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CANADIAN BREEDER

and
AGRICULTURAL REVIEW.

Vol. II.

TORONTO, DECEMBER 3, 1885.

No 47.

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW.

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(Nonpareil measurement, 12 lines to one inch.)
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CANADIAN BREEDER,
COR. CHURCH AND FRONT STS
TORONTO

S. BEATTY, MANAGER.

TORONTO, THURSDAY, DECEMBER 3RD, 1885.

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OUR VETERINARY COLUMN.

It is with much pleasure that we announce to our
patrons that we have secured the services of a com-
petent and skilful Veterinary Surgeon as Editor of
our Veterinary Department. Hitherto we have felt
the need of such an addition to our staff of writers,
but it was one thing to feel a want and quite another
thing to supply that want satisfactorily. Deter-
mined as we were to be second to none in anything
we undertook, we found the securing of a thorough-
ly clever and competent veterinarian to preside over
our Veterinary Department no easy matter. The
difficulties that lay in our way have at length been
overcome, however, and we have the pleasure of
announcing to our readers that for the future Mr.

F. A. Campbell, V.S., one of the most skilled and
promising of Canadian veterinarians, will edit our
Veterinary Department, and answer all questions
regarding the treatment and ailments of horses,
cattle, sheep, swine, dogs, poultry, etc.

We wish it distinctly understood that while we
will answer all questions pertaining to a veterinary
department through our own columns, we will
undertake to forward no answers by any other
means. We have no desire that our newly estab-
lished department should in any way take out of
the hands of veterinary surgeons the work which
legitimately belongs to them, but rather to so instruct
our readers as to the treatment of live stock that
their animals will not be unnecessarily subjected to
dangers through ignorance of veterinary science on
the part of their owners. There are continually
occurring cases in which a comparatively superficial
knowledge of veterinary science on a given point
will enable the stockman to minister with pleasure
and profit to the comfort of animals under his care
though the discomfort, loss or danger arising out of
a want of these ministrations would never be of
such a character as to cause him to call in the aid
of a veterinarian. Should an animal be found suf-
fering from any acute complaint requiring immedi-
ate attention, the man who would consult the
BREEDER and wait for an answer instead of calling
in the aid of a veterinary surgeon, would deserve to
be ranked as a lunatic, but there are a thousand
chronic ailments and inconveniences to which
cattle and horses are subject which can be satisfac-
torily dealt with in the enquiry column of our
Veterinary Department.

All questions should be addressed to the "Editor,
CANADIAN BREEDER, corner of Front and Church
Streets, Toronto."

BREEDING WITH A DEFINITE PURPOSE.

The man who is not progressive is very apt to
fall badly behind in the race for wealth and success
in life, and this applies as pronouncedly to the
farmer and stockman as it does to the manufac-
turer, the merchant, or the member of the learned
professions. Forty years ago the man who bred
good-looking thrifty lambs, calves and colts, usually
found himself fully abreast of the times, and getting

along as well as the best among his neighbors.
There were some stockmen in Canada, even then,
who had regard to blood and pedigree in live stock,
but stock-breeding was a very different thing then
from the stock-breeding of 1885. Men who are
making most of the beef-producing business breed
especially for beef. They do not want a drop of
"milking" blood in their herds. In the same
manner the butter producer who would occupy the
front rank in his business will carefully exclude
from the composition of his herd any tendency to
put on fat and make beef. The "general purpose
cow" is an animal oftener found in the mind's eye
of the agricultural editor than in the herd of any
breeder who makes money out of the production
of beef, butter or cheese. This tendency to defi-
nite-purpose breeding is already well developed
among cattlemen, and it is producing the very best
results. "General purpose" breeding would never
have produced Mary Anne of St. Lambert, nor
Clarence Kirklivington. The intelligent farmer or
stockman finds it better to breed his sheep of a
well defined strain, whether for wool or mutton,
than to go on year after year producing mongrels.
In one branch of breeding, however, farmers and
stockmen appear to cling to the old slipshod
methods of forty years ago. A great many of them
go on breeding their horses in the most unscientific
and haphazard fashion. The cheapest horse is too
often the most popular, and he is bred to mares of
all sorts, shapes and sizes, regardless of conse-
quences. One farmer has a fine, high-stepping,
up-headed, compact little mare, fourteen and a half
hands high, and weighing perhaps 850 lbs. Were
such a mare bred to a thoroughbred horse, having
good compact form and plenty of quality and sub-
stance, the chances of producing a high-class, high-
priced cob, would be excellent. The farmer,
however, takes it into his head that the mare is too
small to be of much use on the farm, and he
determines that her next colt shall not be troubled
with the same complaint, so without giving the
matter a second thought he breeds her to a big
Clydesdale, weighing a ton, and standing seventeen
hands high. The result is a raw-boned brute that
is bigger than his dam, smaller than his sire, and
ten times uglier looking than either of them. The
farmer wanted to breed a farm horse, and without

stopping to consider whether he had at hand the requisite materials or not, he proceeded to make an abortive attempt with what he had. If, on the other hand, he had coupled his little mare suitably, she would have produced a cob that would have sold for enough to have paid for two excellent farm horses. Farmers often complain that it does not pay to breed horses, but if they would only go about the work intelligently and use some judgment, as they do in breeding cattle and sheep, we should hear less about their want of success in the profitable production of horses. Let the Clydesdale mare be bred to the Clydesdale horse, let the lighter breeds be coupled according to the purpose for which the colts are designed, but let some design, whatever it may be, be present to the mind of the breeder when he selects a stallion with which to couple his mare.

OUR FUTURE MEAT SUPPLY.

When capitalists are told of the wonderful capabilities of the grazing regions of the Canadian North-West they are apt to jump at the conclusion the world's meat markets are destined to be glutted with beef which can be produced at such an astonishingly small cost and that there will be next to no demand for the product of the ranch. To a casual observer there is certainly a good deal in this view of the case. As everybody knows who has watched the progress of the grazing industry, those who have come to grief financially in the business are the exceptions, while a degree of success that to outsiders would seem phenomenal has been the rule. Men who have a little money to invest are generally anxious to begin to realize the day after the investment is made, and this is why the men who are willing to wait a few years for their returns have had the cattle-grazing business all to themselves, and their returns have been such as they could well afford to wait for. In 1883 one of the solid men of Helena Mountain said to the writer of these lines, "If you want to help our Territory, write about the mines but not about the cattle business. When a Montana mine earns \$100,000 for its owner, \$90,000 of that sum is expended in the Territory, and that helps us. I do not mean to say that successful strikes make better returns than ten per cent., but I mean my figures to apply to mining enterprises, good and bad, successful and unsuccessful. Now, on the other hand, for every \$100,000 that is made on beef grown and fattened on Montana grass not \$20,000 is expended in the Territory, the other \$90,000 going as clear profit into the pocket of the ranchman." My friend then went on to say that the grazing lands of Montana were already fully occupied, while the mining resources of the Territory were not yet half developed and not likely to be as long as capitalists had a chance to invest their dollars in stock ranches.

Of course a business such as that just described might reasonably appear to be in danger of being over-done, but statistics point in the opposite direction.

In his address before the third National Convention of Stockmen, held at Chicago, Nov 17 and 18, Hon. Norman J. Coleman, United States Commis-

sioner of Agriculture, placed the number of cattle within the Republic at 45,000,000, and he estimates their value at \$1,200,000,000. This is a vast aggregate of wealth locked up in one industry alone. Add to this sum the money represented by 13,000,000 of horses and mules, 50,000,000 of sheep, and 45,000,000 of swine, and we have a grand aggregate of \$2,500,000,000.

In alluding to the extent of the cattle business, Mr. Coleman said:—

"There is an impression throughout the country that the cattle business has been developed far beyond what is necessary or even prudent. Our people have seen the cattlemen go out over the plains, on the Great American desert, over the foothills of the Rockies, and in the valleys of that great range of mountains and beyond, and possess the country. And now in all that immense region, comprising millions and indeed hundreds of millions of acres, wherever water exists there has been established a breeding ground for cattle. To-day the Eastern capitalist goes to the far West, and animated with the spirit of the pioneer, pushes hundreds of miles from the railroad to find an unoccupied portion of Uncle Sam's domain suited to a ranch enterprise. Just as he reaches a section supplied with water, where he thinks the white man's foot has never trod before, he stumbles upon a cattle ranch. And not only does he find that the country is already occupied, but that different companies are already crowding each other, and that there is no room for the new comer."

But notwithstanding the wonderful increase in cattle, the growth of the population of the United States has fully kept pace with it. The cattle business is of slow development, because the cow drops but one calf at a time and produces but once a year. The Commissioner of Agriculture estimates that they double their population every fifty years, and that in 1905 they should have 100,000,000 mouths to feed, and in 1980 should have 800,000,000 of inhabitants. Then he asks:—

"Where are these teeming millions to live? On what are they to subsist? Where and how are the cattle to be bred and reared that must be relied upon to furnish beef? To keep up our present beef supply we must increase our stock of cattle to 70,000,000 within twenty years and to 140,000,000 within forty-five years. Is it possible for us to accomplish this under the most favorable conditions? In the States east of the Mississippi in 1850 we had 15,300,000 cattle; in thirty years, from 1850 to 1880, the cattle in these States were only 5,000,000 head, 33 1/3 per cent. Taking the country as we find it to-day, is there any reason to suppose that the percentage of increase will be any greater in the next thirty years than it has been in these States during the last thirty?"

From this it would seem that in the near future the meat supply on this continent will not be equal to the demand, at least on the present system of production. When the pressure does come, ranch lands will assuredly be at a premium and the cattlemen will occupy an even stronger position than they do now. Again and again have we pointed out that Canadians who have money are throwing away golden opportunities in neglecting the mag-

nificent ranges of our North West Territory and allowing English and other outside capitalists to secure the best locations and take precedence in establishing themselves in the business. Our own people will in time find out that they have made a grievous mistake in thus neglecting the grand chances of *founding for themselves and their families colossal fortunes*, and we can only hope that they will find it out before it is too late for the knowledge to do them any good.

BREED MORE HORSES.

F. K. Moreland, in *Breeders' Gazette*

There is one thing that farmers should devote more attention to, and that is the breeding and rearing of horses. There are but few farmers who are so situated that it would be inconvenient for them to raise a colt or two, or three, every year. They have the horses, or should have, for it is just as convenient to keep mares as geldings for work horses. I know good, careful farmers who work their brood-mares up to within a few days of the time of foaling, with no injurious effects resulting to colt or dam. A few days' rest before and after foaling, good care while heavy with colt, and generous feeding while suckling the colt, and a brood-mare is just as serviceable a work horse as if she were not kept for breeding purposes. And again, a little good judgment is exercised in regard to the time the mare should drop her colt, very little inconvenience will be experienced if one or both of the work horses are used as brood-mares. If the mare should be covered at such a time that she will drop her colt before spring work commences, then no apprehension will be felt that the mare is liable to injury from overworking while heavy with foal. A mare with a colt at foot may be worked from morning to noon, and from noon until night, and the colt kept closed up, except at feeding time and at night, and mare and colt do very well indeed. Of course, I offer this suggestion to farmers who have no team work during the winter months. On most farms the team work performed during the winter months is of the lightest possible character, confined for the most part to hauling the year's supply of wood, drawing manure, and perhaps marketing produce. It is hardly possible that a brood-mare, even if quite heavy, could be injured while performing these tasks.

ENGLISH THOROUGHBREDS IN AMERICA.

The London *Live Stock Journal* of Nov. 14th says:—"The export of thoroughbred stock goes on apace, and at the sale of Lord Lovelace's stud last Saturday, nearly a third of the 18 mares were purchased, either directly or on commission, for the Continent. It was only the other day, too, that St. Blaise, the well-known son of Hermit and Fusee, who won the Derby in 1883, was shipped for the United States, and in this connection it may be of interest to point out that no fewer than 11 of the other 105 winners of the Epsom race were sent over to America. Colonel Hoopes, a celebrated breeder in Kentucky, was the first to import thoroughbreds from England, having purchased Diomed, who won the first Derby ever run for Colonel Hoopes purchased two other Derby winners from Sir F. Standish, viz., Spread Eagle (1795) and Archduke (1799), while Saltram, son of the famous Eclipse, John Bull, and Sir Harry were imported by other breeders. After some years had elapsed, the Americans purchased three other Derby winners in Lord Egremont's *Lapdog* (1825), Mr. Chifney's *Priam* (1830), and Mr. Redsdale's *St. Giles* (1832). The last-named did not live many

days after landing, and a worse fate awaited Sir Joseph Hawley's Blue Gown, who, after winning the Derby in 1868, and being for several years at the stud in Germany, died while being taken over to New York. The eleventh Derby winner was Iroquois, but he merely returned to the place from whence he came, having been bred by Mr. Lorrillard in Kentucky. It is no wonder that Americans, with so much good blood in their studs, should breed such horses as Parole, Iroquois and Foxhall, and St. Blaise comes of a strain of blood which should add to the excellence of the American studs.

THE LAWS OF HEREDITY.

1. That from the male parent is mainly derived the external structure, configuration, and outward characteristics, also the locomotive system of development.
2. From the female parent is derived the internal structure, the vital organs, and in a much greater proportion than from the male, the constitution, temper and habits, in which endurance and bottom are included.
3. That the purer the race of the parent, the more certainty there is of its transmitting its qualities to the offspring; say two animals are mated, if one is of purer descent than the other, he or she will exercise the influence in stamping the character of the progeny, particularly if the greater purity is on the side of the male.
4. That, apart from certain disturbing influences or causes, the male, if of pure race, and descended from a stock of uniform color, stamps the color of the offspring.
5. That the influence of the first male is not unfrequently protracted beyond the birth of the offspring of which he is parent, and his mark is left upon subsequent progeny.
6. That the transmission of diseases of the vital organs is more certain if on the side of the female, and diseases of the joints if on the side of the male parent.

Although the influence of the male on the female is well known, it is not so generally admitted that the female exerts influence on the male when mated with subsequent females.

It is expecting too much of a first-class stallion to expect that all his offspring will turn out as good as himself, when he is mated with a number of mares, many of which are inferior.

NOTES ON CATTLE FEEDING.

G. E. Morrow, of Illinois University, in Colman's Rural World.

On October 29th there were sold from the University farms 10 steers from 27 to about 36 months old, from fair to good in quality, all having some Shorthorn blood. As most had been purchased, exact statements cannot be made as to ages or breeding. They had been cheaply wintered; were in good health but in thin flesh when turned on grass April 27. A little grain was given them for a few days. Then they had only grass until August 20, when feeding with new crop corn was begun. At first stalks were fed; then the unhusked ears; then husked ears. They were kept in a good pasture; fed three times each day; with hogs following. For the first few days the feeding was light. For last 60 days they were fed, on an average, a little less than one third of a bushel per day.

When sold, the average weight was 1,351 pounds. In 60 days the average gain was 157 pounds per head. This is 14 pounds less than a somewhat better lot of steers made with like treatment in 1884. In same time two larger and somewhat better steers in same field made average gain of 182 pounds, two steers somewhat younger, 170

pounds; two high grade Jersey steers, just past two years old, 162 pounds each.

Even at the present low prices—\$4.50 per 100 pounds, after "shrinking" three per cent., this gives a fair profit, especially when we take into account the value of the pork made of the undigested corn passing through the cattle; the manure left on the farm; the greater convenience and less cost of disposing of the corn directly from the field, and the addition of, say one-half cent per pound to the value of the steers when feeding was begun.

Four of this lot made average gain of 318 pounds each during the four months and four days when on grass alone, except for a few days at first and last. These four made average gain of 481 pounds during six months from time turned on grass until sold. They were above the average of the lot, in quality and thrift. Quite the best gain made by any steer was 570 pounds for the six months.

The profits from this lot of cattle were affected by the fact that they slightly lost in weight during last winter. They were purposely kept under conditions similar to those under which very many steers are wintered in the west—rather more than less favorable. In pleasant weather they had access to stalk fields; always free access to a large stack of good oat straw; full feeding of hay; a little corn daily in latter part of winter, and shelter of sheds during storms—at other times only shelter of stack and close wind-break of evergreen trees. Some changes made it impossible to give exact loss, but the lot weighed less when turned on grass April 27 than on Dec. 1. No steer gained more than 50 pounds, and one of the best lost 100 pounds.

Three yearling steers of rather superior quality, one pure bred and two high grade Shorthorns, weighing 1,050, 1,250 and 1,280 pounds, Dec. 1, when 18 to 20 months old, were kept during winter in good stable, with full feeding of crushed corn, oats and a very little oil meal, with hay, made gains up to April 26, nearly five months, of 280, 140 and 115 pounds. The smallest gain was made by the heaviest and fattest steer; the largest gain by the lightest and thinnest steer in the fall. These two steers were kept on full grain feed during the summer, with good pasture, and made gains from April 26 to Nov. 2, of 355 and 220 pounds. The pure bred Shorthorn steer, which weighed 1,050 pounds Dec. 1, weighed 1,685 Nov. 2—a gain of 635 pounds in 11 months. The high grade steer, purchased as an unusually good steer, weighing 1,280 when a little past 18 months, weighed 1,625 pounds Nov. 2, a gain of only 345 pounds in the 11 months. The third steer was kept on grass alone until Aug. 20, when corn feeding was commenced as with the lot of ten with which he was kept. During the six months to Nov. 2, he made gain of 350 pounds, almost equalling the best gain made by steer full fed grain during all the season. During September and October he gained 205 pounds, against 135 and 115 pounds by the other two.

A lot of nine good calves, dropped from Feb. 15 to June 1, were given good shelter and full feeding during the winter—shelled corn and oats, a little oil meal and hay. They made an average gain of 163 pounds, varying from 125 to 200 pounds, for the five months. Three calves were purchased during the winter. The lot of 12 were put on grass April 26, but four were given full grain feeding during the summer, the other eight having only grass after a few days. The four fed grain made average gain of 430 pounds, varying from 400 to 515 pounds. The eight on pasture alone made average gain of 279 pounds, during the six months to Nov. 2, varying from 225 to 335 pounds. Four of the lot of eight selected in spring as most nearly

corresponding in age and breeding with the four fed grain, made average gain of 260 pounds—less than the average for the eight. The four grain-fed yearlings average 1,118 pounds; the eight grass fed ones 928 pounds. The average age of each lot is a little over eighteen months.

Neither their weights nor the gains made are equal to those in some former years; although, as a whole, the season seemed favorable for either grazing or grain feeding. Apparently the most unfavorable time was during the excessive heat of the latter half of July. It is noticeable, however, that the young steers on grass alone made very slight gains during September and October, averaging only 48 pounds gain for the two months, with 70 pounds as largest gain. The four yearlings on full feed made average gain, in same two months, of 146 pounds, varying from 115 to 165 pounds.

The twelve calves, now yearlings, referred to, were purchased or selected with the design of comparing steers of different breeds or crosses. It was found impracticable to secure just what was desired. The lot consists of two pure bred Ayrshires, dropped Feb. 15 and 20, 1884; two pure and one high-grade Shorthorn, dropped April 30, May 31 and May 6; one three-quarter Hereford, dropped about March 1, and two half-bloods, dropped about June 1; four half-blood Holsteins, dropped from March 20 to May 20. The Ayrshires had been well fed and were in fine condition when purchased. One of them has not thriven well. The grade Herefords were in fine condition when bought. They were not castrated when bought in the winter, but seemed to suffer little from the operation. The half Holsteins had been reared on skim milk, and were in thin flesh when bought. The Shorthorns were in good flesh. One met with an injury which has affected his growth.

The gain of the Herefords during winter cannot be given. Of the others, the best gains for the five months were 200 pounds, by an Ayrshire; 190 and 185 pounds by Shorthorns, and 170 pounds by Holstein. The lightest was 125 pounds by an Ayrshire.

For the six summer months the gains were as follows, in each case the first-given figures being the gain of the steer on full feed: Ayrshires, 405, 280; Herefords, 400, 300, 225; Holsteins, 515, 335, 320, 305; Shorthorns, 400, 270, 230.

Bearing in mind that it is not wise to draw final conclusions from single trials, the facts concerning these cattle suggest or illustrate among other things, that:

1. The differences in animals of like breeding, and under like treatment are often greater than those between typical animals of different breeds.

2. Under the prevalent methods of wintering steers in the Western States, little or no gain is made in weight during winter.

3. It is difficult, if not impossible, to secure under good conditions, gains in winter which shall nearly equal those made in summer.

4. The largest gains may be expected from animals in thin flesh, if in good health. It is difficult to secure rapid gain in weight during long-continued feeding.

5. Under like conditions, young animals make largest gain in proportion to food eaten.

6. A fair profit can be made, even at present low prices, by grazing and then grain feeding for two or three months, cattle which have been judiciously bought or economically reared, to be sold when from 30 to 36 months old.

7. Economy of production is quite as important as maximum product, especially at times of low prices. It is not clear that it is profitable to give full grain feedings to steers, designed for the general markets, during the best of the grazing season. It is not proven that it is most profitable for western farmers to fatten and sell their steers as yearlings.

CHANNEL ISLAND COWS.

In his treatise on the "Jersey (or Alderney) and Guernsey cow, its nature and management," Mr. E. P. Fowler says.—The prejudice against the Jersey which has existed amongst dairy farmers is now fast wearing away, experience having proved that the introduction of the Jersey, or Guernsey, (especially the latter,) has so improved the character of the dairy that an advance is obtained in any market for the butter, besides the prestige which the best commodity will command.

We have, therefore, in the animal under consideration the triple advantage of a symmetry of form which renders it an ornament to the lawn or paddock, a docility which makes it quiet under the tether, and in the hands of the milker, either male or female, and a richness of production which not only fills the dairy with butter, but that of a firmness which it retains in the heat of the summer, and a richness through the cold of winter, when the butter of the ordinary cow is barely marketable.

The cow needed for the dairy cannot under any circumstances be selected for those qualities which will produce fat—the two natures are incompatible. To have the best meat we must get rid of every tendency to milk; and to have the best butter we must obviate every disposition to fatten. We cannot have both qualities in the same animal, and the attempt will only end in disappointment.

It must be apparent to every thinking person that, let the qualities and points of the cow be ever so good and perfect, they will not ensure an abundant and rich supply of milk unless proper care is taken to furnish the cow with the kind of food best calculated to the required purpose. How often is it that complaint is made by one person that such a cow is a bad milker, when the same animal, transferred to other hands, has given every satisfaction? This is easily explained by the fact that, in the first case, the cow had been kept on foul pasture or on improper food. It becomes, therefore, peculiarly necessary to set forth the manner of feeding which experience has proved to be the most advantageous for the production of milk rich and sweet. The first requisite is that the animal should have abundance of food, so as to be able to consume all that she requires in as short a time as possible, as then she will lie down and have the more time to secrete her milk and that milk to acquire richness. The pasture should be often changed, and if not on pasture, the food should be succulent, otherwise fat instead of milk will be produced; but cows fed with food of too watery a nature, which roots have early in the season, require an addition of more solid food, otherwise the milk, though considerable in quantity, will be poor and wheyey, yielding no cream.

Roots should be carefully selected, having no symptom of rotteness, and should be mild in flavor, or the butter will be tainted.

Mangel wurzel, which is, from its luscious qualities, a favorite food for the dairy cow, requires care and judgment in use, and should not be given before the month of January, as the longer it is kept the less acidity is produced by it. The best, and, in fact, the only, roots that should be given are carrots, the yellow bullock turnip, and mangel, succeeding each other from the time they are required till the cow returns to pasture. Both grains and mangel wurzel are used for creating only a large quantity of milk, where quality is not sought.

It follows that in the successful management of the milch cow great care should be taken to avoid rapid changes of temperature. The climate of England is worse in this particular than that of Newfoundland or many other much more northerly countries. To obviate this disadvantage of climate there should always be a clean, dry shed in which the cattle may take shelter whenever they feel uncomfortable, either from heat and flies or from cold

and damp. This shed should be so constructed that it may to a certain extent clean itself by drainage, to avoid the accumulation of foul water, the floor being constructed of materials of a dry nature. The aspect should be such as to avoid north and north-easterly winds.

An animal always cold is always uncomfortable and a large proportion of the food she takes is consumed in keeping up the heat of the body instead of making milk. Warmth is, therefore, in effect, food for the cow, and may be obtained at little cost and with little trouble by means of a shed as recommended, and where this is very clean the cow will resort to it spontaneously whenever she knows it to be conducive to her comfort, which is food to a great extent. Cold and sudden chills, on the other hand, are a great detriment to the appearance of the cow, and are frequently the cause of her falling off in her milk early in the season.

Much injury is done to cattle by turning them out too early in the season—exchanging them from a warm yard or shed (especially just after calving) to pass the night in the open air, before the season is sufficiently advanced to make such exposure bearable. In proportion as the breeds under consideration have improved, so has the necessity of care become apparent, delicacy of constitution and physical sensitiveness always increasing with high blood. As a principle of economy, milch cows ought to be brought in at night all the year round; for they spoil a great deal of grass during the night and are not benefited by being in the dewy grass too early in the morning.

During the winter, when tied up in stalls, great advantage is derived from thoroughly cleaning the cattle occasionally with a brush; and their feet also should be examined, lest they should get too long, and thereby weaken the pasterns, which is easily remedied by the use of a small saw.

REMARKABLE CASE OF RABIES IN CATTLE.

The following letter was read at the recent council meeting of the Royal Agricultural Society of England. It was written by one of the society's provincial veterinary surgeons, but had been received too late to appear in the committee's report:—

"I have no report of importance to make for the past year. Diseases of an epidemic or endemic nature have not prevailed.

I have had several severe cases of sporadic typhoid influenza, which could, in most instances, be traced to empirical treatment and want of cleanliness.

I may, however, mention a case of rabies in cattle which has come under my notice.

"A herd of 40 Irish yearlings were purchased in Bristol in September last and brought home on the 10th of the same month. In a few days afterwards one of them was observed to separate itself from the others and gallop wildly about, bellowing continually. It was brought to house, and I was sent for. Upon my arrival I found the animal dead. My attention was now called to another of the herd. I found this animal foaming at the mouth, galloping furiously about the field, and bellowing continuously, until, from sheer exhaustion, it would tumble down, continue bellowing and foaming at the mouth. I at once ordered it to be destroyed and buried.

"I now proceeded to make a *post mortem* examination of the animal first affected, and suffice it to observe that all the appearances confirmed my opinion as to the nature of the disease.

"On the following day a third of the herd became affected, and in accordance with my orders, was at once brought in. I now had an opportunity of closely observing every symptom.

"There was perpetual bellowing, a hoarse noise being made, as though sore throat was present, of an ordinary nature, but manipulation of the throat produced no pain; foaming at the mouth, refusal of food, would plunge into a trough of water, but was unable to swallow, and the effort produced spasm and great pain. On the following day the symptoms became much worse, the sense of hearing became painfully sensitive, the slightest sound disturbed it, set it bellowing, and rendered it furious. Third day—animal worse, more violent, would attack any person within its reach; there was amucosis of the near eye. It was found dead on the following morning, lying by the trough of water, having evidently died when making an effort to drink, the nostrils being full of water.

"Within the past few years I have seen rabies in cattle, sheep, dogs and cats; and as this fearful malady continues to steadily increase, I would presume to observe that the authorities would do well to adopt proper measures to prevent its spread, and one of the most potent measures would be to put a much heavier tax upon dogs than at present exists."

THRIFTON NOTES.

Knowing that we are somewhat engaged in the breeding of Jersey cattle and the sale of farm-made Jersey butter, our friends ask, in view of the low price to which butter has fallen, "What are you going to do about it now, with your high-priced Jersey cows, and butter selling as low as 15 cents per pound?" Our answer is that we expect to go right on as usual, except perhaps to be more watchful for the improvement of our herd, and to make if possible a better quality of butter than ever. We have no fear that there will continue to be ready sale for all the good butter the farm can produce.

The revelations made of late regarding the butter and butterine supplies, now to be had in open market, tend to throw discredit on nearly all of the wholesale butter factories. The corner grocery store may offer a nicely branded article at almost any price, high or low, but the origin is obscure, and the make-up is too uncertain for the lover of real butter. He turns away with a distrustful shrug, preferring to buy directly from the farm or local country dairy.

We look upon the present depression in prices as but temporary. The apparent victory of the butterine-makers at the late American Fat Stock and Dairy Show need frighten no honest producer of gilt edge butter. There is in every city, or town of much extent, a large class of consumers who can neither be deceived nor persuaded into the use of lard and tallow as a substitute for butter. They will have a genuine article or none, and are always ready to pay good prices. Such customers are worth looking for, and they will be as glad to find you as you are to find them.

It may not be practicable for every farmer to have regular days for taking the weekly supply of butter to certain families in the city, but is it not possible for you, reader, to do this? Remember that doing what everybody does is not the best way as a rule for making money or getting along happily in the world. Doing the right thing in the right way—usually just what others fail to do—is the surer way to success.

WARM WATER FOR COWS.—Some interesting experiments have been made in France on the advantages of giving water to milch cows warmed, instead of in its natural cold state. At the Agricultural School of St. Remy, two cows were fed on the same food, but one was supplied with cold water, and the other with water heated to 113 degrees Fah. The latter yielded one third more milk. Veterinary Professor Cornevin has obtained similar results.—*Prairie Farmer*.

FALL IN THE PRICES OF PEDIGREE CATTLE.

The Aberdeen *Free Press* discourses on the fall in high-bred stock and gives the following interesting tables, the great feature of which is the remarkably rapid decline in the value of Polled cattle. Taking the averages for the Polled cattle since 1882, it will be found that in that year they were 145 per cent., in 1883 that they were 88 per cent., and that in 1884 that they were 42 per cent. higher than the average for the present year. For Shorthorns the demand has been steadier, and the fluctuations in their value have not been so great, but still they have lost about £3 per head as compared with last year's prices. It was, of course, due to the American demand that prices of Polled cattle rose so high in 1882. This year not a single American has been seen at any of the Polled sales, and there have been no enquiries privately, but it is expected that next season the demand from America will revive:—

	No.	Average.	Total.
1882.			
Polled	341	£62 16 6	£21,458 10 5
Shorthorns	547	26 6 10	14,409 12 6
	888		£35,868 2 11
1883.			
Polled	242	£48 8 0	£11,718 0 6
Shorthorns	481	29 6 2	14,097 16 6
	723		£25,815 17 0
1884.			
Polled	773	£36 12 11	£28,327 8 0
Shorthorns	762	27 11 9	21,249 17 6
	1,535		£49,577 5 6
1885.			
Polled	885	£25 14 1	£22,748 3 6
Shorthorns	720	24 10 8	17,664 9 0
	1,605		£40,412 12 6

WATER SUPPLY OF DAIRY FARMS.

Henry Stewart, in Home and Farm.

Water is the most important part of the feeding of cows. Few people think that water is food. Food really consists of whatever may be taken by an animal or plant for the purpose of supporting life and adding to its sustenance. If this is a true definition, water is then food, and from its peculiar influence upon the system and its rapid and complete absorption into the blood and circulation of an animal, it is of greater importance to health and profit in feeding than solid food. The blood and flesh of animals consist chiefly of water. Seventy-five per cent. or three-fourths of the live weight consists of water. Were it not for this large proportion of water the blood could not flow in the veins and life could not exist. Moreover, water is absorbed into the blood with more rapidity. A cow drinks a few gallons of water, and that process of absorption begins immediately. In a few minutes it is passing through the blood and then through the kidneys to be discharged as urine, or, in the case of a milking cow, it passes from the blood into the milk. The latter fact is thus a very important one to the dairyman, for if the water is not pure it carries with it into the blood and milk whatever impure matter it may contain, and the cow becomes diseased or the impurity collects in the milk and injures its quality. There are abundant facts which go to prove this. Cows have drunk the stagnant water in low, swampy meadows, which have been filled with putrid germs, and a few hours afterward the milk has been filled with these same germs and become putrid in a short time. Cheese makers have had disastrous experience in this way, and the cheese has been spoiled and unfit for sale, or it has been impossible to make it from the effect of such

impure water. The well known trouble in cheese-making called "floating curd," is thus caused. Indeed as such impure water causes fevers, dysentery, and other fatal diseases in mankind, it is quite certain that it cannot be healthful for animals, and as much of the diseased matter from blood so disordered passes into the milk of cows as the readiest way of escape, and makes it impure, it is of the utmost importance for dairymen or other owners of cows to avoid the danger, for no healthful milk, good cheese, or fine butter can be procured from cows which are supplied with impure water, and unless a pure supply can be secured the dairyman's profit is greatly reduced or vanishes altogether.

Pure spring water, brought in pipes or open troughs, by which it may be warmed by the sun, is the best kind. Water from wells that are protected from surface drainage is equally good, excepting that it may be too cold, but this may be avoided by pumping it into open troughs a few hours before it is used in the summer time. In the winter, water from deep wells is best of all, because it is warmer than the air. Rain-water collected from the roofs of barns and sheds is free from objection if the cistern is kept clean, or the water is passed through a filter before it reaches the cistern. With the average rain-fall of 40 inches in a year, the roof of a barn 40x25, equal to 1,000 square feet, will afford a supply of 3,333 cubic feet, or 25,000 gallons yearly. This would supply eight head continually without any other source. But a reserve of water from this source would be found of great value, and every farm having a barn or stable should be furnished with the means of saving all this water.

Open ponds, unless supplied with fresh water from a spring or stream, are always suspicious, because surface water will flow into them and bring in some impurities which will be dangerous. But stagnant water should never be used under any circumstances, nor should ponds into which drainage of yards or fouled ground may flow. The water from a spring may be brought on to higher ground by laying a pipe and connecting it with a lift-pump on the slope. A yard 30 or 35 feet above the spring may be thus supplied with water.

IRISH BUTTER.

The following appears in the *Butter Trades Gazette*—Shippers of Irish butter will have to look sharp, or before long their butter will be unsaleable in the English markets. It is not the packages that are at fault, but the quality of the butter, which is oversalted, largely adulterated with water, and colored with saffron—not by any means a suitable coloring for butter. That Irish farmers can make as good an article as that produced in any country in the world does not admit of the slightest doubt. It is good makers who are the principal losers by the adulteration of salt and water so largely practised in nearly all parts of Ireland. The remedy is in the hands of the shippers of butter. They should post notices in the different markets that they would not buy any butter unless it was fresh made, properly colored, not exceeding three per cent. of salt, and the buttermilk to be well worked out, instead of water being worked in, as at present. The great inducement which shippers of Irish butter hold out to the English grocers to buy is that the price quoted is about 20s. per cwt. under the value, and being well salted it will keep. On the other hand, from every other country an article is produced only fit for immediate consumption, and for which alone there is really any regular demand. The trade in stout salted butter is gone, probably never to return, and the sooner the Irish people become alive to this fact the better it will be for themselves. The choicest mild butters will always meet with a ready sale, but all secondary sorts have a powerful opponent in

butterine, which is daily getting into greater request, and is certainly a more wholesome article of food than Irish butter containing 20 per cent. of salt and water.

The greatest possible benefit to the Irish farmers would be an exceedingly high standard of inspection in the Cork market. If this is done, we can guarantee in reasonable time that Cork butter will again have the confidence of English grocers. We are fully aware of the difficulty of raising the standard of inspection to the extent that is absolutely necessary, but the gain will be very great. It would be far better if even only 25 per cent. of the farmers obtained first quality the price will be so high that every butter maker will do her best to turn out a most superior article. If our advice is taken, the best makers of butter in all parts of Ireland will reap a great benefit, as, unquestionably, Cork market prices rule the prices in all the other Irish markets. The committee of the Cork market should not spare either trouble or expense in making out the best coloring for butter, and commence by boycotting saffron in the interests of the farmers. Not a single manufacturer of butterine or butter-mixer in Denmark, France, Holland, Sweden, or Germany, uses saffron as a coloring, and these people, knowing how much benefit appearance is as regards the market value of their goods, have taken care to use the most suitable coloring. We would further strongly recommend the using of the "Dutch mixing machinery" for mixing lump butter, and a splendid article of a uniform color can be made. This machinery is used in nearly all continental countries, and we have not the slightest hesitation in stating that it is quite a success. The working of it is not difficult, and every butter merchant who is in a position to buy large quantities of lump butter will make considerable profits by setting up the machinery.

TRANSFERS OF THOROUGHbred STOCK.

American Berkshire Record.

- Proctor's Castoria, 14497. T. R. Proctor, Utica, N. Y., to James Leach, New York, N. Y.
- Black Belle, 14498, and Saratoga Queen, 14499. T. R. Proctor to Wallace L. Neebbs, Jonesville, N. Y.
- Grand Princess, 14475. C. Hibbard & Son, Bennington, Mich., to F. J. Tompkins, Girard, Pa.
- Grand Success II., 14476. C. Hibbard & Son to C. D. Muzzy, Dude Corner, Mich.
- Jumbo, 4959, and Zora, 11128. G. W. Clark, Woodstock, Ohio, to Byron Hawley, Woodstock, Ohio.
- Lassie's Prince, 14430. Geo. W. Penney, Newark, Ohio, to T. S. Cooper, Coopersburg, Penn.
- Gorham Girl, II., 14352, and Gorham Girl, III., 14353. C. A. Brackett, Gorham, Me., to C. P. Mattocks, Portland, Me.
- Mary Anderson, 14483. W. W. Stevens, Salem, Ind., to Geo. W. Clark, Hardinsburg, Ind.
- Fred. Douglas, 14481, and Lady Douglas, 14482. W. W. Stevens to Sam. G. Ellis, Hardinsburg, Ind.
- Sampson, 14523. J. J. Renfro & Sons, Collinsville, Ill., to Chas. W. Prange, Edwardsville, Ill.
- Ruby V., 10186. N. H. Gentry, Sedalia, Mo., to J. J. Kern, Friedensaw, Neb.
- Stumpy Duchess, 14553, Count Bruno, 14554, and Leinster Duchess II., 14567. N. H. Gentry to James Riley, Thornton, Ind.

A donkey, which is said to have been more than a hundred years old, has just died at Cromarty. The animal had been in the family of a Mr. Ross since 1779, and its age at the time it passed to its late owners was unknown.—*Irish Farmers' Gazette*.

BUREAU OF INDUSTRIES STATISTICS.

We are indebted to Mr. Blue, Secretary, for the following Summary of the Report of the Bureau of Industries for November, and of agricultural statistics for the year:—

Fall wheat is a fine sample and the yield is large; but owing to the effects of rain and rust spring wheat is a serious failure, both in quantity and quality.

The bulk of the barley was discolored by a wide ly extended rainstorm at the harvesting season.

Oats are below the average quality, having rusted in the ripening stage.

Rye is a fair average in yield and quality, but the area in crop is steadily decreasing.

Peas and beans were affected by spells of dry and wet weather in July and August, and they ripened very unevenly; the pea-bug has almost wholly disappeared.

The growing and ripening season for corn was short, cool and rainy, and much of it is soft in consequence; in the Lake Erie counties it has done fairly well.

Sorghum is generally a failure, and farmers are ceasing to grow it.

Buckwheat has given a good yield and the quality is excellent, but in localities it was hurt by early frosts.

The potato crop has suffered severely from the rot. In all the southern parts of the Province, from the Detroit River to the Ottawa, fully one-half of it is destroyed, and the disease continues its ravages in the pits and cellars. In the northern parts of the Province but little harm has been done.

Turnips are sound and in moderately good supply, and the accounts of mangel wurzels and carrots are uniformly favorable.

The midge has wrought havoc with the seed-clover. It is only where fields were pastured until the beginning or middle of June, and then left to grow for seed, that fairly successful results have been obtained.

The new crop of fall wheat has been sown in good condition, and it has a promising appearance.

Good accounts are received of the fruit crop. In the older counties there has been a surplus of apples of excellent quality, and large quantities have been shipped to England and the North-West. Peas have been moderately plentiful in western districts, and also in two or three eastern counties. The supply of peaches was confined to sheltered orchards in the Niagara peninsula. A good surplus of plums is reported for the northern and eastern districts, but black-knot and the curculio have been destructive in the West-Midland and Lake Erie counties. The black-knot has also wrought great damage to cherry trees, and cherries were scarce and of poor quality. Grapes and small fruits were very abundant. Fruit trees have made fine growth during the season and are generally in a healthy state.

Live stock are in good condition. The swine plague caused serious loss in some western localities early in the fall season, but there remain now only a few scattered cases. The market for live stock is reported dull, a comparative absence of demand and low prices being the rule. A good many sales of cattle off the grass have been made for the British markets. There is a continued decrease in the number of sheep, owing, it is stated, to the low price of wool. The dairy industry has been very dull, and sales of cheese and butter in the early part of the season were made at low figures.

AGRICULTURAL STATISTICS, 1884-1885.

FIELD CROPS.	Acres—1885—Bu.	Acres—1884—Bu.
Fall Wheat	875,136 21,478,281	864,740 20,717,631
Spring Wheat	799,463 9,129,881	721,647 14,609,661
Barley	597,873 16,533,587	700,472 19,119,041
Oats	1,543,745 55,229,742	1,481,828 57,696,304
Rye	78,293 1,294,925	103,416 1,648,259
Peas	646,081 14,006,192	570,928 13,691,607
Corn	167,831 10,741,391	174,560 12,935,889
Buckwheat	61,776 1,530,675	65,836 1,484,570
Beans	24,651 496,564	24,788 502,044
Potatoes	159,741 21,091,144	168,757 27,546,261
Mang. Wurzels	16,435 7,600,729	18,341 8,655,184
Carrots	9,024 3,462,319	10,987 4,107,200
Turnips	102,303 4,137,735	104,199 4,406,363
	Tons.	Tons.
Hay & Clover	2,268,091 3,252,155	2,193,369 3,044,912

HORSES:	1885.	1884.
Working horses	311,587	303,474
Breeding mares	95,963	93,910
Unbroken horses	151,259	138,569
Totals	558,809	535,953

CATTLE:	1885.	1884.
Working oxen	15,302	16,793
Milch cows	750,005	710,519
Store cattle over two years	373,856	384,453
Young and other cattle	837,317	813,905
Totals	1,976,480	1,925,670

SHEEP AND WOOL:	1885.	1884.
Coarse-woolled over 1 year	908,762	994,608
Coarse-woolled over 1 year	547,952	595,996
Fine-woolled over one year	176,248	176,341
Fine-woolled under 1 year	122,643	123,788
Totals	1,755,605	1,890,733
Number of fleeces coarse wool	925,314	1,008,946
Number of fleeces fine wool	180,056	179,770
Totals	1,105,370	1,188,716

Clip of coarse wool	lbs. 5,161,775	lbs. 5,597,643
Clip of fine wool	924,891	921,275
Totals	6,086,866	6,516,918

HOGS:	1885.	1884.
Over one year	225,512	257,711
Under one year	596,750	658,447
Totals	822,262	916,158

POULTRY:	1885.	1884.
Turkeys	428,233	445,532
Geese	476,942	540,130
Other fowls	5,431,630	5,251,944

WAGES:	1885.	1884.
Farm hands per year, with board	\$160.00	\$167.00
do do without board	253.00	257.00
do per month, with board	17.32	19.44
do do without board	27.18	29.11
Domestics per week, with board	1.51	1.51

VALUES:	1885.	1884.
Farm lands	\$626,422,024	\$625,478,706
Buildings	182,477,905	173,386,925
Implements	48,569,725	47,830,710
Live stock	100,690,086	103,106,829
Totals	\$958,159,740	\$949,803,170

AREA OF RURAL LANDS:	1885.	1884.
Resident	Acres 20,717,560	Acres 20,567,632
Non resident	1,128,956	1,444,684
Cleared land	10,837,421	10,736,086
Woodland	8,984,997	8,914,719
Swamp, marsh, waste land	2,024,098	2,061,511
Total occupied	21,846,516	21,712,316

MISCELLANEOUS:	1885.	1884.
Acres in orchard	190,813	192,837
Acres in pasture	2,911,199	2,794,986
Rural population	1,126,296	1,117,880

YIELD OF FIELD CROPS PER ACRE IN ONTARIO, 1882-85.

	1885.	1884.	1883.	1882.
Fall wheat, bushels	24.5	24.0	10.6	26.3
Spring Wheat do	11.4	20.2	16.6	16.5
Barley do	27.7	27.3	24.3	28.6
Oats do	35.8	38.9	38.5	36.4
Rye do	16.5	15.9	16.0	18.7
Peas do	21.7	24.0	19.7	19.6
Corn (in ear) do	64.0	74.1	...	64.9
Buckwheat do	24.8	22.5	...	25.2
Beans do	20.0	23.8	...	20.7
Potatoes do	132.0	163.2	98.0	115.0
Mangolds do	466.1	471.9	363.0	488.0
Carrots do	383.7	382.0	354.0	403.0
Turnips do	402.1	426.2	304.0	448.0
Hay and Clover, tons	1.43	1.39	1.75	1.14

AVERAGE YIELD OF CEREALS PER ACRE IN ONTARIO AND EIGHT AMERICAN STATES.

FALL WHEAT:	1885.	1884.	1883.	1882.
Ontario bushels	24.5	24.0	10.6	26.3
Ohio do	8.1	15.3	9.5	16.7
Michigan do	20.0	14.0	12.0	17.3
Indiana do	10.8	13.2	10.4	15.7
Illinois do	9.2	12.6	10.0	16.0
New York do	15.5	16.5	11.0	18.7
Pennsylvania do	10.0	15.0	13.5	15.5

SPRING WHEAT:	1885.	1884.	1883.	1882.
Ontario bushels	11.4	20.2	16.6	16.5
Iowa do	11.2	12.5	12.7	11.0
Minnesota do	11.5	16.1	13.2	13.3

BARLEY:	1885.	1884.	1883.	1882.
Ontario bushels	27.7	27.3	24.3	28.6
Ohio do	20.5	26.0	21.0	19.9
Michigan do	27.0	23.0	21.0	25.2
Indiana do	12.5	23.0	20.4	24.0
Illinois do	22.3	24.0	26.0	22.5
New York do	22.0	23.0	24.5	25.0
Pennsylvania do	18.5	19.0	25.0	23.5
Iowa do	23.0	23.0	23.6	21.7
Minnesota do	23.8	26.4	24.0	23.3

OATS:	1885.	1884.	1883.	1882.
Ontario bushels	35.8	38.9	38.5	36.4
Ohio do	34.5	29.0	34.0	28.0
Michigan do	35.5	32.0	30.7	33.3
Indiana do	31.5	30.0	30.5	27.0
Illinois do	32.7	33.0	33.0	37.4
New York do	28.0	30.0	32.0	34.2
Pennsylvania do	27.0	28.0	33.0	27.8
Iowa do	32.5	32.0	36.0	31.8
Minnesota do	34.7	35.3	37.0	40.0

The acreage of crops, the number of live stock, the wool clip, the rate of wages and the value of farm property in the statistics of the Province presented above are prepared from schedules filled up by farmers, and returned to the Bureau on the 25th of June; the product of crops is computed from returns of actual yield made by threshers and correspondents on the 1st of November; and the acreage of farm land and of orchard and garden, together with the census of rural population, are made up from the assessment rolls of township municipalities. The average yield of cereal crops for States of the American Union is taken from the reports of the United States Department of Agriculture. It will be observed that the showing for the last four harvests is largely in favor of Ontario.

CROPS IN THE UNITED STATES.

The following account of crops in the United States is prepared from the October and November reports of the Department of Agriculture at Washington:—

The last winter was the most destructive of wheat since 1866. The area harvested is estimated at 34,000,000 acres, and the average yield at about 10.5 bushels per acre. In some Southern and Central States the average is only 5 bushels per acre, while in Michigan the crop is the best for several years. In the Northwestern States there is complaint of shivelled grain, and the yield is very unequal.

The total yield of oats is estimated at 600,000,000 bushels, and the average yield at 27 to 28

bushels per acre. In some Southern States it was injured by drought; but the most extensive injury was caused by excessive rains during and immediately after harvest—especially in Iowa, Illinois, and in parts of Michigan, Ohio, New York and Pennsylvania. In portions of Ohio, Indiana, Illinois and Iowa serious damage was done by grass-hoppers.

A fair product of barley has been secured, the average yield being 22 bushels per acre. In New York a good deal of the grain was stained or otherwise damaged by excessive rains, and to some extent in Iowa and Wisconsin. In Kentucky and Tennessee a considerable portion of the crop was killed by frosts.

The corn crop of this season is the first of a full average yield since 1880, being 26 to 28 bushels of shelled corn per acre. The area is nearly 74,000,000 acres, being the largest in the history of the country. The quality is very good in the east and south, medium in the central parts of the west, and rather low on the northern border from Michigan to Dakota.

An excess of rain has been very injurious to the potato crop from New England to Minnesota. The crop in New York has been reduced one-third, and the rot has been seriously prevalent in portions of Pennsylvania, Ohio, Michigan, Minnesota and Northern Illinois. The reports from Wisconsin and Iowa are extremely unfavorable. In parts of Pennsylvania, W. Virginia, Kentucky, Indiana, Illinois and Minnesota the crop has been materially diminished and in a few localities almost destroyed by bugs.

THE HARVEST OF EUROPE.

The committee of the International Corn Market, held at Vienna, have published the following estimate, which may be regarded as more or less accurate, as the result of the harvest in Europe. The number 100 is taken as representing an average year:—

	Wheat.	Rye.	Barley.	Oats.
Austria	104	100	95	98
Hungary.....	117	86	108	94
Prussia.....	94	87	92	92
Saxony.....	100	85	75	70
Bavaria.....	102	86	101	84
Baden.....	97	95	90	100
Wurtemberg.....	101	97	97	103
Mecklenburg.....	100	95	100	90
Denmark	110	100	90	90
Norway and Sweden.....	105	106	80	105
Italy	79	75	65	80
Switzerland.....	125	55	100	100
Holland	95	98	100	105
France	95	95	95	100
United Kingdom.....	95	—	100	95
Russia.....	86	80	72	75
Roumania.....	93	80	97	127
Servia.....	110	85	110	115

It will be observed that Belgium, Spain, Portugal, Greece, and Turkey are omitted, and, though their production is small, it ought to have been included in the calculation.

The following preparation applied to the surface will prevent any rusting on ploughs or any other metal surfaces which it is desirable to prevent from rusting:—Melt one ounce of resin in a gill of linseed oil, and when hot mix with two quarts of kerosene oil. This can be kept on hand and applied in a moment with a brush or rag to the metal surface of any tool that is not going to be used for a few days, preventing any rust and saving much vexation when the time comes to use it again.—*Exchange.*

THE WORLD'S WHEAT CROP.

The following table, compiled by the Cincinnati *Price Current*, indicates the yearly average production of wheat in the wheat-growing countries of the world, exclusive of the United States and Canada, with the estimated crops for 1885:—

	Av. crop bushels	Crop of 1885 bushels
France	285,000,000	313,000,000
India	24,000,000	250,000,000
Russia.....	200,000,000	175,000,000
Italy	140,000,000	121,000,000
Spain	115,000,000	105,000,000
Hungary.....	95,000,000	114,000,000
Austria.....	85,000,000	38,000,000
Germany.....	96,000,000	94,000,000
United Kingdom.....	78,000,000	75,000,000
Turkey in Europe.....	40,000,000	35,000,000
Australasia.....	32,000,000	38,000,000
Algeria	32,000,000	30,000,000
Roumania.....	30,000,000	28,500,000
Chili, Argentine Republic, etc ..	24,000,000	25,000,000
Egypt	16,000,000	15,000,000
Portugal.....	7,500,000	7,000,000
Holland.....	6,000,000	5,800,000
Greece.....	4,800,000	4,500,000
Denmark.....	4,600,000	5,000,000
Servia.....	4,400,000	4,800,000
Sweden.....	3,500,000	3,700,000
Switzerland.....	2,200,000	2,700,000
Total bushels.....	1,516,000,000	1,515,000,000

The crops of the United States and Canada may be reckoned at 504,000,000 bushels as an average, for late years, and 395,000,000 for 1885, which would make the aggregate for the world, 2,020,000,000 bushels as the average production, and 1,910,000,000 for 1885, or a shortage of 110,000,000 bushels, which, as before mentioned, is balanced by the excess of stocks in 1885 over normal supplies, at the beginning of the crop year. Oct. 29th.

PRESERVING EGGS.

VARIOUS RECIPES FOR THIS OPERATION, SOME OF WHICH HAVE BEEN SOLD AT HIGH PRICES.

THE NATIONAL BUTTER, CHEESE AND EGG ASSOCIATION'S METHOD.

Take one bu. best stone lime, 8 qts. of salt, 25 ten-quart pails of water. Slake the lime with a portion of the water; then add the balance of the water and the salt. Stir a few times and let it settle. Fill the cask or vat to a depth of 18 inches and put in a layer of eggs about a foot deep. Now pour over them some of the settlings that is a little milky in appearance. The object of this is to have the fine lime particles drawn into the pores of the shell to seal them. Continue this operation till the vessel is full. Put only fresh eggs in if you would take good ones out. Eggs may also be preserved by the use of salicylic acid, which may be obtained of druggists. Dissolve a tablespoonful in a gallon of boiling water. Fill a stone jar or clean cask with eggs and pour this solution over them after it has cooled. Keep the eggs covered with the solution, and cover the cask to keep out dust. If kept in a cool place, this preparation will be good for three months. No metal of any kind should come in contact with the salicylic acid solution. Eggs preserved by either method must be used soon after being taken from the pickle.

THE LOCUIS RECIPE.

To 30 gallons of soft water add 5 lbs. salt and 13 lbs. lime; stir it a little every hour or two for one day. Now take ½ lb. borax, ½ lb. cream tartar, ½ lb. saltpetre, 1½ oz. alum, pulverize and mix thoroughly, dissolve in two gallons of boiling water, and add to the other lot. Let stand till settled,

pour off all the clear solution and put the eggs in that. I have tried this method and know it to be good.

THE SULPHUR PROCESS.

Take a common starch or salt box with a sliding lid. Put the eggs in the box, and upon an oyster shell or other suitable substance, place a teaspoonful of sulphur, set fire to the sulphur and when the fumes begin to rise briskly shut up the lid, making the box tight, and do not disturb it for half an hour. Now take out the eggs, pack in oats, and the job is done. If the oats or packing materials be subjected to the same process it will be all the better. If a barrel full is to be preserved, place the eggs in a tight barrel two-thirds full, with no packing whatever. Fire a pound of sulphur upon a suitable substance, on top of the eggs in the vacant space over them, shut up tightly, let stand an hour, and then take out the eggs. As the gas is much heavier than the air it will sink to the bottom, or rather fill up the barrel with the fumes. In another barrel or box place some oats and treat in the same way. Now pack the eggs in the oats, head up the barrel, turn the barrel every day to prevent falling of the yolks, using each end alternately, and they will keep a year; or, according to the efficiency of the operation, a shorter, or even a longer time.—*Poultry Keeper.*

VARIOUS NOTES.

Anything that will exclude air and close the pores of egg shells will preserve the eggs.—Eggs turned daily will keep twice as long as if not turned.—Infertile eggs keep longer than those from hens served by a rooster.—Pack eggs small ends down in dry earth, ashes or bran, or better still, land plaster, and keep in a cool, dry place and the quality will be preserved for several months.—Eggs kept in a temperature of 35° to 60° will be preserved several months according to the degree of coldness attained and freshness when put into cold storage.—Eggs simply packed in salt for two months were the best preserved at a recent competition in England. They had not lost sensibly by evaporation, had good consistent albumen and tasted best when boiled.

To pickle eggs, I dissolve one pint of fresh slacked stone lime in three gallons of water, by boiling. Drain off and it is ready for use. Put the eggs in carefully when fresh so as not to crack the shells. Eggs pickled in this way will keep well and are fully as good as fresh eggs for frying or boiling, but not quite so good for cooking purposes.—*Elisha Hatch, Hancock County, Me.*

HOW TO MILK A KICKING COW.

A. E. K. in the June number of *Farm and Home* gives a way to break a kicking cow, which is very good on some cows, but fails entirely on others. I had a cow that would kick before one could get a rope round her foot. She soon found out what I was up to when I was trying to get it around her leg and would jump and kick "for all that was out." I tried another plan that succeeded nicely: I tied her short in the stable, lifted up her right fore foot so that her knee would be bent up close; then had a loop made of small rope that would slip over her knee and up on her leg when it was bent so that it would hold her foot up from the ground. When I would get the loop on, I would slip a smooth round stick in between the rope and the knee-joint so that the loop could not come off. She had to stand on three feet while milking and therefore couldn't kick. If she did she would go down. I kept the stick and the loop in the stable so that it was always at hand. It was very little bother and always succeeded. But as for getting them broken so that they will always be safe, don't always believe it.

J. W. B., Middlesex, Vt.

THE MASTIFF.

"Grasshopper," in London Live Stock Journal

Those people who have seen the Mastiff described by some ancient writers as a dog used for hunting wild beasts must be somewhat staggered when they look at the show bench winners which bear that name in the present day. There is, however, some similarity in the animal which existed a few centuries ago, which is to be observed from the illustrations which were given at that time, but with the change the mode of sporting, the extermination of wild beasts in Great Britain, the institution of dog shows, and the consequent disuse of the Mastiff for hunting purposes, the entire nature of the animal became altered. It is probable that it was due to the show bench that this came about when the craving for exaggerated properties turned the active dog into the cumbersome and sleepy monster which is to be seen reclining in luxurious ease at the Crystal Palace or any of the other Kennel Club exhibitions.

The antiquity of the breed has never been questioned, it being amongst the earliest of any class of dog which is spoken of in this country. With the Bull dog it is considered by some to claim an equal right to the title of the National Dog of Great Britain, but as there seems to be reason to suppose that both these animals were at one time very nearly related, the right may have been absolute, and, at one period, they were one and the same animal, which man, by careful selection, has converted into two distinct types of the canine race. There are, however, amongst the most prominent prize Mastiffs now extant indications that the Bull-dog character has not been entirely eradicated.

Fashion during the past decade has displayed its subtle influence, and the Mastiff of to-day has reverted much more nearly to an enlarged Bull dog than when dog shows first came into notice. The projecting under-jaw, turned-up nose, wide skull, short back, and straight hocks having, in many instances, taken the place of the more symmetrical formation of such dogs as we were accustomed to see a few years ago descended from the celebrated Lyme Hall strain.

Opinions differ as to whether Crown Prince, who represents the Bull dog type, and is somewhat of the character of Mr. Edgar Hanbury's Wolsey, or Maximilian, who more nearly resembles the style of Miss Aglionby's Turk, is the more correct form for a Mastiff. Judges, however, appear to be deciding in favor of the former, although as far as appearance and beauty of contour are concerned, it cannot be questioned that the latter bear off the palm; but it remains to be seen whether the defective points now so apparent in many of the most successful prize-winners will eventually be bred out, and the same perfection of form be established in the new dog which was conspicuous in that of five or ten years back.

Whilst on the subject of the Bull-dog character, which has been introduced into the modern Mastiff, it is as well to mention that many breeders are greatly opposed to it, and that they still adhere to the old style. The supporters of these views certainly appear to have reason on their side, as it can be of no advantage to the Mastiff, which is now only used as a guard or a companion, to be under-shot, or to possess the points of a Bull-dog, which animal is admitted on all sides to be most ungainly both in its appearance and movements.

It is only a few years ago that Champion Turk, Green's Monarch, and The Shah were considered the *beau ideal* of all that was good in dogs of the breed, and yet they are all distinctly different in formation to Crown Prince, Orlando, and Pontiff. Again, there is Mr. Taunton's Cardinal, who stands forth a bright example of a large dog who, in shape and muscular development, cannot fail to please

those who look upon a dog as an animal to be formed on orthodox lines, and not as a creature to be converted into a mass of deformity to suit the whims and fancies of a few breeders.

There can be no doubt that in the head of each variety of dogs is to be found the distinctive features which mark the characteristics of its breed; so the head of the Mastiff is the first and most important point to consider. It is large, square, and massive, the skull being flat and broad, but not receding, the face a medium length, with broad muzzle, particularly across the top, and a good depth of chop. Squareness of muzzle is a most important feature, as a dog may be tolerably long in face, if he has width of muzzle, and yet be superior to one which is shorter in head, but is cut away too much below the eye. The eyes are dark-hazel in color and a medium size, and the ears rather small and placed rather high, close to the head, the neck strong, but not showing any dewlap, the shoulders also powerful, and placed well back with well sprung and deep ribs carried far back to the flanks and joining a strong loin to rounded quarters, with plenty of muscle in the thighs, it is in this last named point that so many otherwise good Mastiffs are defective.

The tail, which should be carried low, must be very strong at the root, and have no curl or inclination to turn upwards at the end. The body, taken as a whole, should be lengthy, and placed on limbs with heavy bone. The chest of the Mastiff may be slightly wide, but the animal must not be out at elbows, and, above all, the limbs must be straight, the hinder being well bent in the hocks, which must not be turned inwards, but in a straight line with the feet, which, both before and behind, must be set up on nicely-rounded toes. After admitting that there is always great difficulty in rearing puppies of so large a breed as that of the Mastiff, there are still far too many young dogs put upon the show-bench, which are so defective in their limbs and thighs as to render them little less than deformities, and it is against encouraging such that judges should make a firm stand.

The most fashionable colors are fawn and brindle, the former light, with black ears and muzzle, the latter deep and rich. There are, however, various shades of brindle admitted, and dogs that are fawn with little, if any, black markings are accepted, but there can be no doubt that when the markings are correct the beauty of the dog is greatly enhanced.

Undoubtedly the most successful Mastiff which is now living is Crown Prince, not only on the show-bench but as a stud dog, in which capacity he does not transmit his pale face and Dudley nose. There are, of course, exceptions to the rule, but there are more than sufficient winners recorded in the stud-book to admit of the above remark. It cannot be said, however, that he is equally fortunate with his other great defect, that of straight hocks, as in many of his best produce, the failing is prominently shown. In the death of Emperor a great loss was sustained by Mastiff-breeders, as it was through him that the character of the present type of Mastiff might have been improved, it is somewhat extraordinary that from the same bitch two animals so different in shape and character as Crown Prince and Maximilian should have sprung.

As the sire of Cambrian Princess and many other winners, Beau must not be passed over unnoticed, and of the brindle division Cardinal has a string of winners attached to his name, Champion Lily II., with Commodore, being his best representatives. Amongst the chief breeders are:—Dr. Sydney Turner, Messrs. Mark Beaufoy, W. K. Taunton, E. Nichols, R. Cook, John Evans, J. Hutchings, Lord Arthur Cecil, and H. G. Woolmoore.

FARMERS' HELP.

Maryland Farmer.

The labor question among the farmers comes up regularly every year, and always with increasing interest. It is very true that the great increase of labor-saving machinery renders the subject less formidable than in past years, and as this machinery is gradually being provided at very reasonable prices, the necessity of the employment of many laborers is done away with, while only a few intelligent skilful men are actually needed even for large farms.

We can remember when on a 200 or 300-acre farm, harvest time used to bring from 30 to 40 stout, hardy men, with scythes and cradles and reaping hooks, to be paid by the farmer high prices, and to worry the farmer's wife and daughters by hard labor to feed and care for them by day and by night. That time is departed. The rattle of the mower and the reaper, and the steady tramp of the team—and the grass is spread to the sun and the grain lies bound in the field.

Yet the farmer must have help and he should secure good skilful men and employ them all the year round at moderate wages. If steady employment is provided such can easily be found; but when men are employed only a part of the time, when the demand is heavy and the work hard, the farmer must take what he can get and pay whatever is asked. The true policy is to pick out steady, pleasant-speaking, moral men—such as you are willing to have talk freely before your children—in the dull season of the year, make your bargain with them for the whole year's work, and keep them in your employ as long as possible. There is always plenty to do on the farm, whether in the winter or the summer, and you can always make improvements which will require the labor of your help continuously, to the profit of both yourself and them. We believe this to be the only true method of solving this question which so troubles the farmer every summer. Seed time and harvest are not the times to employ help; they should have been employed in the autumn, kept at work all winter in the fields, in the barns, in the orchards, in the gardens; hauling fertilizers, removing stones and stumps, laying drains, renewing fences, planting large trees, in a word preparing for the battle as the spring opens and the summer approaches. In these respects good help will repay all the extra outlay even in these winter months, and then you have just the help you need when the busy months come, or you must otherwise pay any price which is asked, for strange men and unskilled labor.

Then this is better for the laborers themselves. It gives them a good home, something permanent, and places them always upon their honest manhood as to conduct, conversation and devotion to the farmer's interest who employs them. We advocate this system of employment of farmers' help, then, on account of the benefit it bestows both upon the farmer and on the laborer. Also, because it is the real solution of the great question as to the procuring reliable and skilful labor when most needed by the farming community.

Peas contain more than double the digestible albuminoids (the most important and costly element of animal food) of oats and more than a hundred per cent. higher nutritive ratio. Like English bean meal, our pea meal is considered the strongest horse food. It has a somewhat constipating effect upon the digestive organs, and it is therefore advisable to mix eight bushels of peas with eight bushels of Indian corn and one bushel of flax seed, and grind all together. The flax seed counteracts the constipating effects of the peas, and the mixture has a slightly higher nutritive ration than oats. I have fed this ration with much satisfaction.

BIRDS AS A PROTECTION AGAINST INJURIOUS INSECTS.

A correspondent of the *Indian Agriculturist*, published at Colombo, Ceylon, relates the systematic methods used to domesticate insect-eating birds in the cultivated plantations as a protection against injurious insects, which in that tropical climate are very destructive. Among the most useful birds is the magpie robin, which, from the description given of its habits, we judge is a family connection at least of our robin red-breast. The method of domesticating them is given as follows, and is worthy of the attention of fruit growers in this country:—

"We attach chatties or flowerpots, with suitable holes in them, to the wall, in places where no cat can reach them, and so arranged that the crows cannot get at the eggs or young ones. These are intended as breeding places, and in most cases instinct tells cock robin and his mate that they are safe harbors of refuge. After due inspection—for he is a knowing and a cunning little dodger—he will hop in, hop out, hop on to the top of his chatty, and pour forth his long shrill notes of love and approval. In a day or two the materials for the nest begin to arrive, and one then knows all is right, and we betide the impudent crow whose curiosity may lead him to be too inquisitive. In due course the period of incubation is completed, and the process of grubbing commences, the two parents incessantly bringing caterpillars for the young.

"When the little ones are nearly fledged we remove them from the nest, and place them in a good roomy wicker cage, outside, but protected from rain. The parent birds now get very excited, and express their disapproval of these proceedings with harsh screeches, and cock robin no doubt is highly indignant at the liberties taken with his offspring. Gradually, however, he and mother robin get reconciled, and go on assiduously stuffing the young with caterpillars or larvæ through the bars of their cage. In this case the young undergo an imprisonment of six weeks, during which time the dietary arrangements are entirely left for the parents to settle. At the expiry of their term of servitude the youngsters are liberated. They are, of course, delighted, overjoyed, and show their gratitude by still remaining near the compound, to which they have become attached, and by regularly visiting our pot plants, and rose trees, till not a vestige of a poochie can be found.

"We were very anxious to get at some reliable statistics as to the number of larvæ a family of robins would destroy in a day, and had a careful hand told off, to take tally of the number of trips the male and female each made to their young with food, during the entire day. He was furnished with a pencil and a board, and stationed close to the cage, and whenever cock-robin arrived with a mouthful of caterpillars, down went a x; and whenever old mother robin came, down went a r. On reckoning up the crosses and strokes, for three successive days, we arrived at the following average result, viz:—

	Per day,
"Cock Robin, 92 trips a day,	} 213 trips.
"Mother Robin, 121 trips a day,	
"Take the average to be two larvæ at each trip (a low estimate); then larvæ—double the number of trips, or—426 larvæ.	

"As the cage on this occasion contained two young ones, the allowance for each bird was 213 larvæ.

"Now, even say the adults will not require more larvæ than the number they gave their young, viz.: 213 each, we arrive at 852 larvæ per day, for the four birds, or 35,784 for the six weeks the young are in confinement.

"Again, at and in the neighborhood of the nursery grounds and garden, we have at least five

families of say six each, including the adult birds, i. e., 30 birds, each capturing 213 larvæ daily; then for the year of 365 days, [The birds do not migrate as in this country, ED.] we arrive at the enormous number of 2,332,350 destructive larvæ captured by the five families of robins.

"In this calculation, you will see, we have not allowed more food for the adult birds, than was sufficient for the young in confinement, and we think one half more might, with safety, be added to the number of larvæ destroyed. It is better, however, to be on the safe side, and these figures as they stand are sufficiently startling."

When is the safest time to buy the draught horse stallion in England? is a question which some of our foreign contemporaries seem to be asking. The best time to see a draught horse stallion is in the middle of his season, when he is in his natural condition. Then he is to be found in fair good working order, not rolling in beef and not lean and lank. Those who buy at our stallion shows run a great risk, and if foreigners really wish to have something to take away with them, they should make their selections in autumn. Of course, certified stock-getting horses are always safe to purchase at the spring shows, but the certificates in our opinion should be more reliable if a foreign market is to be established. There can be nothing more dissatisfactory in trade than to see a foreigner buy a stock certificated stallion, and watch him pay freight, insurance and all, and so off with an animal which is less worthy in value than a clothes horse. Such things have happened frequently of late years. —*London Live Stock Journal.*

Live Stock & Kindred Markets.

OFFICE OF THE CANADIAN BREEDER
AND AGRICULTURAL REVIEW.
TORONTO, Dec. 2nd, 1885.

There has been no change in the general condition of the British cattle trade and latest cables indicate that no new developments have taken place. The colder weather, however, has created a slight improvement in the meat markets, which show some advance as compared with a week ago. The improvement in cattle has been maintained, although demand has not been active. Receipts from Canada and the United States have been of fair proportions, while the general supplies have been ample, but not any larger than during the previous week. There has been a moderate to fair enquiry from buyers, who, however, are not anxious to go in heavily. Home trade has been of a quiet character. Sellers have held the advance fully and are opposed to forcing matters as the winter receipts from this side will not be heavy. At Liverpool on Monday trade was quiet but steady in tone, although a good supply was offered.

MONTREAL.

Quotations at Liverpool on Monday, being calculated at \$4.80 in the £, were:

Cattle—	\$ c.	\$ c.	
Prime Canadian steers.....	0 12½	to 0 00	per lb.
Fair to choice grades.....	0 12	to 0 00	"
Poor to medium.....	0 11	to 0 00	"
Inferior and bulls.....	0 08½	to 0 10	"

TORONTO.

Receipts of live stock at the Western Cattle Market keep up very well, and for several weeks past have been in excess of those for the same time last year as well as for the year before. The demand generally has been good and a brisk business has been done. Prices rule much about the same as a week ago, there being no change of importance to note.

CATTLE—There was a fair enquiry for shipping cattle yesterday, but none were offered; values are nominal at 4 to 4¼c. per lb. for choice, with extra 1,400 beeves ¼c. higher. Butchers' cattle show no change; supplies yesterday were sufficient; quite a few good were offered, but the majority were second and third class qualities; for the former there was an active demand, but the latter were somewhat slow; it is not possible to make any change in the table of quotations; good loads sold at 3½ to 3¾c. per lb. and small lots of choice at 4c.; among the sales were 11 head, averaging 1,000lbs., at \$30 each; 4 do., 1,025lbs., at \$38; 10 do., 1,000lbs., at \$31; 11 do., 1,100lbs., at \$32; 20 do., 1,050lbs., at \$41; 22 do., 1,050lbs., at \$32.50; 22 do., 1,075lbs., at \$37; 20 do., 1,100lbs., at 3¾c. per lb.; 7 do., 1,000lbs., at \$33 each; 8 do., 1,200lbs., at \$46. Feeders were in fair demand, and almost enough were secured yesterday to fill the stables at the distillery here; a few farmers were also on the market, but they'd not buy many; prices ruled unchanged at 2¾ to 3¼c. per lb. for fair to choice loads, with bulls at 2 to 3c. Milch cows and springers in good demand; offerings continue light; one extra milker sold yesterday at \$53; a pair with calves changed hands at \$100; another fairish cow sold for \$36; one springer also sold at that figure; strippers are worth \$20 to \$28.

SHEEP—Are in good demand for export; by the dollars they are worth \$4.50 to \$5 each; only a few are offering; a couple of bunches offered yesterday changed hands at \$4.50; they averaged 140lbs. each.

LAMBS—Coming in more freely; prices are steady and yesterday's sales were made at very good figures, still it would take but a slight increase in the run to cause a drop in values; some very choice bunches have been offering and good prices have been realized, among yesterday's sales were 73 lambs, all ewes and wethers, averaging over 100lbs. at \$4.10 each; 49 head, about 100lbs., at \$3.75; 98 do., 90lbs., at \$3.50; 129 do., 92lbs., at \$3.60; 25 do., 90lbs., at \$3.60.

CALVES—Quiet, but choice grades will sell well.
HOGS—Demand continues good, receipts this week are not large; a bunch of mixed sold yesterday at \$4.05 per cwt.; light are in good demand at 4 to 4¼c. per lb.; heavy slightly firmer than a week ago at 3½ to 3¾c. per lb.; stores sell readily at 3¼ to 4c. per lb.

Quotations are:

Cattle, export, 1,200 lbs. and upwards,	
heifers and steers, choice.....	4 to 4½ per lb.
" Mixed.....	3½ to 4 "
" Butchers' choice.....	3¾ to 4 "
" good.....	3¾ to 3½ "
" inferior to common.....	2½ to 3 "
" Milch cows, per head.....	\$25 to \$50
" Stockers, heavy.....	2½ to 3½ per lb.
" light.....	2 to 2½ "
" Bulls.....	2 to 3 "
" Springers, per head.....	\$25 to \$45
Sheep, export, choice.....	3 to 3½ per lb.
" inferior and rams.....	" "
" Butchers' per head.....	\$2.50 to \$3.25
" Lambs, choice, per head.....	\$3.50 to \$4.10
" inferior to common per head.....	\$2.50 to \$3.00
Hogs, heavy fat, weighed off the car.....	3½ to 3¾ per lb.
" Light fat, " " " ".....	4 to 4¼ "
" Store " " " ".....	3¾ to 4 "
Calves, per head, choice.....	\$5.00 to \$8.00
" Common.....	\$2.00 upwards.

The receipts of live stock at the Western market here for the week ending last Saturday, with comparisons, were as follows:

	Cattle.	Sheep and Lambs.	Hogs.
Week ending Nov. 28.....	1,387	1,355	717
Week ending Nov. 21.....	1,716	1,091	1,085
Cor. week 1884.....	967	873	1,125
Cor. week 1883.....	821	541	166
Total to date.....	53,558	59,420	16,635
To same date 1884.....	39,244	57,902	12,658
To same date 1883.....	32,530	47,151	8,171

MONTREAL.

The export cattle trade has ruled quiet, as might be expected, after the close of navigation. About 560 head, however, have left to take the Carthaginian at Halifax for Glasgow. Offerings of export stock have been light and demand slow. A few sales have been made at 4c. per lb. live weight. There was a good demand for butchers' cattle at 2½c. to 3¼c. per lb. live weight. Choice beeves, however, were scarce, but larger receipts are expected, as the Christmas markets are coming on, when choice cattle will sell well. Receipts of hogs have been large, but demand was slow at 4½c. per lb. for the best. Sheep were steady at 4c., and calves sold at \$4 to \$8 each as to quality.

EAST BUFFALO.

Nov. 30.—Cattle—Arrivals were very heavy, about 225 loads being among the fresh receipts, while there were five loads held over from Saturday's trade. The market opened with a fairly good demand, but later was duller. The quality of the supply was better than last week, there being

more good to choice and extra cattle on sale, and for these the demand was good from both shipping and export buyers. Prices ruled a shade firmer for good grades, but slow and unchaned for common. Best steers averaging 1,400 to 1,625 lbs., brought \$5.40 to \$5.85; good to choice, 1,300 to 1,400 lbs., \$5 to \$5.25; good shippers, \$4.90 to \$5; fat to medium, \$4.20 to \$4.65; mixed butchers' stock about steady at \$3 to \$3.50; stockers dull and slow at \$3 to \$3.35; a few choice Canada at \$3.40 to \$3.50; feeders a cut steady at \$3.50 to \$4; milk cows in fair demand at full, strong, former prices, or from \$3 to \$3.50 per head, as to quality. Veals steady at \$5.50 to \$6.25; coarse, heavy fed, dull at \$2.50 to \$4. Sheep and lambs—Arrivals of sale sheep heavy, as usual, at the opening of the week, but the run was not as heavy as that of last week; the yards were all filled at an early hour, however, and all will not be yarded. The market ruled with a fair demand at about steady former prices, but there were more good sheep on sale. Feeders took some of the best selections at \$3.75 to \$4.10, but ordinary shipping sheep sold at \$3 to \$3.50; for fair to good common, \$2.05 to \$2.90; Western lambs, \$3.75 to \$4.75; Canada lambs in moderate supply, only 14 loads being here, selling at \$5 to \$5.25, and business being restricted.

PRODUCE.

The week has been quiet nearly all over; for although a good demand for barley has been maintained in it, the enquiry has been less active than in preceding weeks and here has been scarcely anything else wanted, while the tendency of prices for other goods has been downwards in sympathy with outside markets. Shipments would seem to have been large through the week and the continuance of navigation may yet keep them up for some time; but it can be only for a short time. Stocks in store stood on Monday morning as follows: Flour, 375 barrels; fall wheat, 114,694 bu.; spring wheat, 58,652 bu.; mixed wheat, 2,293 bu.; oats, nil; barley, 92,499 bu.; peas, 10,903 bu.; rye, nil. Wheat in transit for England shows an increase on the week, standing on the 26th ult. at 1,775,000 quarters, against 1,601,000 on the 19th ult. In the States the visible supply of wheat stood at 55,679,000 bushels on the 28th ult., against 54,535,000 in the preceding week.

PRICES AT LIVERPOOL ON DATES INDICATED.

	Nov. 24.	Dec. 1.
Flour	08. 0d.	08. 0d.
R. Wheat	78. 3d.	78. 3d.
R. Winter	78. 3d.	78. 3d.
No. 1 Cal.	78. 4d.	78. 4d.
No. 2 Cal.	78. 1d.	78. 1d.
Corn	48. 7d.	48. 6½d.
Barley	08. 0d.	08. 0d.
Oats	08. 0d.	08. 0d.
Peas	58. 7d.	58. 7d.
Pork	508. 0d.	508. 0d.
Lard	328. 9d.	328. 3d.
Bacon	308. 0d.	308. 0d.
Tallow	268. 6d.	268. 6d.
Cheese	458. 0d.	458. 0d.

FLOUR.—There seems to have been nothing whatever doing and prices purely nominal all week, closing with sellers of superior extra at \$3.80 and of extra at \$3.70 but no demand.

BRAN.—Quiet; but at close would probably have brought \$10.30.

OATMEAL.—Choice has sold at \$4 on track, but coarser brands could have been bought 15 to 25c. lower; small lots \$4@4.25.

WHEAT.—Has been neglected all through the week and had sales been proposed buyers could have been found only at a decline in prices. There was nothing reported until the close when No. 2 fall sold at 84c. f.o.c., and Manitoba spring, sound, at 97c., but our own spring was not worth over 85c@86c. for No. 2. On street fall closed an 82c@84c.; spring at 75c@84c. and goose at 72c@75c.

OATS.—Firm with all offered wanted; cars on track sold last week at 33c. for mixed and 34c. for white; on Monday at 33c. and 35½c. for mixed and on Tuesday at 33c. On street prices have usually stood from 35c@37c.

BARLEY.—The demand continued strong at firm prices during the latter part of last week, when No. 1 sold at 90c.; No. 2 at 78c.; extra No. 3 at 70 and 72c.; No. 3 choice at 66 and 67c. and No. 3 at 59 and 60c., all f.o.c. On Monday the feeling was quieter; No. 3 sold at 60c. but nothing reported in other grades; and at the close extra No. 3 sold at 71c. and No. 3 at 60c. but none of the better grades offered at the same figure. Street prices ranged from 60c@91c.

PEAS.—Lots lying outside seem to have been selling at prices equal to 60c@61c. here, which would have been repeated. On streets a few loads sold at 61c.

RYE.—Inactive; but seems worth 60c. on street.

HAY.—Pressed, if guaranteed choice, would have brought \$12.50@13.50. Market receipts have increased and have been selling rather easier at \$10.50@13 for cow hay and \$14@16 for timothy, the later price being exceptional at the close.

STRAW.—Supplies increased and prices rather easier at \$12@13 for sheaf and \$9@10 for loose.

POTATOES.—Cars offered sparingly and in rather better demand at 50@52c. for really sound. On street prices steady at 60@70c. per bag.

APPLES.—Nothing doing in car lots; and street receipts firm as before at \$1.25@2.75 per barrel for good to choice.

POULTRY.—Box-lots very plentiful and very weak at 9c@10c. per lb. for turkeys; 6@6½c. for geese; ducks 50@60c., and fowl 25@40c. per pair.

TORONTO MARKET.

Flour, p. brl., f.o.c., Sup. extra	\$ 3 75	to \$ 3 80
" " Extra	3 65	to 3 70
" " Strong Bakers'	0 00	to 0 00
" " S. W. Extra	0 00	to 0 00
" " Superfine	0 00	to 0 00
Oatmeal	3 75	to 3 85
Cornmeal	0 00	to 0 00
Bran, per ton	10 50	to 0 00
Fall wheat, No. 1	0 86	to 0 00
" No. 2	0 84	to 0 00
" No. 3	0 00	to 0 00
Spring wheat, No. 1	0 00	to 0 00
" No. 2	0 85	to 0 86
" No. 3	0 00	to 0 00
Barley, No. 1	0 90	to 0 00
" No. 2	0 79	to 0 80
" No. 3 Extra	0 70	to 0 71
" No. 3	0 59	to 0 60
Oats	0 33	to 0 33½
Peas	0 61	to 0 00
Rye	0 60	to 0 00
Corn	0 00	to 0 00
Timothy seed, per bush	0 00	to 0 00
Clover	0 00	to 0 00
Flax, screened, 100 lbs.	0 00	to 0 00

PROVISIONS.

BUTTER.—Has been very quiet. Really choice, that is, selected, has continued in active demand and firm at 15@16c.; but medium and inferior neglected and allowed to go on accumulating, though a few small sales have been made to bakers at 9@10c. Rolls in increasing supply and easier at 13@15c. the latter for choice and well-packed. Street supplies increasing and easier at 19@21c. for pound rolls and 14@16c. for tubs and crocks.

EGGS.—More abundant and easier at 19@21c. for fresh in round lots and about 16c. for packed, the latter very slow of sale. On street fresh easy at 19@21c.

CHEESE.—Steady, at former prices, or 9@9½c. for fine and down to 7c. for inferior in small lots.

PORK.—Quiet at the close but held steadily at \$13.

BACON.—Sales few and small as there has been very little to sell. The little new in the market has been going at 7c. for long clear, at 9½@9½c. for rolls, and 11@11½c. for bellies with Cumberland almost nominal, as none is offered.

HAMS.—Steady and sold readily at 11¼@11½c. for new smoked in small lots with old canvassed obtainable at 7@10c. according to quality.

LARD.—Has been selling well at 9@9½c. for tinnets and pails and 8½c. for tierces of new in small lots.

HOGS.—Rail-lots have sold usually about \$5 with a fairly good demand for them; and street lots at \$5@5.50.

SALT.—Quiet and unchanged, with Liverpool coarse held in small lots at 75c.

DRIED APPLES.—Have continued in good demand; trade lots have changed hands at 4@4½c. and evaporated at 7½@8c.; dealers selling the latter at 8½@9c. and common at 4½c.

HORS.—No demand heard and prices almost nominal.

WHITE BEANS.—Scarce and wanted at \$1.10@1.20 for trade lots of new, and dealers selling small lots at \$1.30@1.35 for choice.

TORONTO MARKETS.

Butter, choice dairy	\$ 0 14	to \$ 0 16
" good shipping lots	0 10	to 0 12
" inferior, etc.	0 03½	to 0 04
Cheese, in small lots	0 07	to 0 09½
Pork, mess, per brl.	13 00	to 0 00
Bacon, long clear	0 07	to 0 00
" Cumberland cut	0 07	to 0 00
" smoked	0 00	to 0 00
Hams, smoked	0 11½	to 0 11½
" cured and canvassed	0 07	to 0 10
" in pickle	0 00	to 0 00
Lard, in tinnets and pails	0 09	to 0 09½
" in tierces	0 08½	to 0 00
Eggs	0 16	to 0 20
Dressed hogs	5 00	to 5 12
Hops	0 07	to 0 09
Dried apples	0 04	to 0 04½
White beans	1 10	to 1 35
Liverpool coarse salt	0 70	to 0 75
" dairy, per bag 50 lbs	0 00	to 0 00
" fine	1 30	to 0 00
Goiterich, per barrel	0 85	to 0 90
" per car lot	0 80	to 0 00

HIDES, SKINS AND WOOL.

HIDES.—Green readily taken at former prices; cured in active demand; all offered wanted and prices rather stronger with sales at 9½c.

CALFSKINS.—Scarcely anything doing; prices nominally unchanged.

SHEEPSKINS.—Prices have been advanced ten cents during the week; the best green now stand at 95c. and country lots from 70@85c., the latter for green only.

WOOL.—Fleece in demand at 21c. for selected and 17@19c. for mixed lots, but scarcely any offered. Super has been selling fairly well at 22c. and some extra has changed hands at 26@27c. The demand from the factories has continued quiet but a little super has gone off to them at 22@23c.

TALLOW.—Dull and unchanged at 3c. for rough and 6c. for rendered, with the latter offered freely in trade lots at 6½c. but not taken.

Hides and Skins—

No. 1 steers	\$ 0 09½	to \$ 0 09½
Cows, No. 2 and No. 1	0 07½	to 0 08½
Cured and inspected	0 09½	to 0 09½
Calfskins, green	0 11	to 0 13
" cured	0 13	to 0 15
Sheepskins	0 60	to 0 95
Lambskins	0 00	to 0 00
Pelts	0 00	to 0 00
Tallow, rough	0 03	to 0 00
" rendered	0 06	to 0 00

Wool—

Fleece, comb'g ord.	0 19	to 0 21
" Southdown	0 22	to 0 23
Pulled combing	0 17	to 0 18
" super	0 22	to 0 23
Extra	0 26	to 0 00

THE HORSE MARKET.

TORONTO.

The market has ruled more active than for weeks past. There has been a fair demand for drivers, but the principal call is for workers. There are no foreign buyers in the market. The special sale at Grand's, Tuesday, was crowded with buyers from all parts of Canada; 89 horses were offered; 78 sold realizing \$9,126, an average of \$117 each. Prices ruled high considering the lateness of the season. Messrs. Gilles Bros., lumber merchants, Carleton Place, bought sixteen for the woods, 1,200 to 1,400 lbs., averaging \$145 each.

Mr. W. L. Grand reports the following private sales: 3 drivers, 7 years, 15.2 hands, 1,050 lbs., \$360; 2 heavy draughts, 1,400 lbs., \$330; saddle horse, 6 years, 16 hands, \$150; coup horse, 8 years, 16.1 hands, \$165; saddle horse, 4 years, 16 hands, \$200; pair Indian ponies, 14 hands, \$140; brood mare, aged, 1,300 lbs., \$100; driver, 5 years, 1,000 lbs., \$135; thoroughbred stallion, 4 years, \$1,100 lbs., \$290; 3 aged workers, \$300.

MONTREAL.

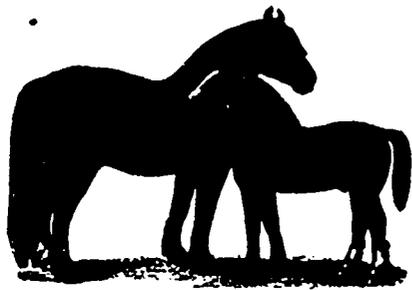
The horse market has been more active during the past week, there having been a good enquiry from American buyers for first-class carriage and saddle horses, which are scarce. The following sales were made at Mr. James Maguire's stables, on College Street: 1 gray horse 5 years old, at \$90; 1 bay do., 8 years old, at \$110; 1 bay mare 8 years old at \$150; 1 bay horse, 8 years old, at \$125; 1 pair bay mares, 5 years old, at \$600; one bay horse, 5 years, at \$175; and one chestnut horse, 4 years, at \$150.

BOSTON.

There has been a slight improvement for a good grade of business horses weighing 1,200 lbs. or more, some selling by auction as high as \$300. Stock that can be warranted all right is taken readily. Quite a good supply at market, that arrived during the week, at prices ranging from \$125 to \$400 each, as to quality. H. Boone, of Michigan, has in market a mixed lot of 19 head, breeders, workers, and drivers. Sales of one pair of heavy draught horses averaging 1,500 lbs., at \$425; a pair of black coachers weighing 1,175 lbs., at \$550, the pair. Street car horses at \$145 to \$150. J. W. Hayes, of Michigan, had 18 head of breeders and drivers, the former at \$150, weight 1,000 to 1,100 lbs. each. Drivers of single hitch at \$150 to \$225, weight 950 to 1,100 lbs. Some were of extra quality. This gentleman has shipped to this market this season 180 horses—the best feature being that he has never had a sick horse at market. W. C. Kellogg, of Michigan, had 19 head on sale: a fine matched pair of chestnut horses for family use at \$375, weighing 2,300 lbs.; nice single drivers range from \$125 to \$175; two horses that can road along at a 2:45 or 2:50 gait, weighing 1,050 to 1,150 lbs., at \$300 to \$400.

CHICAGO.

The horse market is now under the shadow of the winter, which is just at hand; there is hardly trade enough to be called a market and we are not likely to see a revival until the latter part of February, about which time we may expect to see the spring trade open.



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BREEDERS AND DEALERS IN
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STALLIONS & MARES,

OWNERS OF

Manfred, Cheviot, and Doubtnot,
All First Prize Winners.

Have always on hand, Stallions of the now most fashionable breeds for sale. Correspondence solicited. Address,

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"CHANCELLOR,"
THE CELEBRATED STALLION,
FOR SALE CHEAP.

Dark Brown Horse Foaled in 1878. Sired by "Terror," Dam, Nellie Lyall, by Luther. Chancellor stands fully sixteen hands and one inch—a very handsome horse of great substance, weighed, at end of a very successful season, 1,205 pounds. As a race-horse, was very fast at all distances. His colts, from mares of all descriptions, are very promising. For particulars apply to

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A good selection of either now for sale.

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J. & W. B. WATT,

BREEDERS OF

Shorthorn Cattle, Clydesdale Horses,
Southdown Sheep, and
Berkshire Pigs.

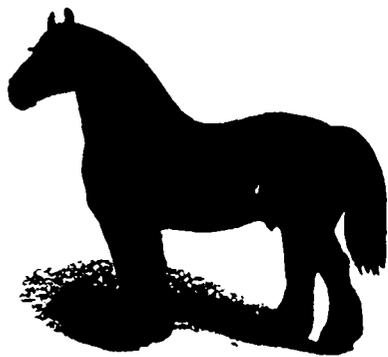
"Barnum Hero," 278-34613, and imported "Lord Lansdowne" at head of herd.

Herd numbers 60 head of choice animals.

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English Shire Horses,

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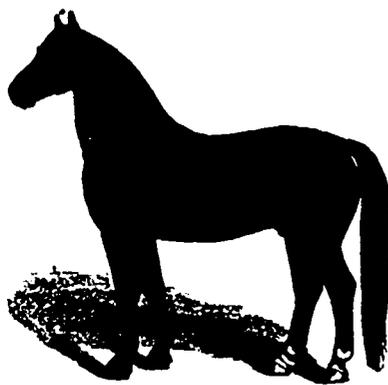
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MIRFIELD,

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Heavy Bred Entire Colts,	£10 to £20
1 year old	15 to 25
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Stud book certificate with each animal.

Clydesdales, Thoro. Breds, Cleveland Bay
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Would exchange entire horses:

MAGNUM BONUM, 3 years old, for 1000 bus. maize.

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Free on Steamer in both cases.

Agents could be appointed on both sides.

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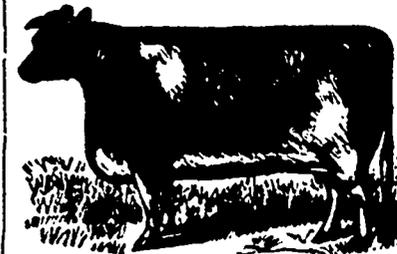
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Herd headed by the Imported Bulls Corporal, 4176 and Earl Downton, 12797.

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ACTOR, \$250.

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First Prize Toronto, 1885, eleven animals in the ring.

BULL CALF, \$40; 9 months old.

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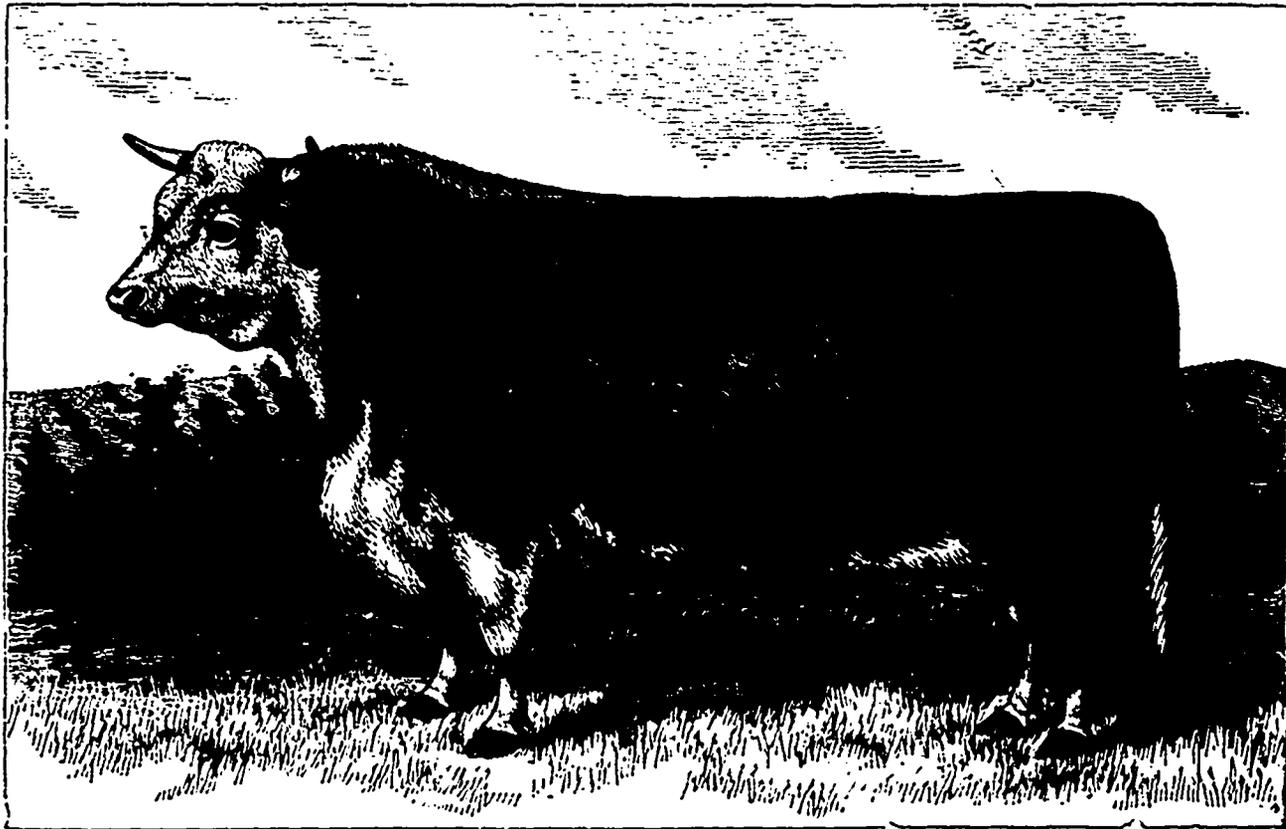
SENATOR, 1783, at head of herd. Has always a few choice animals of both sexes for sale.

Address

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PRIZE HEREFORDS.



PRIZE HEREFORDS.

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Blue Ribbon do.	18.00	"	35.00
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Harness at all prices. Send for price list.

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Scaled tenders addressed to the undersigned, and endorsed "Tenders for Chantry Island Works," will be received until Thursday, the 17th day of December next, inclusively, for the construction of works at Chantry Island, Bruce County, Ont., according to a plan and specification to be seen on application to Mr. James T. Conway, Town Clerk, from whom forms of tender can be obtained.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, the blanks properly filled in, and signed with their actual signatures.

Each tender must be accompanied by an accepted bank cheque, made payable to the order of the Honorable the Minister of Public Works, equal to five per cent. of the amount of the tender, which will be forfeited if the party declines to enter into a contract when called upon to do so, or if he fails to complete the work contracted for. If the tender be not accepted the cheque will be returned.

The Department will not be bound to accept the lowest or any tender.

By order,

A. GOBEL,
Secretary.

Department of Public Works,
Ottawa, 10th November, 1885.

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We have a few Choice HIGH GRADE JERSEY COWS, Fresh in Milk, of good individual merits, which we can offer for sale to those anxious to improve their dairy stock. PRICE \$100 EACH. The Jersey is the great Cream and Butter Cow. Apply to H. H. FULLER, Manager of Oaklands Jersey Dairy, 131, Yonge St., Toronto.



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From the herds of Stewart and Swanswick, several R.A.S.E. Prize winners in stock.

A good yearling Short Horn Bull and a few Heifers of Bates Blood for sale. Also, a superior yearling Jersey Bull.

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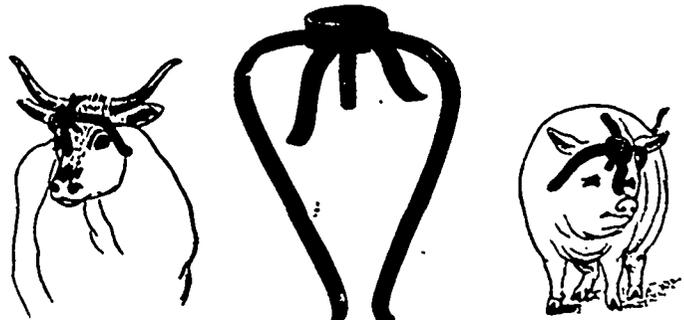
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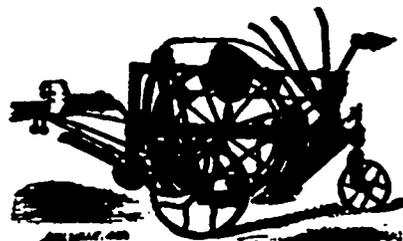
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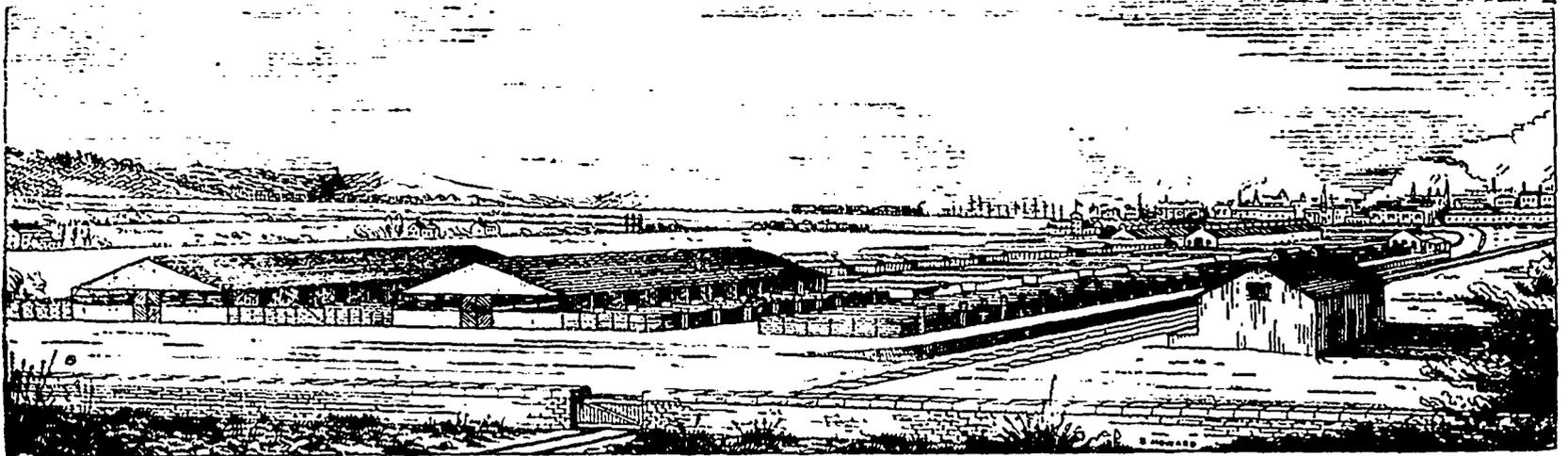
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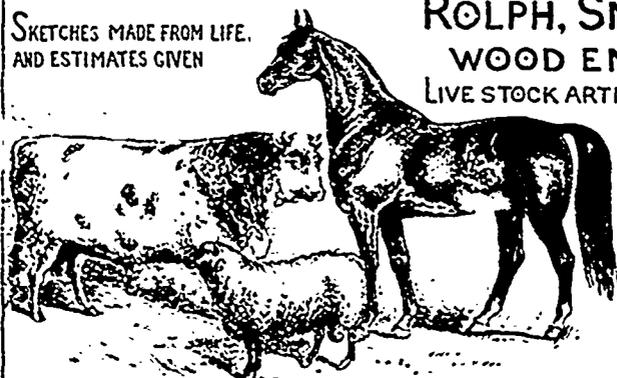
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- 2. The Operation of the Agricultural Holdings (Scotland), October, 1883
- 3. Reminiscences of Clydesdale Horse-Breeding, by D. Riddell, Blackhall, Paisley
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- 5. The Law of Horses, by a member of the Faculty of Procurators, Glasgow.
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