and we believe our readers will find it the same if they patronize it, as we hope they will.

**Do We Lead in Well-Fenced Farms?**—The Page Wire Fence Co., of Walkerville, Ont., whose advertisements have appeared many times in FARMING, write us: "We are glad to say that the farmers and stockmen of this country are adopting Page woven wire fencing very rapidly, the demand for this fence this year being much greater than ever before. This indicates that the farmers of Canada will lead the world in well fenced farms, as well as be leaders in the production of fine stock."

**Grinding Mills.**—The mills manufactured by S. Vessot & Co., of Joliette, Que., are wonderfully perfect, as may be supposed from the fact that they obtained a gold medal and diploma at the World's Columbian Exposition in 1893. This year's mills have a number of important improvements which make them far more useful and valuable than ever. The same firm also manufacture an improved corn and cob crusher which is highly recommended. See their advertisement in another column.

**Moody's Two-Horse Tread Power.**—Messrs. Matthew Moody & Sons, of Terrebonne, Que., are advertising their very complete two-horse tread power

in this number of FARMING. The question is often asked, "Why is there a centre track with rollers in Moody's two-horse power?" The answer is that with it there is a support on each side of each horse. This is only one of many wrinkles which may be learned by a perusal of this firm's catalogue. Send for it, and at the same time get their revised price list.

**Pure Salt.**—It is frequently a matter of wonder why salt, an article so cheap and so easily obtainable, should come to the consumer in an adulterated condition. The fact is that in its natural state salt has blended with it numerous other ingredients, and it is only by the most careful processes of refinement that the foreign elements can be eliminated. The Windsor Salt Co. claim that they have succeeded in perfecting a process by which the salt is entirely separated from all objectionable material, thus producing a perfectly pure article, and that therefore their products are absolutely safe for use in the dairy and sure to give entire satisfaction. See their advertisement.

**The Wall-Paper King.**—Mr. C. B. Scantlebury, Belleville, Ont., better known throughout Canada as the "Wall-Paper King of Canada," whose advertisement has been running in these columns, has built up a wonderful wallpaper business through his system of sending samples through the mails and by express. His advertisement explains his method of doing business. We quote from it: "Address a post-card to C. B. Scantlebury, Belleville, Ont., then on the other side say: Please send me samples of wallpaper suitable for (mention the rooms), the prices to be (mention prices) per single roll. I saw your advertisement in FARMING. By mailing that post-card to the firm, samples will be sent to the writer by return mail free of all cost."

**Souvenirs.**—The most remarkable stove placed upon the market during the present century is the famous line of Souvenir stoves and ranges. The Souvenir ranges have the wonderful aerated oven, having a continuous flow of pure fresh air. Recent scientific experiments have shown that where food is cooked in air-tight ovens it absorbs all the impurities of the heated atmosphere surrounding it. This greatly destroys the delicate and sweet natural flavors of the food, besides imparting impurities. Souvenirs, it is claimed, require less fuel and labor to operate them than any other stoves made. An aerated oven can be heated more quickly and with less fuel than the ordinary ovens. The Gurney-Tilden Co., of Hamilton, Ont., is one of the oldest and greatest stove building concerns in North America; their stoves are sold everywhere between the two oceans, and their goods are guaranteed to give extra satisfaction. Souvenir stoves are a marvel of beauty, economy, and convenience, and are made in seventy-five different styles and sizes. You can buy any kind of a Souvenir that may be required.

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## Stock Notes.

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*Items concerning conditions of stock, also information as to recent sales, purchases, milk performances, or any other matters that will be of interest to our readers as news freely admitted in these columns. Items describing stock for sale, or anything else of an advertising nature, will be inserted only if paid for.*

**THREE HOURS A DAY.**—Mr. William Bacon, of Orillia, writes: "I have had to spend three hours a day at times answering correspondence on the Jerseys which I advertised in FARMING, and I am a quick writer at that."

JOS. CAIRNS, of Camlachie, Ont., has imported a fine yearling Chester White boar and sow from the herd of W. Wilnery, Ohio. They are a grand pair. The boar is reckoned to be one of the best ever passed through quarantine. He will now head Mr. Cairns' herd.

CHESTER WHITE AND BERKSHIRE PIGS.—Anyone who desires to obtain choice young stock of either of these breeds cannot do better than drop a card to Mr. J. H. Shaw, of Simcoe, Ont., who desires to dispose of some of his surplus stock. He is offering bargains in young pigs of both breeds.

MR. EDWIN BUSS, of Elphicks, Horsmonden, Kent, England, whose advertisement is in FARMING, has been recently visited by quite a lot of foreign customers seeking stock from his famous Berkshire herd. These visits have resulted in twenty-five or more head having been sold, to go to Buenos Ayres, Africa, Russia, etc.

SALE OF PRIZE STOCK.—Mr. David Benning, of Williamstown, Ont., we understand, has disposed of his prize calves (which are illustrated on page 158 in this number of FARMING) to Mr. W. W. Ogilvie, of Montreal, on very favorable terms. These calves are an exceptionally fine lot, and Mr. Ogilvie is to be congratulated on his purchase.

MR. A. TERRILL, of Wooler, Ont., writes: "I am much pleased with my 'ad.' in FARMING. I have just got through showing, and have taken sixty-eight first prizes, nineteen second prizes, and three third prizes on my Ayrshires; fifty first prizes, eight seconds, and nine thirds on my Oxford Downs; and thirty firsts, eight seconds, and eleven thirds for my Berkshires. My stock are all doing well."

DISPERSION SALE.—We call attention to the advertisement of Mr. Charles Mackey, of Thornbury, announcing a dispersion sale of his exceptionally fine collection of collie dogs, bronze turkeys, Duroc-Jersey swine, Shropshire sheep, and Jersey cattle. Those desiring to obtain new stock in any of the classes mentioned will be able to do so on favorable terms, as Mr. Mackey has decided to give up farming.

THE VALUE OF AN ADVERTISEMENT.—The man who waits for "better times" to advertise does not know the value of advertising. When trade is quiet and prices low, it is then that the wise man increases his advertising space. The most successful stockbreeders find it more advantageous to advertise now than at any other time. Those who use FARMING as a medium for advertising do not complain of a lack of interest in stock.

GEORGE & SPETTIGUE, of London, Ont., are offering for sale a great collection of fine poultry stock. They give prices in their advertisement, so that those of our readers who are not familiar with the value of well-bred poultry may form an estimate of the outlay requisite for the improvement of their own breeds. There is nothing on the farm which responds more readily in results to good breeding and good management than poultry.

MRS. E. M. JONES.—We are very glad to hear from Mrs. E. M. Jones, of Brockville, that although it was quite recently announced that she had disposed of nearly the whole of her herd, it is not by any means her intention to retire permanently from the position she has so ably occupied amongst the Jersey breeders of the continent. She writes that she still has a "little home herd of a dozen or so" of choice Jerseys; and we hope it will not be long before she will again be a competitor in the show ring, where she has always been so eminently successful.

MR. ARTHUR JOHNSTON, of Greenwood, reports that he has never owned, at any one time, so many really good young cattle of both sexes as there are to be found in his herd this year. Amongst the lot of youngsters are nineteen exceptionally fine young bulls of various ages and desirable Shorthorn colors. There are also a number of equally good heifers; and as Mr. Johnston intends to dispose of the whole of them at very moderate prices, according to individual merit and breeding, this opportunity to obtain choice young stock should not be overlooked by those intending to make purchases this fall.

A VALUABLE JERSEY BULL.—High Sheriff, the thoroughbred Jersey bull, now owned by Mr. E. B. Eddy, the well-known manufacturer of Hull, was purchased not long ago from Mr. William Rolph, of Markham, at a pretty big figure, and has given his owner entire satisfaction as a stock-getter and in every other respect. But Mr. Eddy, believing in the theory that the infusion of new blood into a herd is of great importance, has decided to procure another bull and sell this one, as per his advertisement in another column. High Sheriff is a young animal, in prime condition, and will be disposed of at a very reasonable price.

MR. C. R. DECKER, of Chesterfield, reports: "My stock is doing well. I was very successful at the fairs. I have added three new choice stock boars to my herd, and now have a lot of my large sows breeding. My boars run from 600 pounds to 725 pounds. My sales since last report are as follows: J. Hall, Plattsville, three boars; Robert Woods, Britton, two boars; The Bow Park Co., Brantford, two stock boars; J. E. Ratz, Gad's Hill, one boar; Hugh Hutchison, Gorrie, one sow; A. Nahrgang, Haysville, a sow in farrow; Win. Moran, Hespeler, young sow and boar; W. H. Clemens, Blair, a boar and sow; John D. Moore, M.P., Galt, one boar; Thomas Dewar, Wellesley, one boar; D. Hamilton, Harriston, one boar and sow."

A CORRECTION.—Mr. John Kelly, of Shakespeare, calls our attention to two errors in his advertisement in the last issue which he desires corrected, as he very justly thinks he has won honors enough without claiming any that he did not win. In the first place, he did not get the pen prize at Toronto in 1887; and, secondly, his ram Royal Chester did not take first prize at the World's Fair, Chicago, for the best ram of any breed, as was stated in the advertisement, for such a prize was not offered, but it did get the sweepstakes prize for the best ram of any age of the Leicester breed. The advertisement was printed by FARMING just as it was received; but the party to whom Mr. Kelly gave the information respecting his flock misunderstood what Mr. Kelly said, thus the error occurred.

OF VALUE TO HORSEMEN.—Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horses out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well, and at a time when the horse is having a rest. Of course it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

C. M. SIMMONS, of Ivan, Ont., writes: "I have disposed of Royal Saxon and Barmpton M., and have now at the head of my herd the imported bull, Blue Ribbon=17095=(63706), he by Royal James (54972); dam Roseanty, Vol. 38, p. 298, E.H.B., by Grovesend (46461). I sold Barmpton M. to head the herd of Jas. Crerar, Shakespear, and Royal Saxon to Mr. Brown, near Galt; also the yearling, Strathallan Heifer 14th, that took first at Toronto, 1895, second at Montreal, and first at Ottawa, and first at London, 1896, to John Braydone, of Milverton; also a red Strathallan bull calf by Barmpton M. to S. Johnston, of Fordwich; and another roan bull calf by Royal Saxon to Mr. McKillop, of East Williams. In Berkshires, JAMES QUIRRE reports sales to Green, Cox, and others totalling over \$300. This, with the Shorthorns added, makes a handsome amount. It would take quite a crop of wheat and oats to realize the amount, making no mention of the number of young bulls and heifers yet on hand to supply the fall and winter trade. We much appreciate FARMING."

JOS. W. BARNETT, manager of the Pine Grove Stock Farm of W. C. Edwards & Co., Rockland, Ont., writes: "We have just sold to Stephen Weldon, Middle Coverdale, N.B., the bull calf, New Year's Boy; to C. A. Archibald, Bellevue Stock Farm, Truro, N.S., the bull calf, Marmion; to James C. Clark, North Wiltshire, P.E.I., the bull calf, Bold Boy; to George A. Fawcett, Upper Sackville, N.B., the bull calf, Billy Douglas; also the yearling bull, Doctor Hamilton. We have also sold to the Restigouche Agricultural Society, Shasto, N.B., five shearling Shropshire rams. We are getting several enquiries for bulls, and have several of our best ones left, and will price them right to intending purchasers. Banker, the Toronto winner, is doing well, and we feel proud of him. We thought it pretty good for him to win in Toronto in a class of thirty-two entries. He afterwards won in Ottawa, beating the Montreal medal bull. Our sheep are all in good breeding condition. We have a bunch of shearling Shropshire rams that are good and will be sold cheap."

C. T. GARBUTT, Claremont, writes to say: "Our sheep are home again. They look grand after their circus; not one has laid a pin. They have won me a nice little snug sum of \$402, which I feel justly proud of. We have sold and shipped since our last writing: one sow to George Green; one boar to Mr. McMurray, Sandford, Ont.; one sow and one boar to John Griffins, Myrtle, Ont.; one ram to Francis Spofford, Claremont, Ont.; one stock ram to Nelson Bostwick, Newmarket; two show ewes to F. Bonnycastle & Sons, Campbellford, Ont.; one boar to Thomas Pickett, Uxbridge, Ont.; one ram to John A. Walker, Vandorf, Ont.; one ram to Mrs. Hall, Whitby, Ont.; one ram to A. Groat, Brooklin, Ont. We have shipped to-day our (Imp.) Lord Lorne ram to Heber Rawlings, Ravenswood. You will be pleased to hear that my stock have taken so well. Mr. S. V. McDowell, Fredonia, Pa., who has bought his sheep from me for four years, writes me that he has won \$413 in prizes this fall. He is now purchasing five more from me. People are getting wakened up, and your paper, FARMING, is helping to do it. Success to your journal."

JOHN CAMPBELL, Fairview Farm, Woodville, Ont., Oct. 12th, writes: My fall trade in rams has been good enough to clear all out except two excellent sheep of first-class quality. One of them, bred by Mansell and used in my flock during the fair season, being specially recommended by his breeder as a stock ram. Shropshires are making their way

to every part of our great continent. I have shipped to Manitoba on the north, and south to several of the Middle States, to Prince Edward Island east, and Hornby Island, B.C., westward. But the expressage on three sheep to the latter point was enough to try the buyer's nerve, and yet no complaint was heard of the \$96 bill of charges. Though the ram trade has been so unusually brisk, the great scarcity of winter feed leads me to offer at tempting prices the best stock of ewes ever owned. I must sell, hence my new advertisement. My great winning rams, Fairview Stamp 77778, by Newton Lord; The Comet 89088, bred by A. E. Mansell; and The Gem 89089, bred by P. L. Mills, are now at work in the flock, while the old champion, Newton Lord, active as ever, has to his service a bunch of twenty ewes which have proved very successful breeders to his core in the past.

MR. JOHN KELLY'S SALE.—The disagreeable weather interfered somewhat with Mr. John Kelly's sale of Leicesters on Wednesday, October 21st, at Shakespeare. There was a small attendance of buyers, only about one hundred being present, but they were there to buy, as the prices given below will show, and hence made up in quality what was lacking in numbers. The following is a list of the sales and prices realized: James K. Campbell, Palmerston, one pair yearling ewes, \$85, and one pair ewe lambs, \$50; Stewart Wright, Clachan, one pair yearling ewes, \$80; Wm. Rennie, Shakespeare, two pair yearling ewes, \$48 and \$42, and one pair ewe lambs, \$85; Alex. Hastings, Cross Hill, one pair ewes, \$32, and one pair ewe lambs, \$38; Alex. Crerar, Lisbon, three ewe lambs, \$105; Matthew Hyde, Stratford, one pair yearling ewes, \$41, one pair ewe lambs, \$40; W. Whitelaw, Guelph, one pair two-year-old ewes, \$50. Only twenty-five head were sold, as the buyers seemed satisfied. Considering the crowd, the prices were remarkably good. The average is about \$27.84 per head, and, when it is remembered that this included eleven ewe lambs, it shows that good sheep will still bring good prices. Evidently the bottom has not gone out of the sheep business despite the low prices that have been ruling.

A NEW ADVERTISER.—Mr. Norman Blain reports that he has been most successful at the fall shows; out of 32 entries he has won 20 first and 9 second prizes. This includes three entries for herd prize, and in these he won two firsts and a second. The head of his herd is King George, sired by Rex (imp.). His grand proportions and extra qualities stamp him as a very superior animal, and one that should get a lot of show pigs. This pig has never been beaten, having an unbroken record as a winner of first prizes. In sows he has some splendid ones: Amber Rose, the grand aged sow, weighing over 700 lbs., sired by Norman's Pride (imp.), has also been a winner wherever shown. Trilby, a young sow of his own breeding, sired by Amber Smith, has also been a most successful winner. This splendid sow is scarcely a year old and weighs about 500 lbs. He has also a number of other very fine sows of choice stock. Red Knight, his two-year-old boar, is a noted animal of grand proportions, and was a most successful prize-winner last year. This fall he was shown six times, and won five firsts and a second; as a pig under six months he was never beaten in the show ring. His sire is Rattler, and his dam Amber Rose, by Norman's Pride (imp.). This animal has proved himself a famous stock-getter, and is for sale.

ISALEIGH GRANGE, Danville, Quebec, is making great headway under the able management of Mr. T. D. McCallum. Their stock this year won over



## Stock Notes—Continued.

\$1,000 at the leading exhibitions. An experiment that Mr. McCallum is making with cabbage as a fodder plant is worth recording. One acre and a half of land has been sown to cabbage, cultivated just as turnips would be. The results are most satisfactory. The crop comes in for feeding at a time when corn is likely to be frozen, and when the silo is not ready to be used. Consequently it fills a very important place in the season's feeding. The variety of cabbage used by Mr. McCallum in this instance was "Tottler's Cabbage," the seed having been purchased from Wm. Ewing, of Montreal. The crop was magnificent, and, at the time of our representative's visit, forty cows, eighty hogs, and seventy-five sheep had been feeding upon it for six weeks. At the same rate of consumption, which was six large loads per day, it would last two weeks longer. It will be readily seen that with such a production this would be one of the most profitable and convenient crops that could be grown. Mr. McCallum intends increasing the quantity to five acres next season. All the Isaleigh Grange stock is doing well, and in the near future we shall give our readers an opportunity of seeing illustrations of it in the columns of FARMING.

**HENRY ARKELL'S SALE.**—Mr. Arkell had a fine afternoon for his sale, and an attendance of about 300 people, among whom were a large number of prominent breeders from different parts of the province, as well as the surrounding country. Prices, while not phenomenally high, were exceedingly good, considering the present state of the market. The Shorthorn cattle sold well. Hugh Eveleigh, Moffat, and Mr. Alderson, Guelph, got a cow each. Messrs. Currie, Everton; J. Arkell, Arkell; and J. Hume, Arkell, each got a heifer. A bull calf went to Mr. Alex. Walie, Acton. The following is a partial list of the sheep sales: Two pair of ewes to Charles Rennie, Eden Mills; three pair of ewes to John Taylor, Ancaster; one pair of ewe lambs and five ewes to Alex. Walie, Acton; one pair of ewe lambs and three lambs to H. A. Hunter, Orangeville; one pair of yearling ewes and two ram lambs to Wm. Alderson, Guelph; one pair of ewes to Geo. McGill, Guelph; one pair of ewes to D. Robinson; one ram each to P. Moran, Guelph; Walter Lang, Eden Mills; Wm. Kerr, Morriston; Wm. Watson, Arkell; D. Wilson; E. Keenan, Guelph; Andrew Lang, Arkell; H. Barden; and to G. L. Laycock, Aberfoyle. Mr. John Ross, Hespeler, bought a sow and young pig. Mr. Thomas Arkell also bought a young pig. Mr. Arkell reports the sale of fifty yearling ewes and fifteen rams to Mr. Robert Jones, Fort Steel, Wyoming, who spent a week with Mr. Arkell the latter part of September. This is the fourth year Mr. Arkell has sold him sheep; he is starting a large herd of Oxfords. Sales were also made of a large number of animals to various points in the country before the sale.

## Sheep Sales in England.

(From Notes Supplied by Our Own Correspondent.)

Taken as a whole, there has been this autumn a capital trade for all the best specimens of the various breeds. No very exceptional prices have been paid; but a far better general average, as we think, has been made than usual. There has been a very considerable demand for medium quality rams and ram lambs at prices about \$50 per head, and there has also been a very sensible increase in a tendency to go in for sheep of the size that is far more in demand than any other, *i.e.*, the 64 to 80 lb. carcass.

Horse Owners Should Try

## COMBAULT'S Caustic Balsam

The GREAT FRENCH VETERINARY REMEDY  
A Safe, Speedy and  
POSITIVE CURE.



Prepared exclusively by J. E. Combaud ex-Veterinary Surgeon to the French Government Stud.

### SUPERSEDES ALL CAUTERY OR FIRING

Impossible to produce any scar or blemish. The Safest best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Eoro Throat, Etc., it is invaluable.

**WE GUARANTEE** that one tablespoonful of CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular, testimonials, etc. Address

THE LAWRENCE-WILLIAMS CO. TORONTO, ONT.



## High Sheriff

Having no further use in my herd for this valuable bull, he is For Sale. A chance worth looking after. Full particulars by addressing

E. B. EDDY, Hull, Que.



## Do you keep a DOG?

Send for free pamphlet on feeding, treatment, etc., and catalogue of foods, etc.

To SPRATT'S PATENT Ltd

239 E. 65th St., New York.

### WHOLESALE AGENTS:

Caverhill, Hughes & Co., Montreal; J. A. Simmers, 147 King Street East, Toronto; The Eby, Blain Co., Ltd., Toronto; John S. Pearce & Co., London; M. F. Eagar, Halifax, N.S.; H. N. Bate & Sons, Ottawa, Ont.; Whitehead & Turner, Quebec; W. H. Gilcoard & Co., Hamilton, Ont.

Sheep Sales in England.—Continued.

Here below are given some of the averages and prices made at various sales, etc., throughout England during some recent fairs: Cirencester Fair, Cotswolds, F. Craddock; average for ram lambs, \$21. Hampshire Down ram lambs, W. F. Hobbs, average \$27.50 for 18. At Messrs. C. Hobbs & Sons' thirty-sixth annual sale of Oxford Downs the very satisfactory average of \$60.50 for 49 shearlings was made, \$625 being the highest price, at which bid the lot went to Mr. R. W. Hobbs. At Messrs. Brown & Sons', Markham Hall, Norfolk, annual sale of Cotswold shearlings the average was \$40.

Mr. E. Ellis' annual sale of Southdowns found a very useful demand, the average being \$57.

Southdown rams have been making very good prices at the various sales throughout their own district.

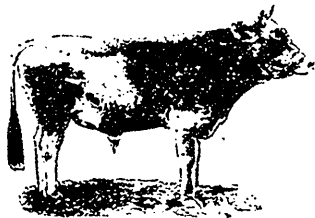
At the Cambridge Southdown sale 49 rams averaged \$50, a large consignment being purchased for Buenos Ayres.

The numerous Hampshire Down ram sales, where ram lambs were principally sold, shearlings being few and far between, have met with a first-class demand. Our advertiser, Mr. James Flower, practically heads the list, for which we are very gratified, as it is another proof, if proof were needed, that our British advertisers are those who are the owners of the leading flocks of the respective breeds that they advertise in our columns; and, although it may not be perhaps quite the thing to interlope here in our correspondent's notes from England, we cannot help again reminding our breeders that if they want good stock of reliable pedigree breeding they cannot go to better breeders than those who have a continuous advertisement with us.

Mr. James Flower's average for eight lambs "let" for the service of the present season, and to be returned at the end thereof to him, was \$140 per head, \$242 being the highest price made. At the same sale he sold 92 other lambs at from \$130 to \$250 per head, the average of the let and sold, 101 in number, being \$57.50.

There have been many other sales, but we are, of course, unable to give details of all, and we thus select the one that is at once the best, as well as being the one who has given us his support, and thus we are pleased to take an opportunity, in a small way, to make public the merit in which his flock is held at home, as is proved by the prices realized at this sale.

Continued on page xxii.



Dora's Hugo of St. Anne's. 1st prize, Ottawa, 1895 and 1896; 1st prize, Montreal, 1896.

**FOR SALE.** Five yearling bulls, almost full brothers to the above, all pure St. Lamberts, grand individuals, Victor Hugo-Stoke Pogis strain. Prices, \$40 to \$60, if taken soon. Write at once and get your pick.

**W. A. REBURN & CO.**  
Ste. Anne de Bellevue, Que.

PUREST AND BEST



Is the only salt manufactured by the Vacuum Process in Canada, and is much superior to any imported Vacuum Process Salt.

**Table Salt**  
**Dairy Salt**  
**Cheese Salt**

Made by a patent process solely in use at the Windsor Salt Company's plant. Each package containing these grades is marked with our trade mark.

Best quality ordinary fine salt for general purposes

**WINDSOR SALT CO., LTD.**  
Windsor, Ont.

**Saskatchewan**  
**Buffalo Robes**

Received the highest award at the World's Fair.  
Have had seven years' experience in Canada.



**T**HEY are in general use by Liverymen, Doctors, Farmers, and hundreds of others, from one end of the Dominion to the other, and one and all say that they are the coming Robe, now that the Buffalo has gone never to return, and the verdict to-day of thousands is that seven years of rough general usage does not injure any more than it would have done the old buffalo skin.

We guarantee every robe to be absolutely wind, water and moth proof, and will not wear bare in spots like a skin robe. They will dry quicker and never get hard, are as strong as leather and far more durable and warmer than any cheap fur robe.

The robe is made in three parts—the Fur Cloth, the Astrachan Lining, and Rubber Interlining. All these parts are without seams.

The increased sale of these robes are the best evidence of their popularity. None genuine unless bearing our trade mark. For sale in all towns and villages in Canada.

MANUFACTURED BY

**NEWLANDS & CO.**  
**GALT, ONT.**



**IRON FENCING**  
**COMMUNION RAILING**  
and all kinds of  
**IRON AND WIRE WORK**  
**TORONTO FENCE AND OR-**  
**NAMENTAL WORKS.**

437 TORONTO, CAN.

**Sheep Sales in England.—Continued.**

At Mr. J. Treadwell's Oxford Down sale a grand lot of 60 shearing rams were offered, and we are glad to note that a capital average of \$60 per head was obtained for them, the highest price being \$210, Mr. J. T. Hobbs being the purchaser.

At Oxford Fair Mr. A. Brassey's 39 shearing rams averaged \$59.50, the first prize Royal sheep making \$155. Nineteen ram lambs from this flock realized \$30.25.

At the Southdown Sheep Breeders' Association Show and sale at Chichester, the attendance was large and influential, and the average price made was one of the best of the year as regards this breed. Shearing rams, sold and let, averaged \$62.25; old rams, \$42; and ram lambs, \$34 per head. Mr. H. Penfold averaged \$60.25 per head for 18; The Pagham Harbour Co., for 18 sold and let, averaged \$54; Mr. W. Toop, for 15 ram lambs, \$29; Mr. John Harding's Shropshires average was \$81 for 31 rams.

The Suffolk sheep sale at Ipswich was in every way a success, and capital prices were realized, \$200 being the highest price paid for ram lambs, others making from \$355.

Mr. C. Coxon's Shropshires met with a capital demand at his annual sale, the 40 rams making an average of \$83.50; \$315 being the top price.

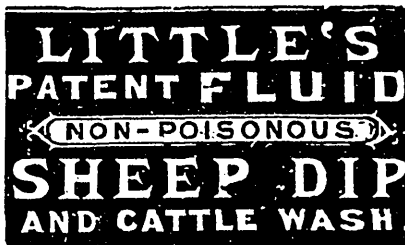
Messrs. Evans' Shropshires made an average of \$48.50.

Mr. Minton's Shropshires made an average of \$80; \$450 being top price.

Mr. A. E. Mansell's noted annual sale was again a great success, a large attendance with spirited competition. The three highest prices for rams were \$825, \$775, and \$600, or an average of \$770 for three sheep; whilst for the whole sale for those let and sold, 43 in number, the average was \$147. Shearing ewes averaged \$20 per head.

Mr. J. Bowen Jones' annual sale of Shropshires was a capital sale with very active demand, \$375 being top price for ram, Bath Barr, and \$350 being paid for the Eastbourne champion sheep. The rams averaged \$131 per head, and the ewes \$20.50 per head.

**TO STOCKMEN AND BREEDERS**



For the destruction of Ticks, Lice, Mange, and all Insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc.

Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc. Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy, and healthy.

The following letters from the Hon. John Dryden, Minister of Agriculture, and other prominent stockmen, should be read and carefully noted by all persons interested in Live Stock:

**"MAPLE SHADE" HERDS AND FLOCKS.**

BROOKLIN, ONT., Sept. 4th, 1890.

DEAR SIR,—I cannot afford to be without your "Little Sheep Dip and Cattle Wash." It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested, I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders.

JOHN DRYDEN.

17 Gold, Silver, and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world.

Sold in Large Tins at \$1.00.

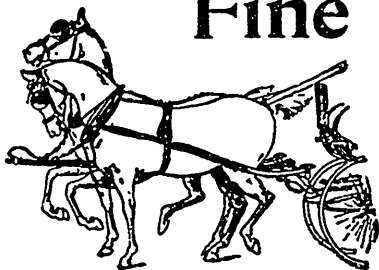
Special terms to Breeders, Ranchmen, and others, requiring large quantities. Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

**ROBERT WIGHTMAN, Druggist, Owen Sound.**

700

Sole Agent for the Dominion.

**Fine Drivers**



cannot be made out of horses that are out of condition. Merely to feed plenty of oats is not enough. A horse gets run down the same as a man and needs a general toning up.

**Dick's Blood Purifier**

is a scientific preparation in the form of a powder. It purifies the blood, strengthens the digestion, turns a rough coat into a smooth and glossy one and puts the animal "in condition." He then has "good-life" and feels like holding up his head and lifting his feet.

**MILCH COWS** are greatly benefitted by it. The whole system is toned up. The digestive organs being strengthened, more nutriment is drawn from the food and the flow of milk increased.

**Dick's Blood Purifier will pay for itself ten times over.**

For sale by druggists, at general stores or sent post paid on receipt of 50 cts.

Dick & Co., P. O. Box 482, Montreal.

# We Stand Direct . . .

Between the

## . . . Producer and Consumer

Any farmer can send us his Butter, Eggs, and Poultry. If they are good quality, we will return you at once either cash or goods, as you may direct.



Send for our fall catalogue of goods and prices, and compare values. We have almost everything a farmer needs. We guarantee every line we sell to be as represented.

If you receive anything from us not to your entire satisfaction, deliver it back to us and we will refund your money. It will pay every farmer to co-operate with us.

For financial standing we refer you to Bank of Commerce, corner King and Jarvis Streets.

## The People's Wholesale Supply Company,

R. Y. Manning,  
Manager.

144 KING STREET EAST,

Toronto.

According to Greeley, "Go West." But before you go, write to F. I. Whitney, G.P. & T.A., G.N.Ry., St. Paul, Minn., for printed matter descriptive of the Northwest country, which offers so many inducements to new settlers and investors.

### A Business Proposition.

The owners of a large body of land on Whidby Island, in Puget Sound, Wash., will divide it into tracts to suit buyers and sell at \$10 and upwards per acre, on long time, and no payments the first year. Produces all staple crops; has close markets; schools and churches; 1,700 population; mild climate. For further information address R. E. Werkman, Seattle, Wash.

### "Where Are We At?"

This question perplexes the whole business world. People interested in the Northwest can find where they are at by consulting an atlas containing fine up-to-date maps and much valuable reference and descriptive matter; sent to any address for 15 cents in stamps by F. I. Whitney, G.P. & T.A., Great Northern Railway, St. Paul, Minn.

### Farms on the Crop Plan.

Do you want to buy lands in the far-famed grain-growing district of the Red River Valley of North Dakota? Remember they are the best wheat lands on earth. Write to us and get particulars. We can sell you a farm and take pay from a share of the crop. Grandin & Edwards, Mayville, N.D.

### Flathead Valley, Montana.

Farming lands producing all the staple crops without irrigation. Forests of pine, fir, and cedar. Mines of precious metals and coal. Delightful and healthful climate. Adapted to live stock and dairying. Unexcelled water supply and power. No extremes of temperature. Market facilities. Homes for all. For further information address C. E. Conrad, Kalispell, Mont.

## Where?

When choosing a home this important question is frequently asked. There are thousands of acres of land on the line of the Chicago, Milwaukee, and St. Paul Railway in South and North Dakota that are available.

These valuable farms are located in various beautiful rural districts, convenient to churches and schools. Besides being situated where good markets are of easy access, the soil yields an abundant crop each year. While the natural advantages are many and important, the facilities for the transportation of farm products are ample. The climate is healthy, the water good and abundant.

Prices are most favorable for those wishing to secure desirable homes. The outlook is in the direction of a rapid increase in values, thus rendering this a most opportune time to invest. It is evident that no luckier chance has been obtainable in the West than may be had at the present. The advantages of going with the tide, especially when locating in a new country, are of great moment. Now is the time to secure bargains and make a fortune in the West.

Correspond with or call upon W. E. POWELL, General Immigration Agent, 410 Old Colony Building, CHICAGO, ILL., for all information regarding prices and details.

## Agents Wanted...

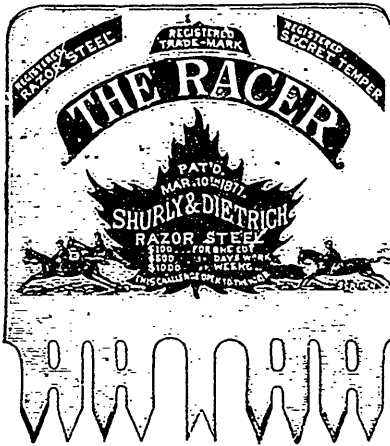
We offer liberal terms to good men to canvass for **FARMING**, the most popular agricultural magazine published.

Send for particulars to

**THE BRYANT PRESS,**  
20 Bay Street,  
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# THE RAZOR STEEL, SECRET TEMPER, ..... CROSS-CUT SAW.



WE take pleasure in offering to the public a saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a cleaner cutting edge and holds it longer than by any process known. A Saw to cut fast "must hold a keen cutting edge."

This secret process of temper is known and used only by ourselves.

These saws are elliptic ground thin back, requiring less set than any saws now made, perfect taper from tooth to back.

Now, we ask you, when you go to buy a saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Set Saw, and if you are told that some other saw is as good, ask your merchant to let you take them both home, and try them and keep the one you like best.

Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

It does not pay to buy a saw for one dollar less, and loose 25 cents per day in labor. Your saw must hold a keen edge to do a large day's work.

Thousands of these saws are shipped to the United States and sold at a higher price than the best American saws.

MANUFACTURED ONLY BY **SHURLY & DIETRICH,**  
GALT, ONTARIO.

# Fertilizer

## The Packing House Fertilizer

MANUFACTURED BY  
The Ingersoll Packing Company, Ingersoll, Ont.

Is composed solely of Blood, Bone, and other Offal from their pork-packing establishment, and is exceedingly rich in Nitrogen and Phosphoric Acid, as the following Government Analysis shows:

Soluble Phosphoric Acid.....	0.64
Reverted Phosphoric Acid.....	5.44
Insoluble Phosphoric Acid.....	2.11
Ammonia.....	10.39
Moisture.....	10.84

The value of this Fertilizer has been estimated by Prof. Shutt, Chemist at Ottawa Experimental Farm, at \$35.43 per ton.

**WE OFFER IT TO FARMERS AT \$20.00 PER TON**

OR IN SMALLER QUANTITIES AT \$1.25 PER CWT.,  
F.O.B. INGERSOLL, TO ENCOURAGE A TRIAL ORDER

TRY A TON OR TWO.  
IT WILL PAY

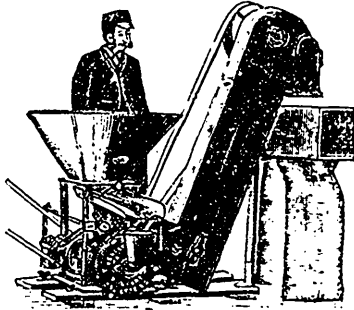
ORDERS FOR SMALL OR  
LARGE LOTS FILLED

**INGERSOLL PACKING COMPANY, - INGERSOLL, ONT.**

# THE VESSOT IMPROVED GRAIN GRINDER

PATENTED

Awarded Gold Medal and Diploma World's Fair, Chicago, 1893.  
First Prizes at Canadian Expositions.



## OUR LITTLE CHAMPION GRINDER

run by horse power, especially for farmers' use.

## OUR LARGE-SIZED GRINDERS

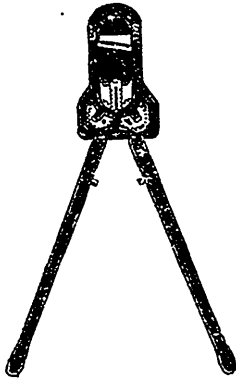
for mills, grind twenty to sixty bushels per hour as fine as desired. Always guaranteed.

Our Mills are greatly improved, being made low down. Elevator and bagger added when desired. A sieve or screen protects the plates from sticks and stones. The plates can be instantaneously parted and brought together again while in motion by a simple LEVER ATTACHMENT. Price List unchanged. Last year's mills sold at great reduction.

We also furnish an improved Corn and Cob Crusher.

Send for circular. Information cheerfully given.

S. VESSOT & CO., Sole Manufacturers JOLIETTE, P.Q., CANADA



DR. LEAVITT'S  
NEW—

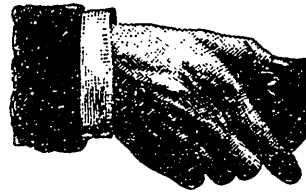
## Champion Denorning Clipper

More of these clippers in use than all other kinds.

Now is the time to use them.

We want a good agent in every town where we have none. AGENTS are making \$10.00 PER DAY selling and using them. Write for circular.

S.S. Kimball, 577 Craig St., Montreal  
Gen. Agt. for the Dominion



THE

\$5.00

Pocket

...Kodak

TAKES EVERYTHING  
IN SIGHT

BOOKLET FREE

J. G. Ramsey & Co.

89 Bay Street  
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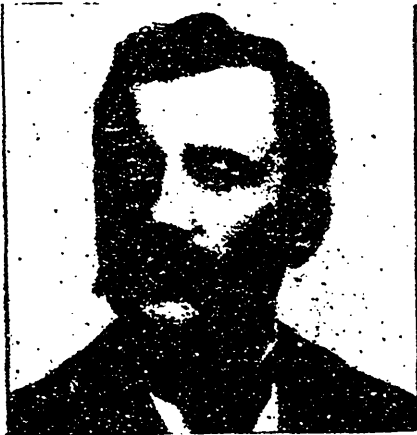
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A thoroughly up-to-date institution.

Write for particulars. Address

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OTTAWA, CANADA.



OUR \$1.00 PER DOZEN PHOTOS  
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Dr. Hess' Stock Food, Poultry Pan-a-ce-a, and Instant Louse Killer.

Dr. Hess' Stock Food is a reliable tonic and flesh producer; it expels worms and cleanses the blood. Dr. Hess' Poultry Pan-a-ce-a cures diseases in poultry and makes hens lay; it is not a stimulant, but a reliable tonic. Instant Louse Killer kills lice on all kinds of stock and poultry, fleas on dogs, ticks on sheep; it is a deodorizer and disinfectant, put up in round can, perforated top. These goods were tested at the Toronto Exhibition and awarded the medal; also were awarded the medal at London in '96. Sold by dealers generally, or address,

Dr. Hess & Co., Ashland, O., U.S.A.

**Aged  
Heavy  
Draught  
Mares**

These mares 1600 to 1800 lbs. Good bone, well-bred, and most suitable to work a farm and breed from.

Apply to **HENDRIE & CO., Ltd.**

Cartage Agents, G.T.Ry.

FOR SALE  
OR  
EXCHANGE

F O R Sound  
R Workable  
Stock.

**Wind..  
Engines**

FOR POWER  
AND  
PUMPING.

(Galvanized or Painted)



- Canadian (Steel) Airmotors.
- Gem Steel Wind Engines.
- Halladay Standard Windmills.
- Gem Steel Towers.
- Horse Haying Tools, with Steel or Wood Track.
- Brass Spraying Pumps.
- Iron and Wood Pumps.
- Grain Grinders.
- Saw Tables.
- Railway and Other Water Tanks, etc.

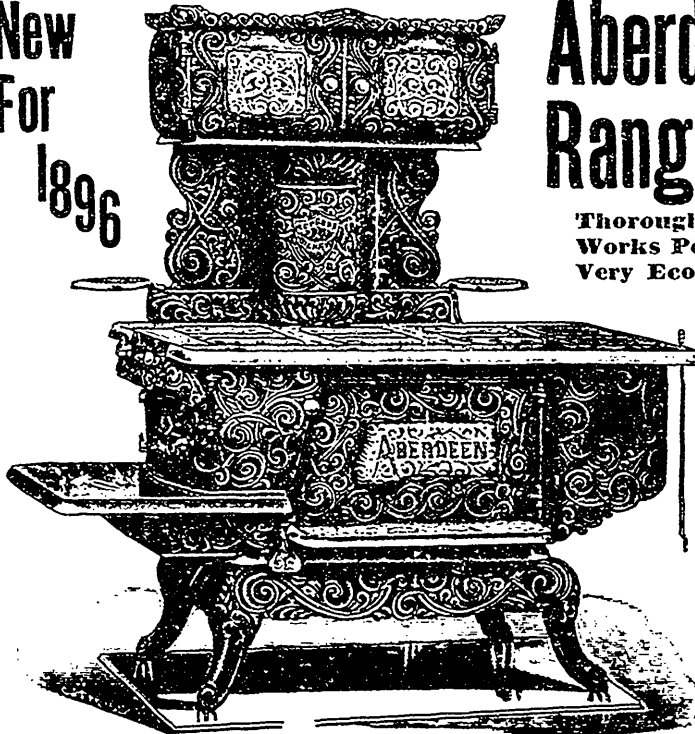
We manufacture the largest variety of Windmills and Pumps of any firm in Canada. Our goods are strictly up-to-date, and prices are made to suit the times. Be sure to get our prices before purchasing. Catalogues mailed free on application. Live agents wanted in unoccupied territory.

**ONTARIO WIND ENGINE AND PUMP CO.**

367 SPADINA AVE., TORONTO, CAN. 466.

(Please mention FARMING.)

New  
For  
1896



**Aberdeen  
Range**

Thoroughly Tested  
Works Perfectly  
Very Economical!

We  
Guarantee  
To Every  
Purchaser  
Complete  
Satisfaction.

**ASK FOR IT**

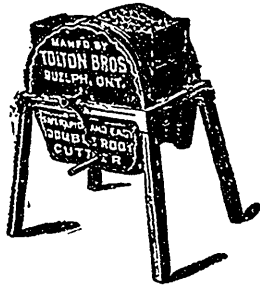
Buy No  
Other

**COPP BROS. CO., LTD. HAMILTON**  
TORONTO BRANCH: 19 Richmond St. W.

The Latest and Best and the only Double Root Cutter Manufactured.

ALL THE WORLD LOVES A WINNER; CONSEQUENTLY

## TOLTON'S NO. 1 DOUBLE ROOT CUTTER



Patented September 6th, 1894.

Is the favorite among all Pulpers, having won all the first prizes last year; also captivated the hearts of all the stockmen who have used or seen it. It is a money winner to all concerned and a saver of time and labor to the operator, and one which sells at sight after a careful inspection, as it will either pulp coarse or fine, or slice by simply turning over the centre grate and turning crank the reverse way; and is considered in either capacity superior to any single machines.

### POINTS OF MERIT.

- 1st.—To change from pulping to slicing is but the work of a moment, which can be done at the one feeding, with no loss of time and no trouble.
- 2nd.—There are two separate wheels, one for pulping and the other for slicing. Each one is specially adapted for the work it has to do, with the best of knives placed in their respective wheels in a manner to obtain the very best results possible (three for slicing and six for pulping).
- 3rd.—The united force of both wheels is always used in doing the work in either capacity. This accounts for it being a steady, easy-running and rapid root cutter.
- 4th.—The Hopper being between the wheels, and having large lower pockets, prevents choking, and with the knife-wheels both internally shielded makes it perfectly safe and prevents the roots from acting as a break on the wheels, and also from jostling them about, so common in all other combined machines.
- 5th.—Hence the Latest and Best, and what has been long looked for, a safe, rapid and easy Double Root Cutter.

Soliciting your orders for same, we are, yours truly,

**TOLTON BROS.,**

**Guelph, Ont.**

## Freeman's HIGH-GRADE BONE Fertilizers

### FOR SPRING CROPS

High-grade Bone Fertilizers furnish the cheapest and best plant food known. Freeman's Fertilizers furnish just the plant foods needed; they are of the right kinds for each stage of growth, so that there is rapid and healthy growth from germination to maturity.

Lay aside your prejudices, and do that which experiment and experience have determined to be the best.

You can restore the fertility and productiveness of your soil easier, cheaper, quicker, and more lastingly by a liberal use of our high-grade bone fertilizers than by any other known means.

#### Sixty per cent. more clean and smooth potatoes.

"Used your Potato Manure on potatoes at the rate of about 500 pounds per acre, which were planted on ground that had been sown to oats without manure the year previous, getting at least sixty per cent. more potatoes than where none was used.

"Also used it alongside of stable manure, using about thirty dollars' worth per acre, and about ten dollars' worth of Freeman's Potato Manure per acre, the yield being about the same, but there was a wide difference in quality. Where Potato Manure was used the potatoes were clean and smooth; where stable manure was used they were very scabby.

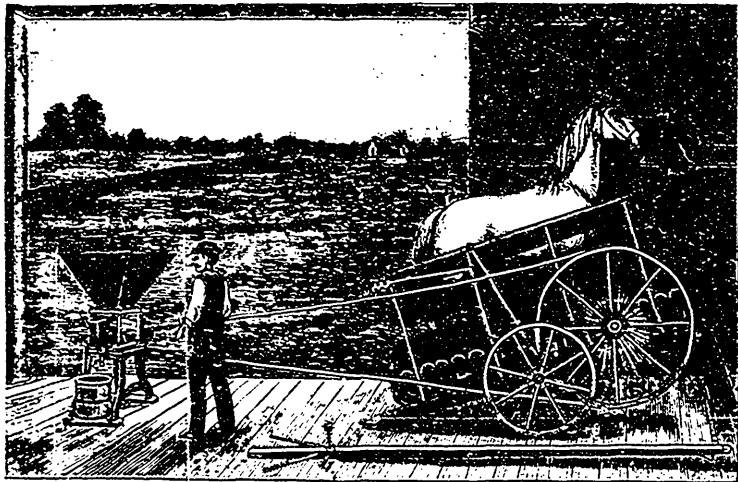
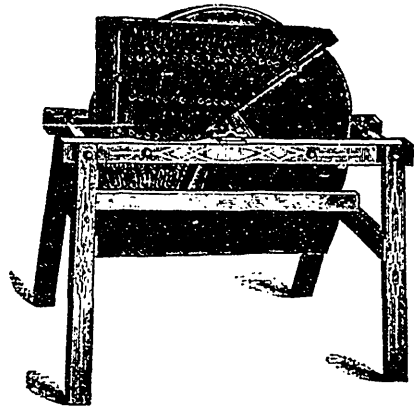
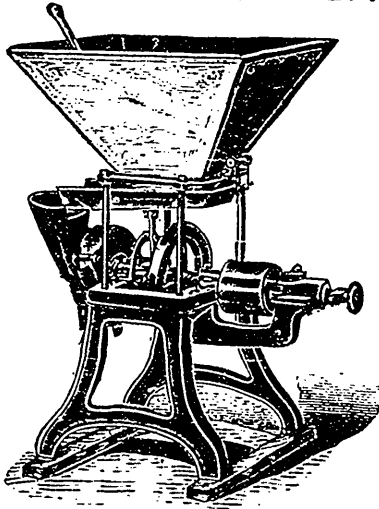
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Send your address for catalogue, giving the experience of hundreds of our leading farmers and fruit-growers who have used our fertilizers.

THE W. A. FREEMAN CO., LTD.

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They are all  
**DAISIES...**



The "DAISY" Feed Grinder  
The "DAISY" Root Pulper  
The "DAISY" Tread Power

WE MAKE NOTHING BUT "DAISIES"  
IN FACT, WE ARE THE "DAISY" FIRM



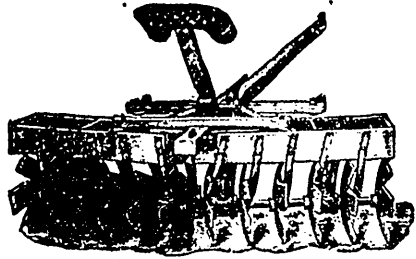
Our goods are right; our prices are right; we treat our customers right. If you deal with us once you will come again. Write for illustrated circulars, prices, etc.



**THE WORTMAN & WARD MANUFACTURING CO., - LONDON, ONT.**

# Clark's Cutaway Harrow

Supersedes the Plow.  
Makes a Perfect Seed Bed.



## THE SYLVESTER PEA HARVESTER THE CHAMPION PEA HARVESTER OF ONTARIO.



Farmers! Consult your own interests and send in your order for a Champion Pea Harvester or Cutaway Disc Harrow

If the coming season finds you in need of a Disc Harrow, Pea Harvester, Clover Table Binder, Mower, Sulky Rake, Spring Tooth Cultivator, Combined Drill, Double or Single Furrow Plows, Garden Plows, or Corn Cultivator, and you buy a SYLVESTER, you will be well pleased with your selection. Now, then, this we confidently predict: You will bear testimony to the superiority of our machines. Remember, we guarantee the successful operation of every machine leaving our works. It is in the actual work of the machines themselves in the field that the right to claim them the best in the market is exemplified

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Send for Special Circular.

75,000 IN USE.

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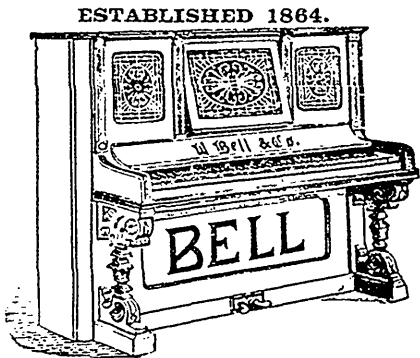
Recommended by leading musicians as superior in tone and touch. Elegant in finish and durable.

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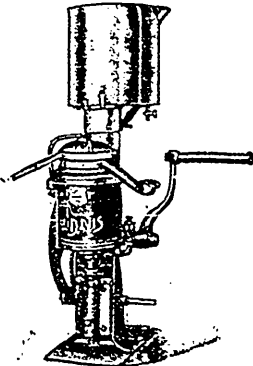
**THE BELL ORGAN & PIANO CO.**  
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GUELPH, ONTARIO.

Branch Warerooms at Toronto, Hamilton, London, Etc.  
421 Mention this paper.



## THE JOHN ABELL ENGINE AND MACHINE WORKS CO., LTD.



# DAVIS CREAM SEPARATORS

People pleased with the practical working exhibitions of this machine at the Toronto Industrial Exhibition, September, 1896.

SEND FOR  
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USED BY THE DOMINION GOVERNMENT

The John Abell Engine and Machine Works Company, Ltd.

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**THE**

# **..Wilkinson**

# **..Plough Co., Ltd.**

**TORONTO, ONT.**

We manufacture a full line of

## **PLOUGHS**

FOR  
ONTARIO and QUEBEC  
THE EASTERN PROVINCES  
MANITOBA and THE NORTHWEST  
BRITISH COLUMBIA and PRINCE EDWARD ISLAND

We do not build a second-grade. Only high grade ploughs, of the best material and workmanship.

We protect the farmer by casting our name and address in full on every head, sole plate, and point.

Our Mouldboards have a world-wide reputation. Our name and number of plough stamped in the steel. They are all of the best United States Crucible Soft Centre Steel.

The Patent Suspension Drum Steel Land Roller. The most substantial and longest lived Land Roller in the market.

The Patent Adjustable Roller-Bearing Land Roller is the greatest advance for those who prefer an Adjustable Land Roller.

Straw Cutters. Root Pulpers and Slicers.

Wheelbarrows, all kinds. Drag and Wheel Scrapers.

Subsoiling Attachment. A monkey-wrench puts it on any Steel-Beam Plough.

# **The Wilkinson Plough Company**

(LIMITED)

**TORONTO, ONTARIO.**