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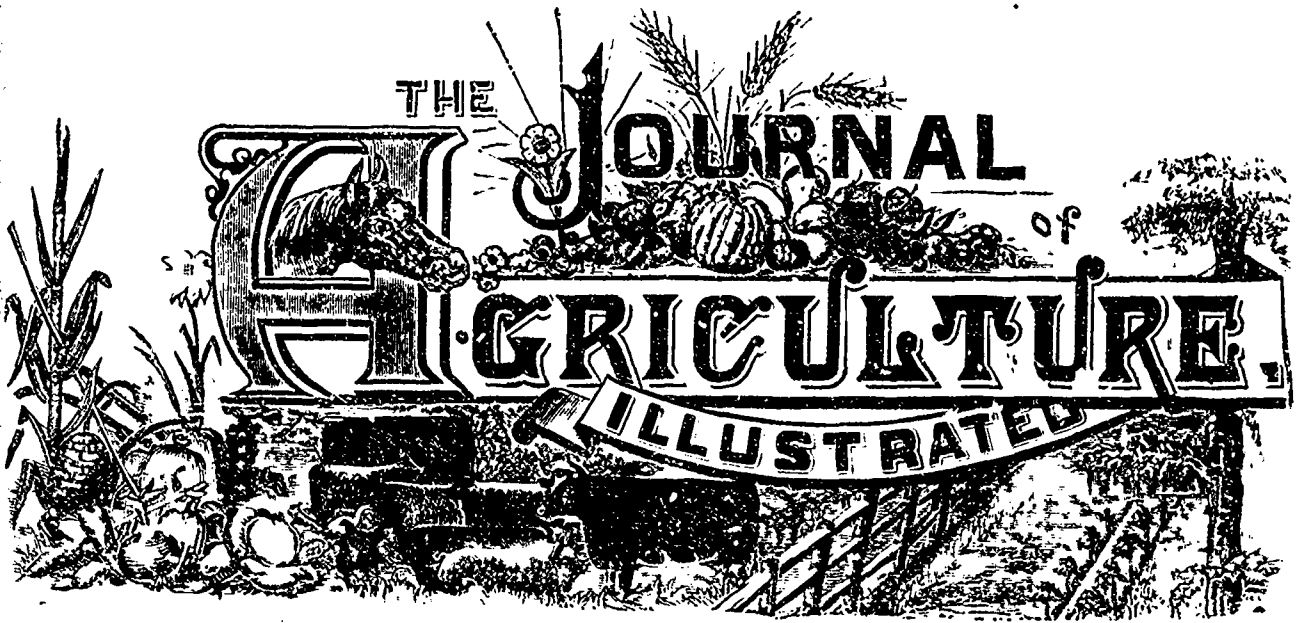
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Published for the Department of Agriculture for the Province of Quebec, (official part) by  
EUSEBE SENECAL & FILS, 20, St. Vincent St. Montreal.

Vol. IX. No. 11.

MONTREAL, NOVEMBER 1887.

\$1.00 per annum, in advance.

**NOTICE.**—The subscription to the *Illustrated Journal of Agriculture*, for members of Agricultural and Horticultural Societies, as well as of Farmers Clubs, in the province of Quebec, is 30c annually, provided such subscription be forwarded through the secretaries of such societies.—**EDITORIAL MATTER.** All editorial matter should be addressed to A. R. Jenner Fust, Box 109, Lachine, Que.—or to the Director of Agriculture, Quebec.

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### List of Prizes awarded at the Provincial Exhibition, Quebec, Sept. 5th to 9th, 1887.

#### HORSES.

##### ENGLISH THOROUGHBREDS.

1 *Stallions, 4 years old and upwards*—1st, Louis Beauchamp, Montreal.

##### ROADSTERS.

1st prize, F. A. Camirand, Sherbrooke; 2nd, C. Cleveland, Danville; 3rd, H. D. Moore, Moore's Station.

2. *3 year-old Stallions*.—1st, H. Swift, Quebec; 2nd, G. Broomer, Quebec; 3rd, O. Cleveland, Dauville.

3. *2 year-old Stallions*.—1st, F. Delisle, Quebec; 2nd, F. Camirand, Sherbrooke; 3rd, E. Laflèche, Ste-Anne de la Pérade.

4. *Yearling Stallions*.—1st, F. Camirand, Sherbrooke; 2nd, N. Camirand, Sherbrooke; 3rd, A. Lafrance, Stoke Centre.

5. *3 year-old fillies*.—1st, F. Camirand, Sherbrooke; 2nd, Louis Durand, St. Ambroise.

6. *2 year-old fillies*.—1st, F. Camirand, Sherbrooke; 2nd, G. W. Fuller, Capleton; 3rd, H. Moss, Quebec.

7. *Yearling fillies*.—1st, H. Swift, Quebec; 2nd, G. Broomer, Quebec.

8. *Brood-mares, not less than 15 hands and upwards*.—1st, G. Roy, Quebec; 2nd, J. C. Chapais, St. Denis; 3rd, H. Ross, St. Ambroise.

9. *Pair of horses in harness—15 hands and upwards*.—1st, L. Whitman, Knowlton.

#### GENERAL PURPOSE HORSES.

1. *Stallions, 4 year-old and upwards*.—1st, G. Roy, Quebec; 2nd, Dr. Rinfret, M. P., Ste. Croix; 3rd, W. Eglinton, Stoneham.

2. *3 year-old Stallions*.—1st, A. Somerville, Huntingdon; 2nd, L. Toupin, L'Acadie; 3rd, E. Sansfaçon, Charlesbourg.

3. *2 year-old Stallions*.—1st, D. Beaucage, Lachevrotière; 2nd, S. Demers, La Chaudière; 3rd, T. Gariépy, Lachevrotière.

4. *Yearling Stallions*.—1st, J. D. Guay, Chicoutimi.

5. *3 year-old fillies*.—1st, G. Stuart, Ste-Foye; 2nd, F. Camirand, Sherbrooke.

6. *2 year-old fillies*.—1st, J. DesGagnés, Eboulements.

7. *Yearling fillies*.—1st, G. Kidd, sr., Petite Cote, Montreal; 2nd, H. Moss, Quebec.

8. *Brood mares—with foal*.—1st, G. Kay, Quebec; 2nd, H. Brown, St. Joachim; 3rd, O. Carlton, Stoneham, and G. Kidd—equal.

9. *Pair of carriage-horses, harnessed, 15 hands and upwards*.—1st, G. Stuart, Quebec.

10. *Single harness-horse, 15 hands and upwards*.—1st, Chs. Webb, Danville; 2nd, O. Cleveland, Danville; 3rd, F. Ritchie, Ste-Anne de la Pérade.

11. *Extra prizes*.—1st, F. Camirand, Sherbrooke; 2nd, S. Poupart, St. Isidore.

#### HEAVY DRAUGHT HORSES.

1. *Stallions, 4 years old and upwards—over 1400 lbs.*—1st, J. Laurin, Longue-Pointe; 2nd, H. Normandin, St. Philippe; 3rd, Boa Bros, St. Laurent.

2. *3 year-old Stallions, 1200 lbs. and upwards*.—1st, Boa Bros, St. Laurent; 2nd, D. Baxter, North Georgetown; 3rd, Achille Tremblay, Pointe aux Trembles.

3. *2 year-old Stallions*.—1st, Boa, Bros, Montreal.

4. *Yearling Stallions*.—1st, Boa, Bros.

5. *2 year-old fillies*.—1st, A. Lefebvre, St. Rémi.

6. *Brood-mares*—1400 lbs., with foals.—1st, G. Kydd, son, Petite Côte; 2nd, Boa, Bros.  
7. *Pair of heavy draught horses, in harness*—over 1400 lbs.—1st, G. Kydd, Montreal.

## LIGHT DRAUGHT HORSES.

1. *Stallions, 4 years old, less than 1400 lbs*—1st, A. Denis, St Norbert; 2nd, E. Langlois, Montreal; 3rd, P. Brosseau, Laprairie.
2. *3 year-old fillies*.—1st, S. Parent, Beauport.
3. *2 year-old fillies*.—1st, W. Eglinton, Stoneham; 2nd, Louis Jobin, St. Augustin.
4. *Yearling fillies*.—1st, G. Kydd, Petite Côte.
5. *Brood-mares, under 1400 lbs., with foals*.—1st, A. Boa, Montreal and G. Kydd, Montreal, equal; 2nd, A. Couture, St. Augustin, 3rd, Boa, Bros.
6. *Pair of horses harnessed to carriage—less than 1400 lbs.*—1st, Boa, Bros; 2nd, W. Tozer, Quebec; 3rd, P. Légaré; St. Sauveur.

## HEAVY DRAUGHT HORSES—PURE-BRED OLYDES AND SHIRES.

1. *Stallions, 4 years old and upwards*.—1st, P. Beaudin, j., St. Urban; 2nd, J. Henderson, Petite Côte; 3rd, R. Ness, sr., Howick.
2. *3 year-old Stallions*.—1st, A. Lefebvre, St. Romi; 2nd, E. Brosseau, Laprairie; 3rd, R. Ness, sr., Howick.
3. *2 Year-old Stallions*.—1st, R. Ness, sr.; 2nd, R. Ness, jr.
4. *Yearling Stallions*.—1st, R. Ness, jr.
5. *3 year-old fillies*.—1st, H. Patton Montreal.
6. *2 year-old fillies*.—1st, R. Ness, jr.
7. *Yearling fillies*.—1st, R. Ness, jr.
8. *Brood-mares, with foals*.—1st, G. Kydd; 2nd, Thos. Irving, Montreal; 3rd, G. Kydd.

## PERCHERONS.

1. *Stallion, 4 years old and upwards*.—1st, B. Vannier, Ste-Martine; 2nd, Agricultural Society No. 2, of Lothinière.

## CANADIANS.

1. *Stallion, 4 years old and upwards*.—1st, E. Cécire, Château-guay; 2nd, A. Bouchard, N. D. de Laterrière; 3rd, P. Côté, Baie St. Paul.
2. *3 year-old fillies*.—1st, A. Bouchard.
3. *Brood-mares with foals*.—A. Larivière, St. Ours; 2nd, J. Morency, Beaumont; 3rd, M. Bouchard, Baie St. Paul.
4. *Stallions and their progeny*.—1st, G. Kydd, jr., Petite Côte; 2nd, G. Roy, Quebec; 3rd, F. Goumarind, Shorbrooke.
5. *Special prize for the encouragement of breeders of horses*.—1st, G. Kydd, jr.; 2nd, G. Roy, Quebec; 3rd, Boa, Bros.

## HUNTERS, HACKNEYS—COBS AND GALLOWAYS—PONIES.

1. *Hackneys*.—1st, S. Fisher, Quebec; 2nd, W. Pratton, Maple Grove; 3rd, L. Targeon, Beaumont.
2. *Hunters*.—1st, B. Coughlin, Montreal.
3. *Best jumpers*.—1st, B. Coughlin.
4. *Ponies in harness—12 hands and under*.—1st and 2nd, C. Richardson, Quebec; 3rd, P. Hall, Quebec.
5. *Cobs and Galloways*.—1st, Hall, Quebec; 2nd, J. E. Fortier, Quebec.
6. *Best Boy-rider*.—1st, W. A. Tozer, Quebec

## CATTLE.

## SHORTHORNS OR DURHAMS.

1. *Bulls, 4 years old and upwards*.—1st, P. Young, Rockfield; 2nd, J. Michael, St. Sylvestre, (West); 3rd, W. Davidson, Libbytown.
2. *3 year-old Bulls*.—1st, J. S. Williams, Knowlton.
3. *2 year-old Bulls*.—1st, Lake and Son, Eaton; 2nd, J. Giffard, Danville.
4. *Yearling Bulls*.—1st, J. Williams; 2nd, W. Davidson.
5. *Bulls 6 months and upwards*—1st, J. Learned, Cookshire.
6. *Bulls under 6 months*—1st, J. Learne; 2nd, P. Young.
7. *4 year-old Cows*.—1st, J. Mairs, Melbourne; 2nd, J. Learned; 3rd, J. Williams.
8. *3 year-old Heifers*.—1st, J. Williams; 2nd, J. Learned.
9. *2 year-old Heifers*.—1st, J. Williams; 2nd, P. Young.
10. *Yearling Heifers*.—1st, J. Williams; 2nd, W. Evans, Montreal; P. Young.
11. *Heifer-calves*.—1st, P. Young
12. *Herd-prize*.—1st, J. Williams; 2nd, P. Young.

## HEREFORDS.

1. *Bulls, 4 years old and upwards*.—1st, E. Judah, Hillburst.
2. *3 year-old Bulls*.—1st, J. Vernon, Waterville; 2nd, R. Pope, Cookshire,

3. *Yearling Bulls*.—1st, J. Vernon; 2nd, E. Judah; 3rd, R. Pope.
4. *Bulls over 6 months*.—1st, E. Judah.
5. *Bulls under 6 months*.—1st, J. Vernon; 2nd, E. Judah; 3rd, R. Pope.
6. *Cows, 4 years old and upwards*.—1st, R. Pope; 2nd, J. Vernon; 3rd, E. Judah.
7. *3 year-old Heifers*.—1st, J. Vernon; 2nd, R. Pope; E. Judah.
8. *2 year-old Heifers*.—1st, J. Vernon; 2nd, R. Pope.
9. *Yearling Heifers*.—1st, J. Vernon; 2nd, E. Judah; R. Pope.
10. *Heifers over 6 months*.—1st, J. Vernon; 2nd, J. Paquette, St. Charles; 3rd, E. Judah.
11. *Herd-prize*.—1st, J. Vernon; 2nd, R. Pope; 3rd, E. Judah.

## AYRSHIRES.

1. *Bull, 4 years old and upwards*.—1st, J. Drummond, Montreal; 2nd, J. Mackay, Papineauville; 3rd, H. Moss, Quebec
2. *3 year-old Bulls*.—1st, T. Irving, Montreal; 2nd, T. Brown, Petite Côte; 3rd, R. Montreuil, Ste-Anne de la Pérade.
3. *2 year-old Bulls*.—1st, T. Irving; 2nd, E. Ouimet, Ste. Rose, 3rd, J. Drummond.
4. *Yearling Bulls*.—1st, J. Drummond; 2nd, T. Irving; 3rd, Ste. Anne de la P. Agricultural School
5. *Bulls over 6 months*.—1st, T. Irving; 2nd, H. Lortie, Quebec; 3rd, J. Le Vasseur, St. David.
6. *Bulls under 6 months*.—1st, T. Irving; 2nd, H. Moss.
7. *Cows, 4 years old and upwards*.—1st, J. Drummond, 2nd, T. Brown; T. Irving.
8. *3 year-old Heifers*.—1st, T. Brown; 2nd, T. Irving; 3rd, J. Drummond.
9. *2 year-old Heifers*.—1st, J. Drummond; 2nd, T. Irving; 3rd, T. Brown.
10. *Yearling Heifers*.—1st, T. Irving; 2nd, J. Drummond; 3rd, T. Brown.
11. *Heifers, 6 months and upwards*.—1st, T. Irving; 2nd, T. Brown; 3rd, J. Drummond.
12. *Heifers under 6 months*.—1st, T. Irving, 2nd, H. Moss.
13. *Herd-prize*.—1st, James Drummond; 2nd, T. Irving; 3rd, T. Brown.

## POLLED ANGUS.

1. *Bull, 4 years old and upwards*.—1st, R. Pope.
2. *2 year-old Bulls*.—1st, J. Learned.
3. *Bulls, 6 months and upwards*.—1st, R. Pope.
4. *Cows, 4 years old and upwards*.—1st, R. Pope.
5. *3 year-old Heifers*.—“ “
6. *2 year-old Heifers*.—“ “
7. *Yearling Heifers*.—“ “
8. *Heifers, 6 months and upwards*.—“ “
9. *Heifers under 6 months*.—“ “
10. *Herd-prize*.—“ “

## JERSEYS.

1. *Bulls, 4 years old and upwards*.—1st, W. Reburn, Ste. Anne de Bellevue; 2nd, J. L. Tarte, Rivière aux Pins.
2. *3 year-old Bulls*.—1st, W. Reburn.
3. *2 year-old Bulls*.—1st, W. Reburn; 2nd, D. and J. Frazer, Quebec.
4. *Yearling Bulls*.—1st, W. Reburn; 2nd, F. Ritchie, Ste. Anne de la Pérade.
5. *Bulls 6 months and upwards*.—1st, W. Reburn.
6. *Bulls under 6 months*.—1st, W. Reburn; 2nd, S. Lesage Ste Foye.
7. *Cows 4 years old and upwards*.—1st, W. Reburn
8. *3 year-old Heifers*.—“ “
9. *2 year-old Heifers*.—“ “
10. *Yearling Heifers*.—“ “
11. *Heifers over 6 months*.—“ “
12. *Heifers under 6 months*.—“ “
13. *Herd-prize*.—“ “

## CANADIANS.

1. *Bulls, 4 years and upwards*.—1st, E. Gaudet, St. Jacques L'Achigan.
2. *3 year-old Bulls*.—1st, J. Tarte, Rivière aux Pins; 2nd, M. Bouchard, Baie St. Paul.
3. *2 year-old Bulls*.—1st, M. Bourget, Roberval; 2nd, Rev. P. Beaudet, Baie St. Paul; 3rd, F. Lefrançois, Château-Richer.
4. *Yearling Bulls*.—1st, A. Bouchard, 2nd, J. Tarte; 3rd, M. Bouchard.
5. *Cows 4 years old and upwards*.—1st, J. Tarte; 2nd, I. Plamondon, St. Raymond; 3rd, Gaudet and Miresault, St. Jacques L'Achigan.

- 6. 3 year-old Heifers.—1st, J. Tarto; 2nd, M. Boucher.
- 7. 2 year-old Heifers.—1st, J. Tarto; 2nd, F. Lefrançois; 3rd, Gaudet and Mireault.
- 8. Heifers under 6 months.—1st, J. Tarto; 2nd, L. Tarto.
- 9. Herd-prize.—1st, J. Tarto; 2nd, Gaudet and Mireault; 3rd, Rev. P. Beaudet.

HOLSTEINS.

- 1. Bulls, 4 years old and upwards.—1st, F. N. Ritchie, Ste. Anne [de la Péraide.
- 2. 3 year-old Bulls.— “ “
- 3. 2 year-old Bulls.— “ “
- 4. Bulls, 6 months and upwards.— “ “
- 5. Bulls under 6 months.— “ “
- 6. Cows, 4 years old and upwards.— “ “
- 7. Yearling Heifers.— “ “
- 8. Heifers 6 months old and upwards.— “ “
- 9. Heifers under 6 months.— “ “
- 10. Herd-prize.— “ “

DAIRY-COWS, FROM THOROUGHbred PARENTS.

- 1. Cows 4 years old and upwards.—1st, L. Durand, St. Am- broise; 2nd, J. Learned; 3rd, T. Légaré, St. Sauveur.
- 2. 3 year-old Heifers.—1st, J. Waters, Quebec; 2nd, L. Durand; 3rd, F. Ritchie.
- 2. 2 year-old Heifers.—2nd, A. West, Ste Foye; 3rd, H. Moss.
- 4. Yearling Heifers.—1st, P. Lippens, Rimouski; 2nd, F. Ritchie; 3rd, J. Waters.

DAIRY-COWS.

- 1st prize.—W. Reburn; 2nd, T. Brown; 3rd, James Drummond; 4th, E. Marcotte, Portneuf.

OXEN—FAT OR WORKING.

- 1. Working Oxen of any age.—1st, S. Foster, Knowlton; 2nd, E. Judah.
- 2. Working Oxen (calved 1883).—1st, L. Jobin, A. Augustin, and L. Lake & Son, Eaton, equal.
- 3. Fat Oxen.—Best Butcher's beast: 2nd, E. Judah.

SHEEP.

COTSWOLDS.

- 1. Ram, 2 year-old and upwards.—1st, E. Ouimet, St. F. de Sales; 2nd, A. Roch, St. Norbert; 3rd, W. and C. McNish, Lynn.
- 2. Yearling rams.—1st, N. Lachapelle, St. P. l'Ermitte; 2nd, E. Ouimet; 3rd, W. and C. McNish.
- 3. Lamb-rams.—1st, A. Roch; 2nd, A. Denis, St. Norbert; 3rd, E. Ouimet.
- 4. Two 2 year-old ewes.—1st, A. Denis; 2nd, E. Ouimet, 3rd, W. and C. McNish.
- 5. 2 yearling ewes.—1st, E. Ouimet, 2nd, N. Lachapelle; 3rd, W. and C. McNish.
- 6. 2 ewe-lambs.—1st, A. Roch; 2nd, W. and C. McNish.

LEICESTERS.

- 1. Rams, 2 years and upwards.—1st, J. Cowan, Allan's Corner; 2nd, H. Brown, St. Joachim; 3rd, J. Mathieu, St. Joachim.
- 2. Yearling rams.—1st, J. Cowan; 2nd, D. Baxter, North George- town; 3rd, F. Desjardins, Ste. Rose.
- 3. Lamb-rams.—1st, D. Baxter; 2nd, J. Cowan; 3rd, F. Des- jardins.
- 4. Two 2 year-old ewes and upwards.—1st, W. and C. McNish; 2nd, D. Baxter; 3rd, J. Cowan.
- 5. Two yearling ewes.—1st, J. Cowan; 2nd, D. Baxter; 3rd, J. Gadbois, Terrebonne.
- 6. Two ewe-lambs.—1st, J. Cowan; 2nd, D. Baxter; 3rd, R. Tozer.

LINCOLNS.

- 1. Two year-old rams and upwards.—1st, Z. Ouimet, St. F. de Sales; 2nd, F. Desjardins.
- 2. Yearling rams.—1st, E. Ouimet; 2nd, C. Ouimet.
- 3. Lamb-rams.—1st, C. Ouimet.
- 4. Two 2 year old ewes.—1st, E. Ouimet.

OXFORDS AND HAMPSHIRE-DOWNS.

- 1. Rams, 2 years and over.—1st, Jas. Neilson, Lynn, Ont.
- 2. Yearling rams.— “ “ “
- 3. Lamb-rams.— “ “ “
- 4. Two ewes 2 years and over.— “ “ “
- 5. Two yearling ewes.— “ “ “
- 6. Two ewe-lambs.— “ “ “

SHROPSHIRE.

- 1. Rams, 2 years and over.—1st, W. and O. McNish; 2nd, G. W. Fuller, Capleton.
- 2. Yearling rams.—1st, W. and O. McNish; 2nd, G. W. Fuller; 3rd, J. Neilson.
- 3. Ram-Lambs.—1st, W. and O. McNish; 2nd, G. Fuller.
- 4. Two 2 year-old ewes and over.—1st, G. W. Fuller; 2nd, W. and C. McNish; 3rd, A. West, Ste. Foye.
- 5. Two yearling ewes.—1st, W. and C. McNish; 2nd, W. Fuller.
- 6. Two ewe lambs.—1st, G. Fuller; 2nd, W. and C. McNish.

SOUTHDOONS.

- 1. Rams, 2 years and upwards.—1st, W. and C. McNish; 2nd, H. D. Moore, Moore's Station.
- 2. Yearling rams.—1st, W. and C. McNish, 2nd, P. Young, Rock- field; 3rd, J. B. Fortier, Berthier (en bas).
- 3. Lamb-rams.—1st, W. and C. McNish; 2nd, H. Moore.
- 4. Two 2 year-old ewes and upwards.—1st, W. and C. McNish; 2nd, H. More; 3rd, W. Tozer.
- 5. Two yearling ewes.—1st, W. and C. McNish, 2nd, H. Moore.
- 6. Two ewe-lambs.—1st, W. and C. McNish; 2nd, H. Moore.

CROSSES—LONG-WOOLS.

- 1. Two 2 year-old ewes and upwards.—1st, A. Ouimet, Laval; 2nd, F. Desjardins; 3rd, R. Tozer
- 2. Two yearling ewes.—1st, A. Ouimet; 2nd, P. Young.
- 3. Two ewe-lambs.—1st, R. Tozer; 2nd, E. Ouimet, St. F. de Sales.

MIDDLE OR SHORT-WOOLS.

- 1. Two 2 year-old ewes and upwards.—1st, J. Neilson; 2nd, G. Fuller, 3rd, Pierre Lippens, Rimouski.
- 2. Two yearling ewes.—1st, J. Neilson; 2nd, G. Fuller; 3rd, H. Moore.
- 3. Two ewe-lambs.—1st, G. Fuller; 2nd, P. Young; 3rd, H. Moore.

FAT SHEEP.

- 1. Two fat wethers.—1st, J. Cowan, Allan's Corner; 2nd, W. Tozer.
- 2. Two fat ewes.—1st, W. Tozer; 2nd, D. Baxter, North George- town.

SWINE.

BERKSHIRES.

- 1. Boars 2 years and over.—1st, J. J. Williams, Knowlton; 2nd, W. and C. McNish.
- 2. Boars over 1 year and under 2 years.—1st, W. and C. McNish.
- 3. Boars over 6 months.—1st, W. Ouimet, Ste. Rose; 2nd, J. S. Williams.
- 4. Boars under 6 months.—1st, J. L. Lloyd, St. Lin; 2nd, J. S. Williams.
- 5. Sows 2 years and over.—1st, W. and C. McNish.
- 6. Sows over 1 year.—1st, W. and C. McNish; 2nd, J. S. Williams.
- 7. Sows over 6 months.—1st, W. and C. McNish; 2nd, J. L. Lloyd; 3rd, J. S. Williams.
- 8. Sows under 6 months.—1st, N. Lachapelle, St. P. l'Er- mitte; 2nd, W. and C. McNish.
- 9. Breeding-sows, with not fewer than 4 piglings.—1st, E. Ouimet.

SUFFOLKS.

- 1. Boars 2 years old and over.—1st, J. Featherston, Credit, Ont; 2nd, J. Jarvis, Milton, Ont.
- 2. Boars over 1 year and under 2.—1st, J. Featherston; 2nd, J. Jarvis.
- 3. Boars between 6 and 12 months.—1st, J. Featherston; 2nd, J. Jarvis; 3rd, E. Ouimet, St. F. de Sales.
- 4. Boars less than 6 months.—1st, J. Jarvis; 2nd, J. Feather- ston.
- 5. Sows 2 years and over.—1st, J. Jarvis; 2nd, J. Featherston.
- 6. Sows between 1 and 2 years.—1st, J. Featherston.
- 7. Sows between 6 and 12 months.—1st, J. Featherston; 2nd, J. Jarvis.
- 8. Sows under 6 months.—1st, J. Featherston; 2nd, Z. Ouimet, St. F. de Sales.
- 9. Breeding sows with not less than 4 piglings.—1st, P. Légaré, St. Sauveur.

## ESSEX.

1. *Boars 2 years old and over.*—1st, J. Jarvis; 2nd, J. Featherston.
2. *Boars between 1 and 2 years.*—1st, J. Jarvis; 2nd, J. Featherston.
3. *Boars between 6 and 12 months.*—1st, J. Featherston; 2nd, J. Jarvis.
4. *Boars less than 6 months.*—1st, J. Featherston; 2nd, J. Jarvis.
5. *Sows 2 years old and over.*—1st, J. Featherston; 2nd, J. Jarvis.
6. *Sows between 1 and 2 years.*—1st, J. Jarvis.
7. *Sows between 6 and 12 months.*—1st, J. Featherston; 2nd, J. Jarvis.
8. *Sows less than 6 months.*—1st, J. Featherston; 2nd, J. Jarvis.

## POLAND-CHINAS.

1. *Boars 2 years old and over.*—1st, J. Jarvis; 2nd, L. Whitman, Knowlton.
2. *Boars between 1 and 2 years.*—1st, L. Whitman.
3. *Boars between 6 and 12 months.*—1st, L. Whitman; 2nd, J. Jarvis.
4. *Boars under 6 months.*—1st, L. Whitman; 2nd, J. Jarvis.
5. *Sows 2 years old and over.*—1st, J. Jarvis; 2nd, L. Whitman.
6. *Sows between 1 and 2 years.*—1st, J. Jarvis; 2nd, L. Whitman.
7. *Sows between 6 and 12 months.*—1st, A. Ouimet, St. F. de Sales; 2nd, L. Whitman; 3rd, J. Jarvis.
8. *Sows under 6 months.*—1st, L. Whitman; 2nd, P. Tibbits, Knowlton.
9. *Breeding sows, with at least 4 piglings.*—L. Whitman.

## YORKSHIRES—CHESTER-WHITES, &amp;c.

1. *Boars 2 years and over.*—1st, J. Featherston.
2. *Boars between 1 and 2 years.*—1st, J. L. Lloyd, St. Lir; 2nd, J. Fortier, Berthier (en bas); 3rd, J. Featherston.
3. *Boars from 6 to 12 months old.*—1st, E. Ouimet, St. F. de Sales; 2nd, J. Featherston.
4. *Boars under 6 months.*—1st, E. Ouimet; 2nd, J. Featherston.
5. *Sows 2 years and over.*—1st, J. Featherston; 2nd, J. Jarvis.
6. *Sows between 1 and 2 years.*—1st, J. Fortier; 2nd, J. Featherston.
7. *Sows between 6 and 12 months.*—1st, J. Featherston.
8. *Sows under 6 months.*—1st, J. Featherston; 2nd, E. Ouimet.
9. *Breeding-sows, with not less than 4 piglings.*—1st, S. L. Lloyd.

## CROSSES—LARGE BREEDS.

1. *Sows 2 years and over.*—1st, James Neilson, Lynn, Ont.
2. *Sows between 1 and 2 years.*—1st, J. Neilson; 2nd, L. Whitman, Knowlton; 3rd, W. Tozer, Quebec.
3. *Sows between 6 and 12 months.*—1st, M. Moody, Terrebonne;
4. *Sows under 6 months.*—1st, J. Neilson; 2nd, P. Légaré, St. Sauveur.

## CROSSES—SMALL BREEDS.

1. *Sows 2 years and over.*—1st, W. and C. McNish; 2nd, P. Légaré.
2. *Sows between 1 and 2 years.*—1st, W. and C. McNish; 2nd, A. Ouimet, Laval.
3. *Sows between 6 and 12 months.*—1st, W. Tozer, Quebec; 2nd, P. Légaré; 3rd, W. and C. McNish.
4. *Sows under 6 months.*—1st, J. Waters, Quebec; 2nd, H. Moss, Ste. Foye; 3rd, J. L. Lloyd.

## POULTRY.

1. *Brahmas, light.*—1st, S. Murray, Quebec; W. Tozer, Quebec.
2. *Cochins, white.*—1st, J. Fortier, Berthier (en bas).
3. *Cochins, buff.*—1st, Mrs. C. B. Wood, Quebec; 2nd, T. C. Gauvreau, Quebec.
4. *Dorkings, silver-gray.*—1st, T. Irving, Montreal.
5. *Dorkings, gray.*—1st, T. Irving; H. Moss, Quebec.
6. *Hamburghs, black.*—1st, J. Dorval, Lévis; 2nd, L. Durand, St. Ambroise, Lorette.
7. *Leghorns, white.*—1st, A. Delisle, Quebec; 2nd, F. Gale, Quebec.
8. *Houdans.*—1st, F. Parent, Berthier; 2nd, L. Fleury, Quebec.
9. *Plymouth-Rocks.*—1st, F. Gale; 2nd, J. Dorval.

10. *Wyandottes.*—1st, A. Paquet, Danville; 2nd, A. West, Ste. Foye, Quebec.
11. *Langshans.*—2nd, F. Parent.
12. *Game, red-breasted black.*—1st, L. Hébert, Quebec; 2nd, A. Vallerand, Quebec.
13. *Game, pile.*—1st, H. Bonneville, Danville; 2nd, A. Paquet.
14. *Game, Malay.*—1st, A. Vallerand; 2nd, U. Bonneville.
15. *Bantams, black game.*—1st, H. Collins, St. Louis road, Quebec; 2nd, E. Carbray, Quebec.
16. *Bantams, red game.*—1st, C. Beckett, Quebec; 2nd, E. Carbray.
17. *Bantams, silver game.*—1st, E. Marcotte, Portneuf.
18. *Turkeys, bronze.*—1st, V. Bonneville, Danville.
19. *Geese, Embden.*—1st, T. Irving; 2nd, H. Brown, St. Joachim.
20. *Geese, Toulouse.*—1st, J. Treggett, Quebec.
21. *Geese, various.*—1st, H. Moore, Moore's Station; 2nd, A. Somerville, Huntingdon.
22. *Ducks, Aylesbury.*—1st, I. Déry, Quebec; 2nd, W. Tozer, Quebec.
23. *Ducks, Rouen.*—1st, H. Collins, St. Louis Road, Quebec.
24. *Ducks, Pekin.*—1st, A. Somerville, Huntingdon; 2nd, H. Moore.
25. *Ducks, Muscovy.*—1st, G. C. Stuart, Quebec; 2nd, E. Carbray, Quebec.
26. *Ducks, various.*—1st, H. Moore; 2nd, R. S. Tozer, Quebec.
27. *Peafowls.*—1st, G. W. Pelletier, Quebec.
28. *Guinea-fowls.*—1st, H. Moore; 2nd, Jas. West, jr., Ste. Foye, Quebec.
29. *Extras.*—1st, J. Waters, Quebec, and Thos. Lebel, Rimouski, equal.

## CHICKENS.

1. *Brahmas, light.*—1st, S. Lesage, Ste. Foye, Quebec.
2. *Cochins, buff.*—1st, Mrs. Ward, Quebec; 2nd, Hon. F. Langelier, Quebec.
3. *Cochins, partridge.*—1st, Mrs. Ward.
4. *Dorkings, silver-gray.*—1st, T. Irving, Montreal.
5. *Dorkings, gray.*—1st, T. Irving.
6. *Spanish, black.*—1st, T. Gale, Quebec.
7. *Leghorns, white.*—1st, R. Beckett, Quebec; 2nd, A. Delisle, Quebec.
8. *Houdans.*—1st, T. Gale.
9. *Polish, white with black topknot.*—1st, T. Gale.
10. *Plymouth-Rocks.*—1st, E. Gowan, Quebec; 2nd, T. Gale.
11. *Langshans.*—1st, F. Parent, Quebec.
12. *Game, red-breasted black.*—1st, U. Bonneville, Danville; 2nd, A. Paquet, Danville.
13. *Game, brown.*—1st, U. Bonneville.
14. *Game, pile.*—1st, U. Bonneville; 2nd, A. Paquet.
15. *Game, Malay.*—1st, U. Bonneville.
16. *Game, various.*—1st, U. Bonneville.
17. *Bantams, brown game.*—1st, C. Beckett, Quebec.
18. *Bantams, red-breasted black game.*—H. Collins, Quebec.
19. *Bantams, duckwing game.*—1st, A. Gowan, Quebec.
20. *Bantams, various.*—Gédéon Laroque, Quebec.
21. *Turkeys, Bronze.*—1st, H. Moore, Moore's Station; 2nd, B. A. R. Simard, L'Assomption.
22. *Geese, Embden.*—1st, T. Irving, Montreal.
23. *Geese, China.*—1st, H. Moore.
24. *Ducks, Aylesbury.*—1st, W. Tozer, Quebec.
25. *Ducks, Pekin.*—1st, T. Gale, Quebec; A. West, Ste. Foye.
26. *Guinea fowls.*—1st, H. Dumas, Lac St. Jean.
27. *Pea fowls.*—1st, U. Bonneville, Danville.

## PIGEONS.

1. *Fantails, white feet, smooth head.*—1st, J. Fortier, Berthier (en bas); 2nd, W. H. D. Elliot, Quebec.
2. *Fantails, black and white.*—1st, J. Almanzor Guay, St. Sauveur.
3. *Turtle-dove.*—2nd, Delle Elodie Dufour.

## CAGE-BIRDS.

1. *Canaries, Belgian.*—1st, Emile Bureau, Quebec.
2. *Canaries, Scotch.*—1st, E. Bureau; 2nd, W. Jolicœur, Quebec.
3. *Canaries, German.*—1st, E. Carbray, Quebec.
4. *Canaries, best collection of.*—1st, E. Bureau; 2nd, P. Brodeur, Danville.
5. *Parrots.*—1st, M. Dickey, Charlesbourg; 2nd, W. Elliot, Quebec.

## PRT ANIMALS.

1. *Guinea-pigs* (2).—2nd, D. M. Spaulding, Quebec.
2. *White rats* (2).—2nd, F. Gowan, Quebec.
3. *Rabbits*, lop-eared bucks (2).—1st, Delle E. Guévin, Ste. Foye.
4. *Rabbits*, lop-eared does (2).—1st, Delle E. Guévin.
5. *Rabbits*, Angora bucks (2).—1st, Delle E. Guévin; 2nd, F. Gowan.
6. *Rabbits*, Angora does (2).—1st, Delle E. Guévin; 2nd, F. Gowan.

## AGRICULTURAL IMPLEMENTS.

1. *Stone-tractor*.—1st, Ed. Corriveau, St. Henri, Lévis.
2. *Ploughs*, collection of.—1st, R. J. Latimer, Montréal; (agent, P. T. Légaré, Québec).
3. *Agricultural implements*, collection of.—1st, R. Latimer; 2nd, Frost & Wood, Smith's Falls, Ont.
4. *Implements for manual use*, collection of.—1st, R. Latimer; 2nd, Frost & Wood.

## AGRICULTURAL PRODUCTS.

## GRAIN, &amp;c.

1. *Red winter-wheat*, 2 bushels.—1st, B. A. Simard, L'Assomption; 2nd, E. Simard, L'Assomption.
2. *White spring-wheat*.—1st, C. Cleveland, Danville; 2nd, J. Gillespie, Petite Rivière.
3. *Red spring-wheat*.—1st, E. Marcotte, Portneuf; 2nd, J. West, Quebec; 3rd, C. Cleveland.
4. *Barley*, 2-rowed.—1st, D. Martin, St. Esprit; 2nd, C. Martin, St. Esprit; 3rd, T. Irving, Montreal.
5. *Barley*, 6-rowed.—1st, A. West, Quebec; 2nd, D. Martin, St. Esprit; T. Irving.
6. *Barley*, black.—1st, L. Whitman; 2nd, R. Tozer, Quebec; 3rd, W. A. Tozer, Quebec.
7. *Rye*.—1st, Ed. Ferland, Lanoraie; 2nd, O. Beaudry, St. Alexis; 3rd, C. Martin.
8. *Oats*, white.—1st, C. Martin; 2nd, J. West, Quebec; 3rd, A. West, Quebec.
9. *Oats*, black.—1st, C. Martin; 2nd, T. Lamarche, St. Esprit; 3rd, D. Martin.
10. *Pease*, field.—1st, J. Gadbois, sen, Terrebonne; 2nd, J. Gadbois, jr., Terrebonne; 3rd, O. Paquet, St. Nicolas.
11. *Pease*, marrowfats.—1st, J. West, jr.; 2nd, D. Martin; 3rd, Archibald West, Quebec.
12. *Buckwheat*.—1st, A. West; 2nd, O. Beaudry; 3rd, Olet Martin, St. Esprit.
13. *Lentils* (*Tares or Vetches*?).—1st, D. Martin; 2nd, O. Martin; 3rd, A. Lamarche, St. Esprit.
14. *Beans*, white.—1st, D. Martin; 2nd, Arch. West.
15. *Beans*, horse.—D. Martin; 2nd, T. Irving, Montreal.
16. *Indian corn*, white.—1st, E. Ferland; 2nd, L. Paquet, Lanoraie; 3rd, F. Desjardins, Ste. Rose.
17. *Indian corn*, yellow.—1st, C. Paquet, St. Nicolas; 2nd, E. Ferland; 3rd, L. Paquet, Lanoraie.

## GRAIN IN SHEAF—PRESSED HAY—ENSILAGE.

1. *Fall-wheat*, 3 sheaves.—1st, J. Plain, Quebec; 2nd, J. B. Forsyth, Quebec; 3rd, E. Simard, L'Assomption.
2. *Fall-rye*, 3 sheaves.—1st, C. Paquet, St. Nicolas; 2nd, E. Ferland; 3rd, E. Simard.
3. *Fall-barley*, 3 sheaves.—1st, P. Légaré, Quebec; 2nd, J. West, jr., Quebec.
4. *Spring-barley*, 3 sheaves.—1st, A. West, Quebec; J. West, jr.
5. *Oats*, white, 3 sheaves.—1st, J. West; 2nd, T. Irving, Montreal; 3rd, Arch. West.
6. *Oats*, black, 3 sheaves.—1st, J. West, jr.; 2nd, Arch. West.
7. *Indian corn*, 3 sheaves.—1st, E. Ferland; 2nd, C. Paquet; 3rd, J. West, jr.
8. *Wheat*, spring, 3 sheaves.—1st, T. Irving; 2nd, E. Ferland; 3rd, Arch. West.
9. *Millet* (?), 3 sheaves.—1st, Arch. West.
10. *Pressed hay*, in bales, for export.—P. Légaré; 2nd, J. O. Malone, Three-Rivers.
12. *Ensilage*.—1st, H. S. Foster, Knowlton.

## SMALL FIELD-SEEDS.

## FLAX, HEMP, HOPS, &amp;c.

1. *Timothy-seed*, 1 bushel.—1st, An. Lamarche, St. Esprit; 2nd, T. Lamarche, St. Esprit; 3rd, Arch. West.
2. *Ryegrass*, perennial, 1 bushel.—1st, Olivier Beaudry, St. Alexis.

3. *Clover-seed*,  $\frac{1}{2}$  bushel.—1st, O. Beaudry; 2nd, Arthur Beaudry, St. Alexis; 3rd, E. Ferland, Lanoraie.
4. *Alsike-clovered seed*,  $\frac{1}{2}$  bushel.—1st, O. Beaudry; 2nd, B. A. Simard, L'Assomption.
5. *White-clover seed*,  $\frac{1}{2}$  bushel.—1st, O. Beaudry; 2nd, B. A. Simard.
6. *Linseed*,  $\frac{1}{2}$  bushel.—1st, D. Martin, St. Esprit; 2nd, Olet Martin, St. Esprit.
7. *Swede-seed*.—1st, A. Lamarche; 2nd, D. Martin; 3rd, O. Beaudry.
8. *Graystone turnip*.—1st, A. Beaudry; 2nd, O. Beaudry.
9. *Belgian carrots*.—1st, D. Martin; 2nd, O. Beaudry; 3rd, Ant. Lamarche.
10. *Mangolds*, long red.—1st, C. Beaudry; 2nd, Ant. Lamarche; 3rd, O. Beaudry.
11. *Mangolds*, yellow globe.—1st, D. Martin; 2nd, O. Beaudry.
12. *Millet*.—1st, Clet Martin; 2nd, Ant. Lamarche; Arthur Beaudry.
13. *Hungarian grass*.—1st, Arthur Beaudry; 2nd, Chs. Grant, Thornbury; 3rd, Ant. Lamarche.
14. *Sorghum-seed*.—1st, O. Beaudry.
15. *Broom-corn*, 28 lbs.—1st, J. Gadbois, sr., Terrebonne; 2nd, Ant. Lamarche; 3rd, J. Gadbois, jr.
16. *Flax*, dressed, 56 lbs.—1st, J. Gadbois; 2nd, O. Beaudry; 3rd, Arthur Beaudry.
17. *Hemp*, dressed, 56 lbs.—1st, Emile Simard, L'Assomption; 2nd, Ed. Simard, L'Assomption; 3rd, Arth. Beaudry.
18. *Aniseed*.—2nd, Louis Audet dit Lapointe, Saint Jean Port-Joli.

## ROOTS, &amp;c.

1. *Potatoes*, red garnet-Chilis.—1st, J. West, jr.; 2nd, J. Waters; 3rd, P. Légaré.
2. *Potatoes*, white garnet-Chilis.—1st, And. Fleming, Quebec.
3. *Potatoes*, early Goderich.—1st, James Gillespie, Petite Rivière; 2nd, R. S. Tozer, Quebec.
4. *Potatoes*, early rose.—1st, J. West, jr.; 2nd, J. Gray, Quebec; G. Lloyd, St. Lin.
5. *Potatoes*, various.—1st, Arch. West; 2nd, J. West, jr.; 3rd, H. Lortie, La Canardière, Quebec.
6. *Potatoes*, collection of.—1st, P. Légaré; 2nd, T. Beckett; 3rd, Pierre Lippens, Rimouski.
7. *Swedens*.—1st, R. S. Tozer; 2nd, W. A. Tozer; 3rd, Jas. Plain, Quebec.
8. *Turnips*, white globe.—1st, R. S. Tozer; 2nd, Arch. West; 3rd, W. A. Tozer.
9. *Turnips*, yellow Aberdeen.—1st, R. S. Tozer; 2nd, W. Meek, Quebec; 3rd, W. A. Tozer.
10. *Mangolds*, long red.—1st, T. Irving; 2nd, P. Lortie, Beauport; 3rd, P. Légaré, Quebec.
11. *Mangolds*, yellow globe.—1st, T. Beckett, Quebec; 2nd, T. Irving.
12. *Mangolds*, long yellow.—T. Irving.
13. *Sugar-beets*.—1st, T. Irving; 2nd, R. Simard, L'Assomption; 3rd, W. A. Tozer.
14. *Kohl-Rabi*.—1st, T. Irving.
15. *Parsnips*.—1st, W. A. Tozer; 2nd, T. Beckett, Quebec; 3rd, T. Brown, Quebec.
16. *Pumpkins*, cattle.—1st, P. Lortie; 2nd, J. Waters, Quebec; 3rd, P. Légaré, Quebec.

## TOBACCOES.

## HARVESTS OF 1886, 1887.

1. *Named assortment of tobaccos in leaf*.—1st, F. A. M. Foucher, St. Jacques de l'achigan; 2nd, H. L. Foucher, St. J. de l'A.; 3rd, Louis Piquette, St. J. de l'A.
2. *Cut-tobacco*, 10 lbs.—1st, F. Foucher; 2nd, H. L. Foucher; 3rd, Ed. Ferland, Lanoraie.
3. *Cigars of Canadian tobacco*.—1st, F. Foucher; 2nd, L. Piquette.
4. *Canadian tobacco*, in leaf.—1st, F. Foucher; 2nd, Ed. Ferland; 3rd, Louis Paquet, Lanoraie.
5. *Tobacco*, Connecticut.—1st, F. Foucher; 2nd, O. Beaudry, St. Alexis; 3rd, Ant. Lamarche, St. Esprit.
6. *Tobacco*, Healer (?).—1st, F. Foucher; 2nd, Ed. Ferland.
7. *Tobacco*, White Burley.—1st, F. Foucher; 2nd, H. Foucher; 3rd, Louis Piquette.
8. *Tobacco*, Havannah.—1st, O. Beaudry; 2nd, F. Foucher.
9. *Tobacco*, Kentucky.—1st, F. Foucher; 2nd, H. Foucher; 3rd, L. Piquette.
10. *Tobacco*, manufactured Canadian.—Diploma, Joseph Poirer, Quebec; commended, Félix Lacroix, Quebec.

## DAIRY PRODUCTS.

## BUTTER AND CHEESE.

1. *Butter for export*, 3 tubs—1st, Rev. J. Labonté, Ste. Thérèse; 2nd, P. Couture. M. P., J. Pepin, St. Joachim and Messrs Gaudet & Mireault, St. Jacques de l'Assomption, equal.
2. *Butter, dairy*; one tub, fit for use.—1st, J. N. R. Ritchie, Ste. Anne de la Pénitence.
3. *Butter, best linoleum* of, 28 lbs.—1st, Alexis Chicoine, St. Marc; 2nd, A. Mireault, St. J. de l'A.; 3rd, J. N. Ritchie; 4th, Jas. West.
4. *Butter, dairy*; for table use.—1st, A. Mireault; 2nd, Widow Basile Olivier, St. Nicolas; 3rd, A. Couture, St. Augustin; 4th, J. S. Williams, Knowlton.
5. *Cheese, factory*—2 of 40 lbs., August make.—1st, John A. McDonald, St. Hyacinthe; 2nd, Brodeur, Taché and Vigneault, St. Marcel; 3rd, Numa Bernatchez, St. Thomas; 4th, C. Meunier, St. Césaire.
6. *Cheese, uncoloured*.—1st, C. Meunier.
7. *Cream-cheese*.—1st, F. X. Côté, Ste. Petrouille.
8. *Cheese, soft*.—1st, F. X. Côté.

## SUGAR, HONEY, &amp;c.

1. *Maple Sugar*, loaves of 10 lbs.—1st, Ambroise Larivière, St. Ours; 2nd, Ed. Feiland, Lanoraie; 3rd, Chas. Meunier.
2. *Maple syrup* (1887), 1 gallon.—1st, C. Paquet, St. Nicolas; 2nd, A. Couture, St. Augustin; 3rd, J. Collin, Montmagny.
3. *Honeycomb*, 10 lbs.—1st, B. Simard, L'Assomption; 2nd, L. Audet dit Lapointe, St. Jean Port Joli; 3rd, F. S. Waters, Quebec.
4. *Honey, extracted*, 1 gallon.—1st, L. Audet dit Lapointe; 2nd, Uldéric Paradis, Cap. Rigaud; 3rd, E. Guerin, Quebec.
5. *Beeswax*, 10 lbs.—1st, U. Paradis; 2nd, E. Guerin; 3rd, H. F. Hunt, Quebec.

## UTENSILS FOR THE DAIRY AND THE SUGARY

1. *Butter tubs*, assortment of.—1st, Dominion Tub Co., Kingston, Ont.
2. *Evaporator, sugar*—Medal and diploma, Cutter, Draper & Co. Sutton, P. Q.
3. *Utensils for the sugary*.—1st, Cutter, Draper, & Co.
4. *Utensils for the dairy*.—1st, Medal and diploma, W. M. Barrie, Morrisbury, Ont.
5. *Butter-hoses*.—1st, W. M. Barrie.
6. *Churns*.—1st, W. Barrie; 2nd, Frank Wilson, Montreal.
7. *Hives, empty*.—1st, Louis Audet dit Lapointe, St. Jean Port Joli.

## HORSES FOR GENERAL PURPOSES.

*Extra Class*.—1st, John St. Denis St. Remi; 2nd, Ambroise Larivière, St. Ours; 3rd, Simon Poupart, St. Isidore, commended, Olivier Blouin, Ste. Anne de Beaupré.

## CANADIAN CATTLE.

*Extra Class*.—Prize, Ferdinand Lefrançois, Château-Richer.  
By order,

GEO. LECLÈRE,  
Sec. gen. of the Exhibition Committee.

(From the French.)

## DE OMNIBUS REBUS.

*Wheat seeding*.—Says the R. N. Y. on the subject of wheat-seeding, or sowing as we Englishmen call it: "Careful tests at the Rural Farm (a sandy loam) showed that one and a-quarter bushel of seed (Clawson) gave the largest yield." The paragraph refers to a letter on the subject from Mr. Waldo Brown, which is printed in another column of that paper. Mr. Brown, talking of course of fall-wheat, recommends what may be a very good preparation of the land for turnips or barley, but, in my opinion, is a very bad one for fall-wheat. "The most important thing in the preparation of a seed-bed is that it be fine and solid." As solid as you please, Mr. Brown, but not fine; and the solidity should be obtained by allowing the land to lie untouched some weeks after ploughing, if the preparation and sowing are to be carried out in the usual way. A *stale furrow* is the grand secret of growing fall-wheat, unless you prefer doing as I have always done in this country, namely, ploughing the seed in.

"I have seen thousands of acres of wheat frozen out and entirely killed because the seed-bed was loose and open;" but no one wishes, I should think to see land that is in that condition sown with fall wheat; still less would any one wish to see wheat put into the ground that had been harrowed, clod crushed, and rolled immediately after the plough, as Mr. Brown recommends. The great desire of the English farmer is to have a fair sized "clod" on his wheat-land, which, mouldering down when he goes to work in the spring, helps the plant to fresh earth, and covers up the roots.

Shallow sowing is recommended by the writer: "Carefully conducted experiments seem to indicate that one inch is the best depth at which to cover the seed." But, on the other hand, carefully conducted experiments have taught me, that unless the wheat is deposited at a sufficient depth to allow the coronal and seminal roots to exert their greatest possible power of resistance to the efforts of the frost to deracinate the wheat, the spring will see but a poor show of plants. It is very odd; but the writers for the United States' agricultural papers never seem to have heard of the two sorts of roots protruded from the seed and stem of the wheat! A description of them, accompanied by a sketch, may be found in the first volume of the Journal, p. 69. I remember sending the "blocks" to the American Agricultural Association, to be used as illustrations to an article of mine on wheat, and they never returned them.

As to the quantity of seed-wheat for fall-sowing, the usual thing with us in England is to begin about the middle of October with 6 pecks an acre, and increase a peck for every fortnight afterwards. The Scotch still sow from three up to four bushels an acre, which is an absurdity that I am surprised they persist in. In this part of the world, when the land is well prepared and in good heart, a bushel an acre is enough, as it *must* be sown, if any success is looked for, by the 10th of September. If ploughed in, another peck or even two should be allowed, as the whole may not come up.

*Improving hill-sides*.—The annexed clipping from the Country Gentleman is clearly not from the pen of a practical farmer. To cover an acre, as Mr. B. W. J. recommends, three inches deep, would require 400 cubic yards of stuff, or about 600 ordinary loads, and as this enormous mass has to be drawn up hill, I leave my readers to judge how many weeks the men and horses kept by an ordinary farmer would take to complete the improvement of one acre of hill-side. And we are advised to "take care that the material is not washed away by the rains"! How is that to be done? I am sure I don't know, but B. W. J. says that "any rubbish (his letter, for instance?) such as stalks, straw, brush, chips, &c., put on such spots serves to stop the washing, and, by shading, slowly enriches the place." Really, if such papers as the Country Gentleman choose to print such nonsense, the least the editor can do, one would think, would be to warn his readers that they must not place any confidence in the writers' opinions.

*EDS. COUNTRY GENTLEMAN*—Farms that have worn-out and barren hillsides in the cultivated fields, seldom yield a high average per acre, because the unproductive spots cut it down. The good farmer will try to have no such places in his fields, and it is certain that most of them can be mended and improved.

On all such spots that are now vacant haul on forest leaves and mould, and cover them over with a thick layer. Let the covering be two or three inches deep, at a least. After this is on, spread over it a large dressing of lime or marl. Muck from swamps or ponds and rich earth from fence rows and



ditch banks would be a useful addition, helping to get a soil sooner.

Let the hillsides lie thus all winter, taking care that the material is not washed away by the rains. It will then have time to decompose, muck, if muck is used, will get thoroughly weathered, and by the combined action of lime and frost will become fertilized, and the barren place will be made productive. Any rubbish, such as stalks, straw, brush, chips, and the like, put upon such spots, serves to stop the washing, and by shading, decomposition, &c., slowly enriches the place. But the first plan is speedier, and in the end cheaper, for brush and the like, in the middle of a field, is apt to be in the way of the plow in passing, and will necessitate turning.

Woods mould is especially serviceable for mending the hillsides. It arrests the soil that is being washed off, and being a good absorber, retains the fertilizing elements of the atmosphere. A thick layer of this, put on a hillside now, though the latter may be a hard clay, will cause it to become mellow and pulverable, and capable, in a few months, of being plowed nearly as well as the rest of the field. Try the experiment and see how nicely it will work. Three inches depth will not be too much to put on. It will rot and decompose a good deal before spring time. Rich earth from roadsides is very beneficial to deepen the soil on these places. But there should be much coarse material to the prevent washing off of the soil from above.

B. W. J.

*Surry County, Va.*

*Saving Liquid Manure.*—Can you suggest some cheap plan of saving the liquid manure from a barnyard? It is better to build a cistern under the manure at the side or some distance from the yard? My barnyard being on an elevation, I can locate cistern in any position. **MONHABIE FARM, Bridgeport, Conn.** [The cheapest way to save liquid manure from stables is by using plenty of absorbents, as fully described on page 400 of our number for June 9, upper half of second column, to which we refer you. The objection to saving the liquid in a tank is there pointed out, and in a climate subject to several months of severe freezing weather, we could not recommend the use of tanks for common farming.]

I need hardly say that I agree with the opinion expressed in the above extract from the Country Gentleman, though it is in direct opposition to the conclusions at which many people have arrived on the same subject.

*Sheep.*—Mr. F. D. Curtis, of Kirby Homestead N. Y., in a late letter to one of the American agricultural papers, says that "the Downs are especially calculated for small farms, and even large ones where they may be subdivided into small flocks. Fifty sheep in a flock, of the large breeds, is the limit of numbers to have them do well; while a smaller number to be in one drove or herd, is better. The highest degree of success is attained with the large mutton sheep and the Downs with the smallest flocks."

Now, this is a strange statement to make, and a very short tour in the English sheep-breeding counties would show its absurdity. If Mr. Curtis means to say that, when in winter quarters, sheep ought not to be crowded, I agree with him; but as long as they are at liberty in the open air, and have frequent change of locality, the number in a flock is perfectly immaterial. Have not I seen on my own farms 250 ewes with their 320 lambs altogether from March till weaning time. At Chryssal Grange, then farmed by Sam. Jonas, one of the most successful farmers of the day, I saw, in 1853, two thousand sheep at the same time in the same field, feeding off seeds, with mangels of the previous year thrown in, and nothing could be doing better than this large flock. If small flocks were necessary, how on earth could the store-farmers on

the Scottish hills manage theirs of six thousand and eight thousand? They would find, if they tried the experiment, that the wages of shophers would eat up the whole of their profit. (1) As to the peculiarities of the "large mutton-sheep," I say nothing, as I know nothing about them, but I conceive it to be impossible for our large farmers on the Cotswold Hills, on the Lincolnshire Wolds, or on the extensive pastures of the Midland Counties, to subdivide their flocks into little bands of fifty each. No, what sheep, long-wooled or short-wooled, require is what they do not get here: plenty of range, and frequent shifting of place.

*Change of rams.*—Mr. Curtis asks, in another place, "Have we always got to go to England for our best sheep?" To which I reply, that when the farmers of the United States begin sheep-farming in earnest as an organic portion of their systematic culture, they will find out that a flock of sheep must be treated in America as it would be treated in England. At present sheep are kept on a farm in the States if wool is high in price, and when it is cheap, the sheep are discarded, and after a turn of the market, others are bought in. Thus, the farmer always sells in a cheap market and buys in a dear one.—I have remarked this failing on the part of the Vermont people three distinct times in the last fifteen years;—one consequence of the constant change of stock is that the sheep are never allowed to remain long enough on the same farm to become, as ours are, attached to the soil; there is no attempt on the part of the farmer to aim at breeding a certain style of animal adapted to his land, and to work up to it, and, on that account any ram that comes handy is employed; as a rule, there are no shepherds in America, and without a shepherd born and brought up in a sheepfold, one who knows, personally, every sheep and lamb, their history and genealogy, in the flock, no success in sheep-breeding can be hoped for. The Americans have succeeded well with their Merinoes: let them bestow the same care on the Downs and other mutton-sheep, and they will soon be able to dispense with "going to England for their best sheep."

#### The Best Breeds of Sheep.

##### KEEPING DOWNS AND MERINOES SEPARATE.

**EDS. COUNTRY GENTLEMAN**—In discussing the subject of sheep husbandry there must necessarily be a wide range. Our wants are so diversified, and the extremes of climate so great, and all the circumstances connected with the rearing and marketing so varied, that there must be a great deal of ground to cover, with many special features to be noticed. While Merinoes are unquestionably the sheep for the million, the Downs are especially calculated for small farms, or even large ones where they may be sub-divided into small flocks. Fifty sheep in a flock, of the large breeds, is the limit in numbers to have them do well; while a smaller number, to be in one drove or herd, is better. The highest degree of success is attained with the large mutton sheep and the Downs, with the smallest flocks. The Merinoes, with an innate tenacity for existence, will crop after each other, regardless of the shortness of the bite or the amount of taint on the grass; but at the same time they do better in smaller flocks and with frequent changes of range. I used to keep all of my sheep in one large field, coarse and fine ewes together, the whole season of pasturing; but last year I became satisfied it was a serious mistake. I knew that the coarse and fine would not do so well together, but I did not suppose the odds were so great against the mutton breeds. It is so. The Merinoes do not mind it, but it is very hurtful to the Down or the coarse-

(1) Of course, the "hirse" is divided in lots of 600 or 800 sheep.  
A. R. J. F.



wooled sheep to be confined with Merinoes. The Merinoes eat too close, and the taint of body and excrement renders both the air and grass respectively objectionable. They should never be wintered in the same enclosure. My faith in these notions is so well grounded that this year each breed of sheep has a separate field, and the old sheep pasture is now used for the cows.

On small farms, or where the ranges are somewhat limited, sheep should not remain in one pasture longer than a week without change. They will be found to do a great deal better. This fact was well proved by my experience last year. A week is long enough to give the grass a start sufficient for sheep, and a longer time might result in its getting too rank or coarse. The Down and coarse-wooled sheep will do well on flat land, or on land with ranker grasses, than the Merinoes. The grass cannot be too fine for these sheep, and they delight to feed on the knolls and side hills, and even on the mountains, where the grasses are short and sweet. Large sheep must have rank pasture, or that which furnishes a big, full bite. These facts should be taken into the account, or rather should form the foundation of sheep husbandry on the farm.

So far as breeds are concerned, all the Downs are good. The South-Downs are the typical mutton sheep, and their admirers say, "Why go further?" This depends. While they are the foundation sheep of mutton, and the highest type, they are also the poorest shearers, and this is an important item. The world does not stand still, and I do not believe in resting all our chances on one sheep. The other Downs also have a mutton value, and some of them will make more mutton, and shear double the wool of the average South-Down. These points are worth something, for with sheep the margins are close, and a few pounds of wool help out. A law in breeding crops out here, and should be noticed, that all the good things are rarely, if ever, found in one body, and that perfection of body (carcass for mutton), is, as a rule, at the expense of the fleece. As fine and compact a fleece, or one with so much weight, cannot be produced on a perfect mutton body.

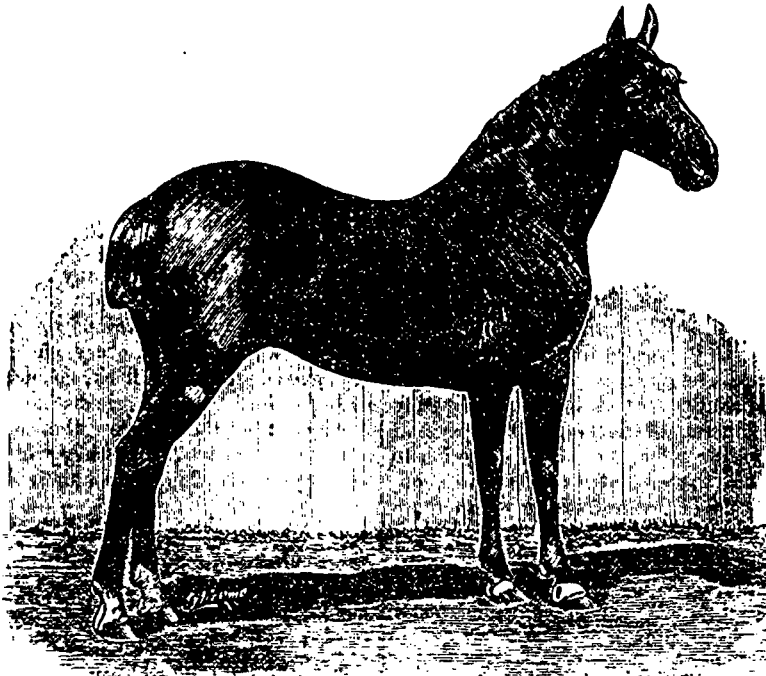
As the Merinoes approach a mutton standard in body, the fleece is more open and coarser in staple. As I have said before, the way to overcome this tendency to coarseness and lightness of fleece in the Down and the larger breeds, is to give them a "dash" of Merino blood. Where a farmer has a taste for thoroughbred animals—and it is always commendable—he should purchase sheep of a suitable pure breed. A small flock of these on the farm could be made a constant delight and profit. Where a farmer has a limited income, and thinks he cannot afford so much culling in his stock, he certainly can afford to purchase a thoroughbred ram, and begin

at once to grade his sheep up to a higher standard. There is no excuse for not doing this. A blind stupidity or a willful obstinacy may stand in the way, and often does.

I like to see a farmer with some kind of an animal hobby. A man wants to believe in some breed, and the more enthusiastic he is, the more likely he will be to succeed. In the older States, where local markets are plenty, the farmers have still got one hold. They certainly can keep a small flock of mutton sheep, and make them pay. They should make this grip stronger by improving their sheep, and not one South-Down ram lamb should go to the shambles, but all be used to improve the mutton qualities of all the sheep. All of the choice ewe lambs should be saved as a foundation for a paying flock, and every farmer should start his foundation new.

#### THE HORNED DORSET.

There is a hardy breed of sheep in England called the Horned Dorset, which combine the mutton and wool features. The wool is light, quite free from oil and strong in fibre. It would be classed as medium. Hon. Adin Thayer informs me that twelve ewes and one ram of this breed have been consigned to him, and are now due. No doubt Mr. Thayer will exhibit them at the next New-York State Fair. The Horned Dorsets are not as heavy as the average Downs, but they are a more sprightly sheep, and better calculated for large flocks and extended ranges. A lot of these sheep, at the Chicago Fat Stock Show, two years ago, bore their lambs in November. A number were born at the show. They struck me then



PRIZE HACKNEY MARE, ELEGANCE.

as a desirable general-purpose sheep, and if the autumn breeding is characteristic, they will be a great acquisition for J. S. Woodward and other Western New-York breeders, who want their lambs to be dropped in the late autumn, so as to be ready for market by Christmas. Have we always got to go to England for our best sheep?

F. D. CURTIS.

*Kirby Homestead, N. Y.*

*Crops in the U. S. and Canada.*—Now that a considerable amount of grain is threshed, we can get some idea of the yield of grain-crops in the States. Corn, in all the great corn growing districts is almost a total failure. Oats and barley are about half a crop; wheat two-thirds of an average: Hay seems to be variable; a good return has been secured in the N. E., but in the S. and Middle States, except in New York, the yield is short. Crops of all sorts in Ontario and in our province are very much below the average, and I fear the farmers and country storekeepers, unless they practise great economy, will have hard work to get through the winter.

Cheese has been largely exported, and as the make has been very short and the sales are close up to the production, there will be little money coming in after October. Altogether, I fancy the banks will exercise great caution in making loans, in spite of the vast sums of money which are seeking investment. Once more, we shall see money in England begging to be employed and hard to come by here.

ARTHUR R. JENNER FUST.

KANSAS.

Burlington, Coffey Co., Aug. 8.—In this immediate section we are burned out by the drought. Hay one-half crop. Oats eight to twelve bushels per acre. Wheat and potatoes failures. Corn made a wonderful promise, but as a rule we shall have very little marketable corn. Flax large acreage and a heavy yield.

O. D. K.

MICHIGAN.

Byron, Shiawassee Co., Aug. 12.—The acreage of the following crops is fully up to average:—hay, corn, oats and wheat—but the yield of wheat and oats per acre, according to the reports made by the thrasher-men, will not be much more than three-fourths of a crop, if quite as high as that. Corn has been badly hurt in this section by drought. Hay is a full crop. J. F. M.

MINNESOTA.

Orrack, Sherbourne Co., Aug. 12.—We have had very little rain all summer. Consequently crops are very light. Wheat, acreage, 125; yield from 0 to 8 bushels per acre.

Oats about the same. Rye a little better. Corn about half a crop. Potatoes almost a failure. All kinds of fruit dried up. Hay a good crop.

W. S. E.

Early lambs.—The price of wool and mutton in the United States must be very considerable if the undermentioned sales, by Mr. Henry Stuart, are to be taken as exact.

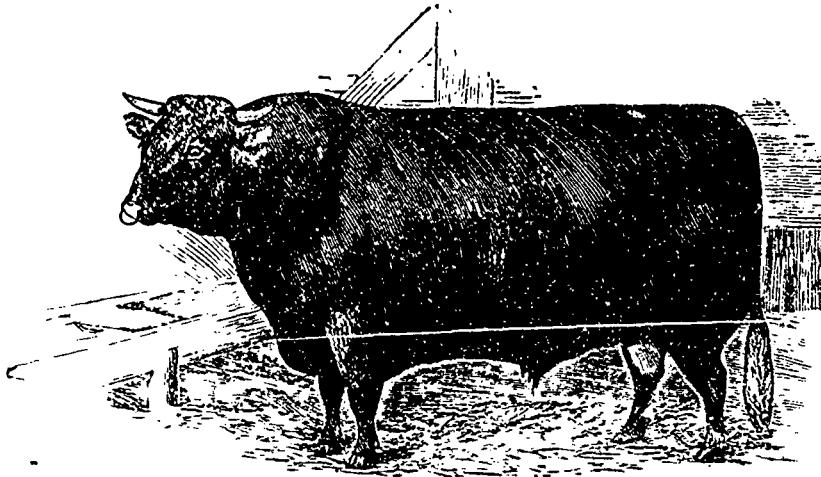
“When Mr. Powers recalls his subject and reconsiders it, he will probably modify his rather broad statement that “the growing of early mutton lambs is necessarily a suicidal industry.” Let me give an instance. I have been in the habit of buying from drovers a lot of good Ohio ewes in the fall, crossing them with a South-Down or Shropshire ram, feeding them well during the winter on my clover hay and some purchased western corn and bran, with a few mangels home grown, making a pile of manure in the shed two to three feet deep, and getting a fleece that averaged \$7.50 per head, a lamb that averaged \$7 (from \$10 down to \$3.50), and then selling the ewes within the year for something more than the cost. The manure is always worth the feed, if the feeding has been judicious and liberal.”

What can Mr. Stuart mean us to understand, when he quotes the value of a fleece of ewe-wool at \$7.50? If Ohio sheep are Merinoes, the wool may be worth half-a-dollar a pound; but surely no Merino-ewe would shear fifteen pounds

of wool! If Cotswolds, at thirty cents, they must yield twenty five pounds, which is absurd. I have no doubt but that lamb in the Philadelphia market sells well; but allowing the firstlings of the flock, at ten weeks old, to weigh thirty pounds, and each to sell at ten dollars, they must fetch thirty-three cents a pound, which does not seem probable. However this may be, I agree with Mr. Stuart in one thing: growing early lamb and fattening lamb and dam is not a suicidal industry; but one which, if carried on in a liberal manner, is a most profitable speculation.

Whirligigs.—Mr. Smith, of Woolston, is a regular correspondent of the English Agricultural Gazette. I presume from his writings that, like our beloved friend, Dogberry, he is anxious to be “written down an ass”! Mr. Smith has lately invented a creaming apparatus, and is always in a state of raging fury with any one who disagrees with his phantasies. Hence, his blind indignation when he hears that the “whirligig,” as he calls the centrifugal, has proved everywhere successful. Of course, no one pays the least attention to anything Mr. Smith says; and why so sensible a man as

Mr. Morton, of the English Agricultural Gazette, continues to print his maudering letters I cannot understand. He is one of the few remaining types of the thoroughly prejudiced Englishman: I really was in hopes they were all gone. I never doubted the ultimate success of the centrifugal, and, since the Quebec Exhibition brought out its useful qualities before the public, I fancy no one who saw it at work there would hesitate to say



ENGLISH PRIZE DEVON BULL CHAMPION.

that in a few years it will be found in every butter-dairy of ten cows in the country.

—THE WHIRLIGIG.—“G. A. H.” gives us to understand that the whirligig takes “all” the cream from milk, after which he says that he has cream sent to him so thick that it needs a spoon to help it out of the jug. On the three first days this week I visited a considerable dairy district wherein a whirligig is worked. One dairyman, who sends his milk to London, told me that he bought whirligigged milk for his calves, and when the milk had been set for a short time a yield of nice cream was found upon it. This, to a great extent, will account for “G. A. H.’s” cream needing a spoon to help it out of the jug, but it goes dead against his word “all.” Now, let me tell my friend that the number of “dairymaids” sufficient to contain the milk of 100 cows would cost in cleaning a little more hot water than a whirligig would, and that would be all. His whirligig will never be accepted by the general dairyman.—William Smith, Woolston, August 11th.”

The following extracts from the Country Gentleman I publish, because it is in accordance with my views of the case, repeated, *usque ad nauseam* I fear, in this Journal. I contend, as I always have contended, that we have not time enough to improve our native stock by selection, but must be

content to do it by crossing with the allied branches of the original stock :

"If a fair test were made of the merits of cattle but little known, including the Belgian breeds, it would be discovered that the 'craze' for so-called blooded breeds is a great mistake, and that Americans pay enormous and absurd prices for foreign cattle. \* \* If our people at home would use the money spent in the purchase of foreign breeding cattle in constructing quarters for our native cattle equal to the housing quarters of Europe; if they would give the native cattle the same care they give to their high-priced foreign cattle, within four generations of careful breeding, always selecting the best bulls and the best cows and keeping the others thinned out by the butchers, the United States would have a native breed that would rival any cattle in the world."

This is putting it pretty strongly, no doubt; "four generations" can hardly develop and establish the qualities sought for by the breeder to anything like the degree that has been attained in Europe after the patient endeavor of a century and in many cases very much more. Still, the admonition not to regard everything native here as unpromising, and everything imported, as certainly of sterling excellence—is timely; and there is much truth in the following remark :

"As a whole the European people take more interest in their stock than do the people of the United States, and there are more inducements in this regard offered in the former than in the latter. The English hold a dozen agricultural or cattle shows to our one, offering thousands of dollars to our half dollars in premiums. and it is no marvel that the cattle are far superior, that the farmer in England should draw closer to his cattle than does the American farmer to his, treat them kindlier, and give them better dispositions."

**Prizes.**—What on earth is the good of giving prizes at our exhibitions to calves, of the year, *over* six months and *under* six months. Surely, the two classes might, without diminishing the interest, be united. Prizes for the best aged bulls, the best 2 year-old, the best yearling bulls, and the best bull-calves, ought to be sufficient. The judges have quite enough to do without their time being wasted on absurdities.

**Canadian cows.**—I saw no Canadian cow at Quebec bearing such evident signs of a real dairy-cow as *la Tave'ie*, Mr. Prudhomme's cow, of Sorel, a photograph portrait of whom appeared engraved in the June number for 1886, p. 88. She would have certainly taken the first prize in her class at the exhibition, but I could not goad her proprietor into action.

**Agricultural College.**—Mr. Blackwood, of Shefford, one of the committee of the Council of Agriculture on Schools, told me the other day that the College of Ste-Anne de la Pocatière was decidedly doing better than the rest.

**Butter.**—A pleasant surprise to-day, August 30th: my butter-woman tells me she must have 30 cents a pound for butter for the future! At the grocers', I find upon inquiry, creamery-butter is selling for 28 cents! What will it be at Xmas? Now is the time, if ever, for a good dairyman to buy cows down-calving in October, and earn a fortune by making winter-butter.

**Hop-picking.**—Mr. Dawes is just now picking his hops: a fair but not a large crop, and very irregular in yield. The people of Lachine have been talking about nothing else for the last ten days, and seem to be deeply interested in the work. It is a pity some of them do not pick a little more carefully: some of the "bins" had too many leaves in by half. The garden is *perfectly clean*, but would have been all the better

for a little later stirring. The land treads as if it had been meddled with when too wet: it is n't *kind*, but, then, all the land here seems to break up harsh and cloddy. The wind, which as far as I can see, is the favourite production of Lachine, has damaged the garden considerably, and this is probably the reason why the hops are being picked in such a decidedly immature condition. As for green hops giving a deeper colour to pale ales than ripe hops, that is quite a mistake, and every one who has studied the matter knows that there is a much greater quantity of condition, i. e., *tupuline*, in ripe than in unripe hops.

#### CONCOURS DES PIÈCES POUR SOREL.

Pacage (pasture).—1er prix, Sénateur Guévremont.  
Prairies (meadows).—1er prix, Narcisse Larochelle; 2e, Antoine Larue.

Blé (Wheat).—1er prix, Narcisse Larochelle; 2e, Sénateur Guévremont.

Orge (barley).—1er prix, Sénateur Guévremont.

Pois (pease).—1er prix, Narcisse Larochelle.

Avoine (oats).—1er prix, Narcisse Larochelle; 2e, Antoine Larue; 3e, Sénateur Guévremont.

Blé d'inde (corn).—1er prix, Séraphin Guévremont; 2e, Narcisse Larochelle; 3e, Antoine Larue.

Patates (potatoes).—1er prix, Séraphin Guévremont; 2e, Antoine Larue; 3e, Narcisse Larochelle.

Betteraves (mangels).—1er prix, Séraphin Guévremont, 2e, Sénateur Guévremont.

Carottes (carrots).—1er prix, Séraphin Guévremont; 2e, Sénateur Guévremont.

J'ai l'honneur d'être, avec considération, votre humble serviteur,

RAYMOND MAGNAND, Berthier.

It will be seen by the above extract from the *Sorelois* that my pupils at Sorel have not done so badly in the competition for the best crops. The Senator would have been more successful with his oats had he taken the trouble to clean the seed. As it was, the grain was so full of bits of straw and other rubbish that instead of 3½ bushels to the acre I do not believe more than 2¼ were sown. M. Séraphin Guévremont has done as well as I expected—won all the first prizes for corn and roots. This young man has made wonderful progress during the last three years, and is now fit to take the management of any farm in the province. I should have expected the first prize for wheat to have fallen to the Senator, for a better plant than there was when I left, on the 7th of June, I never saw. This was the piece that the neighbouring *habitans* howled at him so for rolling, as I mentioned in the July number: "What are you doing there, you band of fools?" The rolling does not seem to have done much harm, after all! I fancy the farmers round Sorel will learn many a good and useful lesson from the Guévremont family.

**Grapes.**—I should not think grape-growing can have been very profitable this year. The prices have been very low, any quantity having been sold in the Montreal market for from 2½ cents to 4 cents a pound.

**Hessian Fly.**—I regret to say that the Hessian Fly has found its way into England. The poor farmers on the grainlands have enough to contend with already without a new and powerful enemy like this. Miss Omerod, the entomologist of the R. A. Soc. of England, has been doing her best to discover and spread abroad the best means of obviating the destructive attacks of this *bestiaccio*.

**Potatoes.**—I would not sell a bushel of potatoes, were I a grower. They must be very dear this coming winter.

*Cheese.*—The market keeps on rising. Our Gloucestershire tenants, even on such a rich alluvial soil as theirs, have nothing but bare pastures, and the make of cheese must be short. Twelve and a-half cents a pound for cheese here, is equal to \$14.00, which is about 58s. 4d. sterling, per 112 lbs. Now the cable of yesterday (August 18th) reported best cheese at Liverpool as worth 57s. 6d. Where then is the profit on exportation? My own idea is that if the present cold weather lasts, we shall see best qualities of Canadian cheese worth 65s.

*Advances of government money in England.*—My good friend Dr. Hoskins, now editor of The Rural Vermonter, seems to have misunderstood the advances made by the English government for the promotion of agriculture. A trifle, about £3000 a year, has been diverted this last session from the "Queen's Plate" fund, which provided 100 guineas to be run for at several race-meetings,—and this sum has been added to the R. A. Soc. Eng. fund which furnishes prizes of £200 each for thoroughbred stallions calculated to get weight carrying hunters. A weight carrying hunter, up to 16 stones (224 lbs.), might not, perhaps, be fast enough to be in the first flight in a burst from Bythorn Toll-bar, or over Stanwick Pastures, (1) in which case he would be just the very thing for the cavalry remounts. Ireland gets something—\$10,000 I think—for the Glasneven dairy-school; but with these two exceptions no money is furnished by the English government for agricultural purposes except the drainage loans, which are granted to the owner of landed property on the following terms: the borrower, generally the "tenant for life" of an entailed estate, can change the land with the loan, and by paying 6 per cent. a year for twenty-two years, the interest and capital are both discharged. Without this loan, no tenant for life could drain his estate except by laying out his own private means, which would be unjust to this younger children.

ARTHUR R. JENNER FUST.

*Roots vs. Ensilage.*—In his lecture on ensilage, the Revd Abbé Chartier, manager of the farms in the occupation of the Seminary of St. Hyacinthe, compares the cost of the cultivation of roots and Indian corn much to the disadvantage of the former. His account is as follows:

Corn.....	Mangolds.
Dung equal to.....	Dung.
Cutting and ensiling equal to.....	Pulling, topping, &c.
Seed sowing \$1.10 and.....	\$1.60
Cost of cultivation \$3.00.....	\$12.00

And the *procureur* adds: The comparison then is entirely in favour of the cultivation of corn.

Now, the cost of cultivation (*frais de culture*) evidently means, the cost of hoeing, as in his computation of the expense of growing corn, the Abbé charges:

Two ploughings.....	\$2 00
Grubbing and harrow.....	1.00
Two hoeings—horse I presume.....	1.00

So I think it is clear that to hoe an acre of mangolds by hand has cost the Seminary the monstrous sum of \$12.00! Let us see, from the testimony of a perfectly impartial witness, what the expenditure really ought to be:

*Dear Sir,*—Here is my calculation of the cost of hoeing an arpent of roots.

(1) Well known meets of Lord Fitzwilliam's bounds.

A. R. J. F.

2 horse-hoings.....	\$1.00
2 women—chopping out—1 day at 60 cts.....	1.20
2 do singling by hand after the chopping out..	1.20
	-----
	\$3.40

I think this is the extreme possible cost: I have sown this year more swedes than last year, but I shall not have as many. Your faithful servant,

SÉRAPHIN GUÈVREMONT.

*From the French.*

You see, then, that, if you know how to do it, hoeing and singling a root-crop is not an expensive job. If you don't know how to do it, and won't learn, it will make the crop a very expensive one.

A. R. J. F.

OUR ENGRAVINGS.

- Shearling Southdown Ram.*—See article on p. 172.
- Dutch-barn;* for hay, straw, &c.—See article on p. 174.
- Elegance.*—Hackney mare. See article on p. 171.
- Champion.*—Prize Devon Bull.—See article on p. 172.

The first frost of the season came last night. Usually this event marks an important point in farm operations, but this year the work of early frosts in checking growth and ripening vegetation has long since been anticipated by excessive dry weather. Though pastures and meadows are of late greening up a little, there are few of the latter here but what look as if they had been nearly or quite grazed to death. It seems hardly possible for many of them to recover, even should favorable weather come soon. Entire renewal by cropping with corn next year and then re-seeding, will in many cases be resorted to. In view of the probable shortage of spring pasture another year, some farmers are sowing rye this fall. The sowing of wheat has been going on slowly since the middle of the month. Much of the ground, however, intended for wheat this fall, cannot be made ready until after a good rain has come.

The Forestry Congress at Springfield, on the 14th inst., was not very largely attended. But this is no proof that forest culture in America is any the less important than it is claimed to be. The time will come when every farmer and land owner will feel as much interest in the culture of forest trees as in the growing of fruit trees, and when the proper planting of trees for wind-breaks and shade will engage as careful attention as has of late years the matter of tile draining on the farm.

Farmers who have hogs to fatten this fall are among the fortunate ones. Hogs have done well and prices have been good. The fear of loss from disease seems to keep hog-raising from being over-done, and thus those who keep at it and take proper care of their stock find it again quite a safe and profitable business.

To the farmer with plenty of money and the prospect of a reasonable length of life before him the rearing of heavy draft horses presents special attractions at this time. The paving of our Western cities is sure to create an almost un-failing demand for heavy horses, and the use of them on these pavements is going to wear out the horses faster than the pavements.

PHIL THURFTON (*Thanks.*)

Springfield, Ill., Sept. 24 1887.

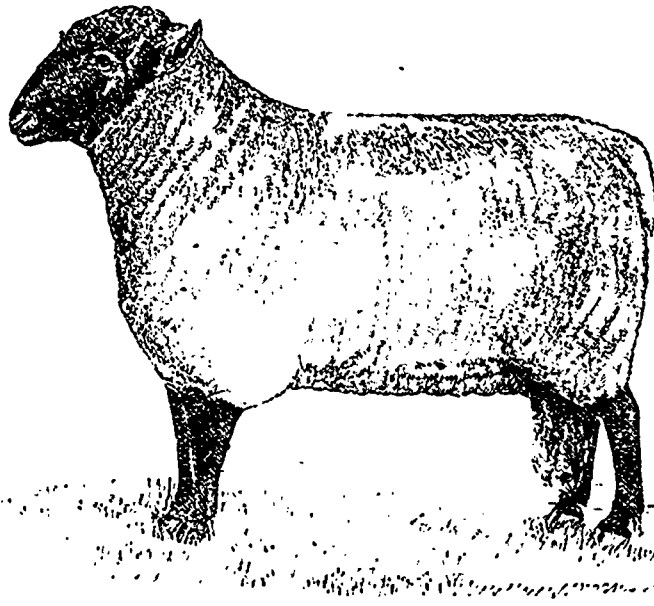
Our illustration, p. 168, this week is engraved from a photograph of the Hackney mare *Elegance*, the property of Mr. R. T. S. LUCAS, Tudor Lodge, Sneyd Park, near Bristol, England, of which the London Live Stock Journal says:

"She was got by Beat'em, dam Graceful, by Dr. Barber. Elegance has won nearly two hundred prizes, and is considered almost unequalled for style, easy, graceful action, quality and manners, although one or two horses surpass her in speed. She has won upwards of one hundred first prizes, including first at Bridgewater, Chelmsford, Royal Counties, Blackpool, Weston-super-Mare and Scarborough, and second at Islington this season." *Country Gentleman.*

A lovely hack; shoulder perfection, and she must carry the saddle well. Great power in hind quarters, but, if she has a fault, it is that she is a little long from hock and knee to the ground. The photograph is unfortunate in the setting on of the head. This mare has won 200 prizes in England.

A. R. J. F.

The shearling South-Down ram Royal Newcastle, whose portrait (re-engraved from the London Live-Stock Journal) appears herewith, "won first prize," says our contemporary, "at the Royal Agricultural show at Newcastle, first prize at the Royal Counties show at Reading, first and champion at Bedford County show at Bedford, and first at Gloucester County at Cheltenham—an unusually brilliant record. The ram was got by Merton, bred by Lord Walsingham, and purchased at his sale for 105 gs. His dam was a ewe by Colman's No. 3, by Mr. H. Webb's No. 47, so that Royal Newcastle combines the blood of three of the most celebrated South-Down flocks." (1)



MARQUIS OF BRISTOL'S SUFFOLK RAM, VAN TROMP THE SECOND.

The Devon bull Champion 1696, whose portrait appears herewith, has taken a number of prizes at leading shows England this summer, including a second at the Newcastle Royal. He belongs to Mr. Richard Bickle, Broadstone Hall, Tavistock; is about four years old, and was got by Champion 1522 out of Cowslip 3d 6225 by Agricola 2d 1675. The picture is re-engraved from the London Live-Stock Journal.

*Suffolk Ram.*—The portrait of the Marquis of Bristol's prize Suffolk ram, Van Tromp the Second, will remind my readers of the Hampshire-downs, three photographs of which were reproduced in the April, 1886, number of the Journal. There is, however, a notable difference in the wool of the two breeds: the wool of the Hampshire-downs, coming over the poll, descends well down the forehead, and, instead of stopping at the end of the shoulder, extends to the knees. The closeness of appearance of the wool of the Suffolk arises from the close trimming of the sheep for exhibition; and, of course allowance must be made for the Hampshire-downs' portraits having been taken with their fall grown winter coats on. The

(1) Henry Webb is the son of the celebrated Southdown breeder, the late Jonas Webb, of Babraham.

A. R. J. F.

Suffolk has the masculine head of the Hampshire-down, a feature, which though sneered at by breeders of South-downs, is, in my opinion, indicative in the highest degree of hardness and vigour.

A. R. J. F.

#### Mr. Cochrane's Herefords.

In connection with the picture of the Polled Angus cow Vine 2d, which appeared in THE GAZETTE of five weeks ago, we gave considerable space to a description of the polled cattle in the herd of Hon. M. H. Cochrane, of Compton, P. Q., Can. Since then we have issued the catalogue of his sale, which is to occur at Dexter Park, Chicago, November 22. In addition to the Angus doddies described in the issue above referred to, we find that Mr. Cochrane's sale will include seven Hereford bulls and thirty-five cows and heifers of the same breed. We looked carefully over the entire offering while at "Hillhurst" a few weeks ago, and we have no hesitation in asserting that the Herefords in this sale will

compare favorably with any of those that have been traveling in the West this season as show animals. Among the bulls to be sold are five yearlings that were selected in England by Mr. James Cochrane, out of a herd that contained eighty-six bulls of the same age; those selected being the pick of the lot, of the very choicest strains of Hereford blood, and either of them good enough to head any herd in the land. Among these yearlings, we were particularly pleased with Sir Harry (whose picture we present above), by Lord Wilton (4740).

*Stock B. G. (1)*

#### AGRICULTURAL MACHINERY.

##### STEAM CULTIVATORS AT LEEDS.

JUNE 14.

A GRAND field-day was held at Scholes, near Leeds, on Tuesday last, when Messrs. Fowler's steam cultivating, steam trenching, steam draining, steam ploughing, steam harrowing apparatus was exhibited in operation before a large and appreciative audience, drawn from both hemispheres and from many continental countries.

Mr. Greig marshalled his guests around the ten or twelve acres of land in the middle of the town, covered with all the machinery of an enormous iron foundry and manufactory, where castings from 30 lbs to 30 tons, welding under Newmyth's hammers, smitheries, turning lathes, fitting shops, carpenter shops, and store houses, are all concerned in the manufacture of engines, pumps, railways, locomotives, and steam cultivating machinery. We were afterwards conducted to a large extent of hard, rough clay-land at Scholes, about six miles off, where pairs of engines from 16-h.p to 4-h.p. also round about tackle—were exhibited in great force, turning six furrows at a time, turning 14 feet width at a time.

(1) See Journal for October.

turning a single furrow 26 to 30 inches deep, and wide in proportion, turning a couple of furrow slices, 12 to 14 inches deep, drawing a mole plough—working combined grubber, roller, and drag harrows, following one another in succession, and reducing a rough-ploughed surface to something more nearly approaching tith—working also a special combination of ploughs intended for vine culture, and enabling the tillage of two six or seven-foot intervals between rows of standard vines. The work was looked at with astonishment in some instances, satisfaction in others, admiration in many, and with pleasure throughout.

If it is a mere question of difficulty, however great, steam power has proved equal to the task. There never was such a sight exhibited before, as the opening of a 30-inch trench, under the most intractable circumstances, at the rate of about two miles an hour; and it seems that in the deep alluvial soil, on which sugar cultivation is most profitable, an operation of this kind is once a year desirable.

The principal manufactures at the steam plough works may be summarised as under:—Steam cultivating engines and machinery to suit every class of soil and crop. Traction engines, road rolling engines, and road locomotives and wagons, for hauling, thrashing, pumping, and road making. Semi-fixed and stationary engines of every class, single or compound, from 6 to 70 nominal horse-power. Electric light engines, with Hartnell's latest patent automatic expansion gear. Colliery engines and plant, oil pulleys, &c. Air-compressing engines and machinery of every kind. Light railway plant, locomotives, and rolling stock, for sugar estates, mines, and military works. Steel wire ropes, &c., &c.

Between 1857 and 1887 the firm have received some hundreds of much coveted awards, gold and silver medals, cups, diplomas, and money prizes.

They stood foremost in the great steam-ploughing contest at the last Newcastle meeting (1864), and their display last week at Leeds is a splendid proof of the enormous advance accomplished by the firm since then. We give illustrations of two of the steam-ploughing tackles then exhibited—the single furrow deep plough and the seven-furrow digger, intended for the widest operation—equal to 30 to 50 acres daily.—*Eng. Ag. Gazette.* (1)

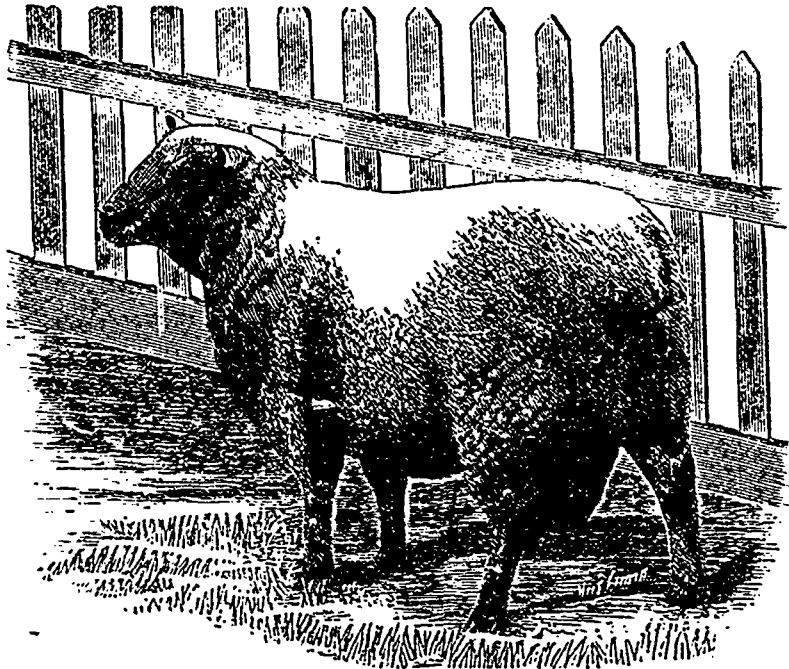
## HORTICULTURAL DEPARTMENT.

### RAISING FRUIT IN POTS.

The facility with which fruit may be raised in abundance in this country, does not render so necessary the culture

of fruit in pots and under glass as in Britain; but the beautiful ornaments which are thus obtained, and the attractive objects for horticultural and other exhibitions, will prevent the practice from falling into entire disuse. Among the fruits which are particularly adapted to this mode of culture are nectarines and grapes. The accompanying engravings, which we have reduced from those which have appeared at different times in *Gardening Illustrated*, are good representations of handsomely grown specimens.

The varieties of grapes selected for this purpose should be strong bearers, and those of smaller growth among exotics, and the skill particularly required in the management is in watering, which should be enough for their growth at all times, but not so abundant as to cause the decay of the small roots around the sides of the pot. The soil best adapted to the purpose is a mixture of leaf mould, old rotted sods and cow manure, with a small quantity of bone dust, fine charcoal and air-slaked lime. These are of course to be well mixed some weeks before use. Broken pots or shells should be placed at the bottom for drainage; twelve inches is a suitable size for the pots. Liquid manure may be used as the grapes swell in growth, made with a pound of guano in half a barrel of water, or of other materials of equal strength, as cow manure and soot. If much stronger, it should be applied more sparingly, or with caution. The vine should bear for only a few years, and then be replaced with a new one. After the first summer, it should be



A VERY SUPERIOR ENGLISH SOUTH-DOWN.

taken out of the pot, the soil shaken from the roots, the longest roots pruned, and repotted with fresh compost. It is the practice of good cultivators not to allow it to fruit the following season, and not till the second year. The vines will bear more uniformly if allowed to hang down, or they may be fastened to training wires, or wound around strong stakes, as shown in the engraving. Among the sorts suitable for pots are Royal Muscadine, Black Hamburg and Alicante, but not the Muscats. Although the quantity of fruit obtained in this way will be small, the management will afford interesting employment, and the ornamental result will repay the care and labor.

Among the different fruit trees which may be raised in pots, the nectarine has some special advantages. The shelter which is given it in this way will give certain crops every year, and it will not be liable to the winter-killing of the fruit-buds which peach and nectarines suffer when the trees are growing in open ground. The same protection shields the young fruit from the attacks of the curculio, to which it is otherwise particularly liable, this insect appearing to attack the nectarine in preference to any other fruit.

One-year trees from the bud should be selected, and foot or fifteen-inch pots used; the soil need not be very rich at first,

(2) See Journal for October.



but liquid manure employed as the trees are afterwards in full growth. The soil should be rammed down firmly among the roots, so that the tree may stand firmly, and loose potting be avoided. As growth advances, prune and pinch back enough to give the tree a good symmetrical shape, and careful attention must be given to watering; and during active growth liquid manure will be important. The pinching process is to be continued through the season, so as to give the trees a rather dwarfed form, and the third year they will give good crops. They are kept under glass in winter, where the thermometer must never be allowed to go below zero, as the fruit buds are more easily killed than are trees standing in open ground. Artificial heat, for the coming crop, may be first given about the first of the year, and ripe fruit of early sorts may be had by the first of summer. The heat of cold weather may be sixty or seventy degrees in the day time, and always above freezing at night; but as the warm weather of spring advances very little or no artificial heat will be required, as the sun will furnish it. Each tree, when in full growth, will require about a gallon of water in twenty-four hours. When the nectarines are within about five days of maturity, if the trees are placed out of doors on the warm side of the house, the open air will complete the process of ripening and give the fruit a flavor which it will not have if allowed to remain inside. If exposed sooner, it will cause curl of the leaf. These trees will bear a few years, and should then be renewed. (1)

EDS. COUNTRY GENTLEMAN—A roof for protecting hay, straw, &c., is much used in this section of country. It is built upon the ground and elevated to the proper height, sliding upon four stout corner posts, and supported in place by movable pins. To bring it to a few feet above the ground is no great undertaking, but to place it at a height of 16 or 20 feet is something of a task. This work and that of lowering the roof, as the contents are from time to time partially removed, have to be repeated year after year making the task in the long run quite a formidable one.

Counsellor A. S. Appelget, a practical farmer living near here, has recently hit upon a contrivance which greatly lessens the difficulty. Fig. 1 represents the roof supported by pins

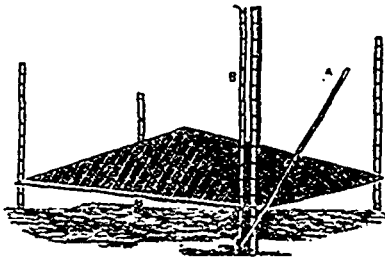


Fig. 1.

in the corner posts and elevated a few feet. It also shows the lever A, and a movable upright B. Fig. 2 gives a view of one corner of the roof together with lever and upright, the pin C, in the upright, being in contact with the under side of the frame. A glance will show that as the long end of the lever is brought down, the upright, together with the corner of the structure, is carried up. Securing this corner in its new position by moving the pin in the corner post a hole higher, lever and upright are moved to the three other corners successively. Coming round again to the first corner, the pin C is placed a hole higher in the upright, and the pro-

cess is repeated. With this contrivance two men can with ease elevate a roof 20 feet square to the desired position. Some reader of your paper may find this plan a great convenience and saving of labor.

*Mercer County, N. J.*

W. W. S.

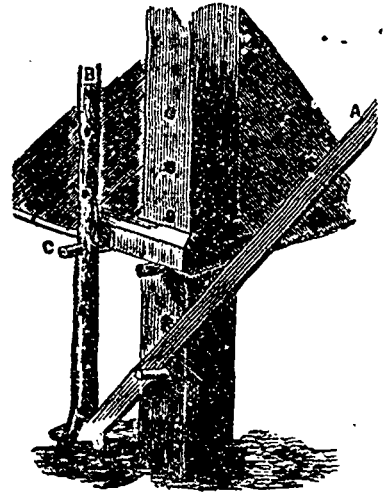


Fig. 2.

## CELERY CULTURE.

DETAILS FROM ACTUAL PRACTICE.

EDS. COUNTRY GENTLEMAN—It is commonly thought that celery can be properly grown only by professional gardeners. The following will show that its culture is as simple as that of cabbage or beans, and perhaps induce many to grow a vegetable which is no longer a luxury, but a necessity.

The following I extract from my daily diary of operations. I keep a Dr. and Cr. account with all crops, I as do not believe in guessing at when sown and when ripe. April 6, 1886, cold frames for celery seed, 14 by 9 feet; excavated one spit deep, not shoveled; six inches mixed cow and horse manure (short) put in and well mixed with loose soil left at bottom, three inches of fine soil on top; when finished, flush with natural soil. Put 6 inch hemlock board in front, 10 inch board at back; sides, flush 10, flush 6. This is for two sash of U. S. waterproofing fibre cloth, 6 ft. 6 in. long and 4 ft. wide, made as heretofore described in COUNTRY GENTLEMAN. Soil tramped and raked; drills marked with a 3-inch marker (an old hay rake head answers the purpose for this); seed sown an eighth of an inch deep (Henderson's Dwarf White and Boston Market), covered very lightly, just as thick as the seed. Lay two boards on when finished, and tramp the roughly. As you tramp the one board, lift the other and lay it close to the first one; you will then have no ridges and all the seed will have an equal pressure; when finished, all should be perfectly smooth, not a mark or ridge visible. Put on your waterproofing fibre cloth sash, giving no water or air for three or more days, according to the weather; when your surface is dry, then give a very gentle sprinkling with a light, fine rose watering pot; avoid by all means any slashing.

Ninety-nine per cent. of all the grumbling about bad seed arises from the sower's inattention to proper depth of sowing, and the non-use of feet tramping or of the roller. No legitimate seed merchant can afford to sell bad seeds. I was once called on to visit a sown field of five acres of similar crop to one that I had up and doing well. It was not doing well at all, only a plant here and there. We both bought our seed from the same seed merchant, but my neighbor sowed his too deep. If you purchase from the corner grocery store, you

(1) See Journal for October.



must expect bad seed, and expense of preparing all lost—the best is cheapest in all things, according to my experience.

The above sown is for use from September 1st to November. When the leaves touch in seed bed, take a pair of sheep shears and clip all down to about one inch from surface of bed. (1) When they make a new growth, transplant into ordinary garden soil, about 3 inches apart. In this operation have your waterproofing fibre cloth loose, one end tacked on board, and stretch it over as you proceed, for shading; if you have any sash made of it not in use, drive wooden pins in the ground at ends of sash and let them rest on the pins; these are easier lifted when watering is necessary.

For early and late I transplant from the seed bed. Letting them remain in seed bed until permanent planting makes the tap root look like a medium-sized parsnip, and more or less misses will occur, whereas those transplanted lift with a fine mass of fibrous roots, and no misses; they are the cheapest.

June 26th, planted out this celery on land on which spinach had been grown, in drills five feet apart; drills opened with 2-horse plow, depth 18 inches; ears passing between drills, dropping 6 inches of manure in each drill, men following forking it in with loose soil left at bottom; then tramped with feet, man marking centre with end of hoe or rake handle; boy dropping plants six inches apart; men planting with iron-pointed dibbers, watered with liquid manure, from cistern liquid, laundry suds and animal urine. Waterproofing fibre cloth, being one yard wide, is ripped in two; it rips straight, and will not ravel at edges. Boys lay this 18-inch wide cloth on top of plants, laying stones or clods along just sufficient to prevent wind lifting it. This, one boy takes off by rolling it round like a ball of cord (it will not crease), thus doing away with our old plan of laying sticks across the drills, and foot-wide boards on them. The sun soon warps these boards, making them useless for after-use. I have used evergreen branches and deciduous tree branches for the same purpose; this cloth does away with all that. It is cheaper, even with the handling on the plants, than all previously used material, and does away with the waiting for a cloudy day to transplant in; you can do it now at your time, not the weather's.

Aug. 23, earthed up celery to top. Sept. 1, first dug; well blanched and crisp. After seeing Henderson's White Plume celery grown on Long Island, close by the sea, on a very sandy loam, where with other varieties it was the poorest, and being told by others in the same vicinity that it was a humbug, I so concluded. A neighbor of mine grew it, not, I think, with as much care as I did my Boston Market, and the White Plume was far superior to mine, being better blanched, and sold for 25 cents a dozen more than mine. Neither did it rust so soon; hot weather will cause rust. (I should have said that I advise all growers, after plowing and harrowing their land, to give it a liberal dose of salt to kill cut-worms and blackhead grub; these will eat into the heart of the celery, but salt will destroy them.) (2) Those not living on the sea shore I advise, by all means, to grow White Plume celery—so much so, that if I were preparing to grow 100,000 plants for fall use, White Plume would be my only variety. What it may be for winter use I know not. If you throw up in the air a head of Henderson's Dwarf, when it reaches the ground it will be a Boston Market. I can see only one difference—Boston Market suckers. As I know that Mr. Peter Henderson is the best authority in the United States on celery, I wish he would state the difference, if any, between Boston

Market and Henderson's Dwarf. We want this from Mr. Henderson as a *market gardener*, not as a *seedsman*. (1)

GERALD HOWATT.

#### A Chat on Dairy Farming.

An address was delivered by Mr. G. Barham before the Tunbridge Wells Farmers' Club on the 18th ult., the president, Mr. D. H. Hutchence, in the chair. We take one or two extracts:—

#### CONVERSION OF MILK.

A dairy farmer has three methods of turning the produce of his cows into money. One is by making butter, another is the manufacture of cheese, and the third is by selling the milk for consumption. At recent prices cheese has not returned more than 5d. per gallon for the milk, and many of the cheese factories have not given so much during the past summer, notably the one at Longford, which has only paid its contributors 4d. per gallon, while 4½d. has been considered a good price, and many farmers have not made more than 3d. per gallon for their milk.

With the use of a separator, butter-making is more profitable. A pound of butter can be made from 2½ gallons of good milk; this, at 1s. 2d. per lb., will give you 5d. per gallon, besides the skim-milk.

But selling milk for consumption is the most profitable, especially in a favoured district like this, surrounded as it is by residential towns such as this, and Brighton, Hastings, Eastbourne, &c., to say nothing of the great metropolis within easy distance. Even in the present bad times milk will average fully 8d. per gallon, and if the railway carriage be paid out of it, the farmer will be considerably better off than if he made either butter or cheese.

As regards butter making, let me compress a few remarks into a very small space. First, if you are setting milk in pans, let me advise you to give the first man you meet £5 to come and steal the pans; and then buy a separator. (2) You must not tell me that you cannot afford it. An outlay of £19 is all that is needed, and for this sum a hand separator can be purchased, such as you have seen at work to-night, capable of efficiently separating 25 gallons per hour. It will be better for you to sell a cow, or even two, if necessary, rather than do without a separator another day, for it has been proved by careful experiments at the Munster Dairy School and other places, that by the use of a separator as much butter may be obtained from the milk of fifteen cows as twenty will give by the ordinary methods of setting. Think of it—the produce and profit of twenty cows, and the expense and trouble of keeping only fifteen. But this is not all, for the butter will be of a better and more uniform quality. Only quite recently a gentleman who had a difficulty in placing his butter at 1s. per lb. has now, by the use of a separator and *délaiteuse*, made it of such regular, even, and superior quality that he has customers for it at some of the best London hotels at 1s. 6d. per lb. Remember, in butter-making, to leave off churning as soon as the butter comes in granules; do not wait for it to form in a lump. This has often been reiterated, but the old practice still prevails, and even in butter-making competitions you will find that five out of every six competitors churn their butter into a lump before stopping. You should make it a rule to churn three times a week in the summer, and twice in the winter, but the cream should be slightly acid

(1) This is quite a new idea to me, but "the thing bears a face"

A. R. J. F.

(2) Salt will, according to my experience, do nothing of the sort, unless put on, at a rate per acre that will destroy every green thing.

A. R. J. F.

(1) A very useful article, though couched in the queerest English. Celery is easy enough to grow, but unless the land is made very rich, and kept moist, this climate will not allow the stems to become crisp and tender.

A. R. J. F.

(2) I thoroughly agree with Mr. Barham.

A. R. J. F.

before churning. (1) This may be produced by the addition of a little butter milk twelve hours before churning, or by increasing the temperature to 65 deg. Fabr., and covering it up for a few hours. Slightly sour (not stale) cream will give more butter, and of better flavour than cream perfectly sweet. An enormous quantity of butter is lost every winter from neglect of this rule, as in very cold weather cream does not sour even in a week. The Scotch churn whole milk, and the same thing is done in the Channel Islands, but great care is taken to "lapper" it that is, to give it sufficient acidity to thicken before churning. (2)

### THE HARROWS.

The past twenty years have witnessed a great improvement in the implements for pulverizing the surface of the soil, and in the aid they have afforded in preparing for and cultivating crops. At an earlier date some of the best farmers were aware of the importance of fine pulverization, and with the old Scotch and other erect tooth harrows, made up in continued repetition what these implements lacked in efficiency. Since then we have witnessed the advantages of using where needed the Shares, disc, slant tooth, Acme, and the several spring-tooth harrows. These have made the work so much easier, that the farmers who use them are tempted to make too short work with them, and not to give that complete finish to a fine, mellow soil which the best success demands.

The disc harrow, and the Acme (the latter somewhat similar in principle to the Shares, and a great improvement on it,) have the advantage of working efficiently on inverted sod without tearing up the grass. They press down the lower portion of the sod at the same time that their blades slice up and pulverize the upper portion. Hence their value in preparing inverted sod for planting corn, for working in young orchards, the roots of which they will not tear, and for covering broadcast seed. The Acme is valuable for many purposes, where the soil is already in partial condition, but which may be finely pulverized and cleared of weeds without the slow process of plowing. The spring tooth harrows will work in hard or stoney ground to which the last mentioned is not adapted, and which would otherwise require the use of the plow. They are not so well adapted to pulverizing the surface of inverted sod as the teeth, pointing forward, would be more likely to tear up the buried grass. The slant tooth or smoothing harrow has some advantages not possessed by the others, among which is clearing out the starting weeds in the rows of young corn, and entirely saving the labor of hand hoeing, (3) and in harrowing crops of grain broadcast in spring, by which the crop is often largely increased. Like the disc and Acme, it may be used on the surface of inverted sod, and in young orchards, the roots of which it will not injure, and it performs a good service in breaking up and spreading evenly coarsely spread manure.

These different harrows are not all suited alike to different soils and conditions of land, and farmers must judge for themselves which will be the most useful, and provide themselves accordingly. A freer use of them generally would undoubtedly increase the farm crops of the country at large.

C. Gent.

(1) I confess myself a partizan of the "slightly acid" faction. I find the creamery butter, as a rule, decidedly *fade* or insipid.

A. R. J. F.

(2) I never tasted any butter fit to eat in either country.

A. R. J. F.

(3) It may be so, but I never saw any implement that would thoroughly clean foul land without the use of the hand-hoe.

A. R. J. F.

The Chicago pleuro-pneumonia is believed to be thoroughly extinct, and the governor of Illinois asks that all quarantines against the State be removed. There are rumors of sporadic outbreaks in Ohio and Northwest Pennsylvania, to which not much importance need probably be attached at present—reporters for the daily press are very likely to diagnose any sickness among cattle as "contagious pleuropneumonia," now that they have generally become informed that there is such a disease in the country and that it is of a serious nature.

The cattle disease commissioners of Massachusetts sent the following communication to the Board of Health last week:

"It having come to the knowledge of the undersigned, that contagious pleuro-pneumonia, or lung plague, has made its appearance in at least eight counties of the State of New York, you are therefore directed to seize and quarantine, at the expense of the owners thereof, all working oxen, milch cows and store cattle, which are brought to your municipality from that State after this date, unless they have a special permit from this board, or from a United States inspector.

"Beef cattle which, in your judgment, are intended for immediate slaughter, and are not being surreptitiously moved for other purposes, you will allow to pass from either Watertown or Brighton to the abattoir, but cattle going to remote places in the State must be moved by railroad to the nearest designated place of slaughter, and may be thence driven to the same."

### NON-OFFICIAL PART.

#### The Culture of Farm Crops.

The necessity for an accurate knowledge of the principles of Agriculture for the guidance of farmers; presented in a plain and simple manner so that it can be easily understood, has been very apparent to all concerned, both to those whose business is to teach and to those who have to learn. This paramount need has led to the production of a Hand-book of Agricultural Science and practice by the well known author and writer upon Agricultural matters Mr. Henry Stewart. This work is entitled the "Culture of Farm Crops" and is intended to tell the whole story of Farm practice and to explain the principles upon which this practice is based. This book should be in every farmer's house and in every student's library; for the farmer it is a library in itself and for the student a most valuable book for reference, because of the very large amount of matter which is condensed in its pages. It is published by Duane H. Nash, of Millington, Morris Co., New Jersey.

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