

known to the plant pathologist. There are a large number of different bacteria producing a soft or wet rot, and also scores of fungi, which find the prevailing conditions suitable for their growth and development, and produce dry rots and decay of various forms. Whatever form of rot may be developing in storage the prevention of losses will be the same in every case, and may be summarized in the following suggestions:

1. Sound, ripe and undamaged potatoes will keep in this condition unless brought into contact with tubers showing signs of decay.
2. The prevention of losses in the storage must begin in the field, where the growing plants should be regularly sprayed to prevent diseases likely to affect the tubers.
3. Potatoes should be dug when ripe if possible. Care should be exercised to prevent damaging tubers when digging. Frozen and damaged potatoes, as well as those showing signs of disease, (with the exception of common scab) should not be placed in storage with sound ones, but must be carefully picked out.
4. Bins, pits, cellars should be cool, not above 40 degrees at any time, and good ventilation should be provided.
5. The stored tubers should be overhauled at intervals, and any potatoes showing signs of disease should be removed.

If the above suggestions are carried out not only will the losses in storage be wholly prevented, but the chances of carrying certain diseases over to next year, by the use of unsound tubers, will be eliminated. In view of the fact that potato canker and powdery scab, two European potato diseases, may at any time become established in the Canadian potato crop through the use of infected tubers, this latter precaution becomes the more important.

H. T. GUSSOW,
Dominion Botanist.

Rhubarb.

Rhubarb is one of our most useful of garden stuffs, the stalks being so much used for cooking and the roots as medicine. It is our earliest spring dish, and what is more welcome after the long winter without anything green! And it is so healthful. And yet, as a rule, it receives little or no attention. It is generally planted in some out of the way spot where it is never cultivated and never receives any fertilizer, with the result that it is not a success, in fact it is no good, especially after the first year.

We have ours planted in our vegetable garden where it is well cultivated (grass should never be allowed to grow around it) and each fall receives a thorough enriching with barnyard fertilizer. We then have rhubarb as early in the spring as is possible in our climate, and it certainly pays one for the trouble, as it is always a good price, and is in great demand in our towns from early spring until the local strawberries are ripe.

I know of no way one can derive more profit from the same amount of land and with as little time expended

Leeds Co., Ont.

SUNBEAM.

The Montreal Gazette recently published an item stating that a man in Winnipeg, Man., a few days ago bought a barrel of apples, paying \$5.25 for it, and in it he found a note written by the grower which read, "I got seventy cents for this barrel of apples; what did you pay for it?" A buyer's commission, transportation companies' toll, cartage, and a wholesalers' and retailers' commissions in Winnipeg were possibly the means of the difference of \$4.55. The railroad would likely get about \$1.00 or a little more. What an advantage to the grower and to the consumer if sales could be made direct.

THE FARM BULLETIN

The Toronto Fat Stock Show.

The Annual Fat Stock Show held at the Union Stock Yards, Toronto, on Tuesday and Wednesday, December 10 and 11, was the third event of this kind held at these yards. Both in point of numbers and quality the show easily surpassed its predecessors. The total entries, single and car lots, totalled 167 and covered a wide area. Several thousand animals were shown. Perhaps the principal attraction was a carload of Hereford steers from Alberta. Some of these had been previously shown in the Western Provinces—one having carried off a championship prize. The shipment made by Messrs S. Downie and I. Groff was a splendid example of what can be accomplished on the prairie, as the cattle had practically not seen the inside of a stable. Their rugged coats gave them much the appearance of buffalo and many who saw them commented on the similarity. The showing of purebred cattle was somewhat interfered with because of the Guelph Winter Fair, but otherwise the Toronto exhibit

was little, if any, impaired because of its competitor. In almost all classes the competition was unusually keen, the judges having repeatedly to have the animals presented in different aspects before making their final decision. The baby beef classes were well represented, and proved an eye-opener to those who have not followed the cattle-raising development closely along this line. It was noteworthy that most of the prizes in cattle went to either reds or roans. Exhibits of sheep and swine were not so numerous as that in cattle, but several good pens of sheep, lambs and hogs were on hand, and were fairly representative of what Ontario can do in these classes of stock. One pen of Tamworth hogs deserve special mention. These did not obtain the first prize because of being a little over weight, but, except for this, they were a splendid example of the bacon hog so much desired by packers. The list of judges was as follows:—James Bowman, Guelph; F. Hunnisett, Toronto; E. Puddy, Toronto; B. Slattery, Ottawa; C. McCurdy, Toronto; W. J. McClelland and C. Muffitt, Toronto; J. H. Dingle, Hamilton; Jos. Baker, Hamilton; J. Kohler, Cayuga; R. Carter, Toronto; W. J. Johnstone, Toronto.

AWARDS.—CATTLE.

Pure bred steers, two years and under three—1, John Black, Belwood; 2, J. D. Ferguson & Sons, Mapleton.

Pure bred steers, one year and under two—1 and 2, A. Barber, Guelph; 3, Jas. Leask & Son, Greenbank; 4, W. A. Douglas, Tuscarora.

Pure bred steer, under one year—1, R. F. Duncan, Ancaster; 2, Brown & White, Galt.

Pure bred heifer, two years and under three—1, Wm. O. Coon, Penville; 2, Brown & White, Galt; 3, R. McMurray, Thorndale.

Pure bred heifer, one year and under two—1, Kyle Bros., Ayr; 2, Brown & White, Galt; 3, A. Barber, Guelph.

Pure bred heifer, under one year—1, R. F. Duncan, Ancaster; 2, Kyle Bros., Ayr.

Champion pure bred steer or heifer—A. Barber, Guelph.

Grade or cross-bred steer, two years and under three—1, Jas. Leask & Son, Greenbank; 2, Robson & Freid, Washington; 3, John Black, Belwood; 4, J. F. Andrews, Goderich.

Grade or cross-bred steer, one year and under two—1, J. A. Watt, Salem; 2, Pritchard Bros., Fergus; 3, A. Barber, Guelph; 4, Robson & Freid, Washington, Ont.

Grade or cross-bred steer, under one year—1, Jas. Leask & Son, Greenbank; 2, Hugh McGregor, Brucefield; 3, J. F. Andrews, Goderich; 4, Wm. Pridham, Mitchell.

Grade or cross-bred heifer, two years and under three—1, Kyle Bros., Ayr; 2, R. Bates, Shelburne; 3, Wm. Scaife, Grand Valley.

Grade or cross-bred heifer, one year and under two—1, Pritchard Bros., Fergus; 2, W. S. Hair, Watford; 3, John Black, Belwood.

Grade or cross-bred heifers, under one year—1, John Black, Belwood; 2, J. F. Andrews, Goderich; 3, A. Elcoat, Brucefield.

Champion grade or cross-bred steer or heifer—Jas. Leask & Son, Greenbank.

Grand champion pure-bred grade or cross-bred steer or heifer—Jas. Leask & Son, Greenbank.

Carload 15 steers, 1,200 to 1,500 pounds—1, Groff & Downie, Carstairs, Alta.; 2, Brown & White, Galt; 3, A. Cormack, Paisley.

Carload 15 steers, under 1,200 pounds—1, J. D. Larkin, Queenston; 2, John Black, Belwood; 3, Brown & White, Galt.

Carload 15 heifers—1, Brown & White, Galt; 2, John Black, Belwood; 3, J. Shea, Dublin.

SHEEP.

Pen of three long-wool wethers or ewes, one year and under two—1, John Houston, Chatham.

Pen of three long-wool wethers or ewes, under one year—1 and 2, A. Barber, Guelph; 3, John Black, Belwood.

Carload 50 long-wool fat sheep—1, John Houston, Chatham; 2, C. F. Jackson, Port Stanley.

Carload 50 long-wool lambs, wethers or ewes—1, J. F. Stapleton, Petrolia; 2, A. Barber, Guelph; 3, T. Harris, Ripley.

Pen of three short-wool wethers or ewes, one year and under two—1, Geo. Baker & Sons, Burford; 2, John Houston, Chatham; 3, C. F. Jackson, Port Stanley.

Pen of three short-wool wethers or ewes, under one year—1, J. F. Stapleton, Petrolia; 2, A. Barber, Guelph; 3, Geo. Baker & Sons, Burford.

Carload 50 short-wool fat sheep—1, Brown & White, Galt; 2, C. F. Jackson, Port Stanley.

Carload 50 short-wool lambs, wethers or ewes—1 and 2, C. F. Jackson, Port Stanley; 3, J. F. Stapleton, Petrolia.

BACON HOGS.

Pen of three bacon hogs, barrows, 180 to 225 pounds—1, Leo. Chard, Lambton Mills; 2, J. H. Simon, Chatham; 3, W. J. Taylor, Varna.

Carload 50 bacon hogs, 180 to 225 pounds—1, Graham & Merrick, Udonia; 2, John Black, Belwood; 3, J. H. Simonton, Chatham.

THE SALES.

On Wednesday the entries were sold at auction. Fancy cattle brought slightly higher prices than a year ago. Every lot excited keen rivalry for ownership, and the result was accepted as a good all-round sale. The sale drew buyers from all the important centres in Ontario and Quebec, most of the prize cattle going either to Hamilton, Ottawa, Montreal or Toronto. The grand champion steer, shown by Jas. Leask & Son, after exciting bidding, went to Will J. Lord, of Hamilton. This animal weighed 1,700 lbs. and was sold at 30c. per lb. live weight. Other single animals in the prize-winning class ranged up to 19c. per lb. live weight. For full loads of prime steers and heifers the range was from 7½c. to 10c. steers sold to Wesley Dunn at 9c. per lb.; steers sold to Wesley Dunn at 9c. per lb.; second-prize steers to Harris Abattoir at \$7.85 per cwt., and third-prize steers to Swift Canadian Co. at \$7.50 per cwt. The loads of first, second and third-prize steers, under 1,200 lbs., sold to Harris Abattoir at \$8.55, \$8.25 and \$8.50 per cwt. respectively. The load of first-prize heifers sold to Harris Abattoir Co. at \$8.50 per cwt.; second-prize heifers to Swift Canadian Co. at \$7.74 per cwt., and third-prize heifers to Puddy Bros. at \$7.60 per cwt. The prices for lambs were decidedly firm at figures ranging anywhere from 7½c. to 10½c. a lb., and sheep at 4½c. to 5c. per lb. The various offerings of hogs sold at from 8½ to 9 cents.

The attendance at the sale was a record one, and, in the opinion of old stockmen, was one of the most spirited that they had ever attended, not even excepting Chicago or other large livestock centres. The close of the Toronto Fat Stock Show has evidently left a favorable impression for future exhibitions, and the Union Stock Yards may be depended upon to allow nothing to stand in their way of making a record next year again in excess of that of any previous show. Manager J. H. Ashcroft deserves great credit from the live stock interests of Ontario and the Dominion for bringing the show to such a successful issue. He was more than pleased with its progress, and renewed his prediction that a few years would see the Union Yards making the premier fat stock show in the Province.

World and U. S. Crop Reports.

The November number of the Bulletin of Agricultural Statistics, edited under the direction of Prof. Umberto Ricci, issued by the International Institute of Agriculture, reviewing the principal crops of this year in the chief producing countries of the world, shows moderate success compared with 1911 in wheat, barley, and larger increases in case of rye, oats and corn.

The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture estimates, from the reports of correspondents and agents of the Bureau, that the winter wheat area sown this fall is 2.5 per cent. less than the revised estimated area sown in fall of 1911, equivalent to a decrease of 928,000 acres, the indicated total area being 32,387,000 acres. Condition on December 1st was 93.2, against 86.6 and 82.5 on December 1st, 1911 and 1910, respectively, and a ten-year average of 89.9. The rye area sown is 1.4 per cent. less than the revised estimated area sown in fall of 1911, equivalent to a decrease of 35,000 acres, the indicated total area being 2,443,000 acres. Condition on December 1st was 93.5, against 93.3 and 92.6 on December 1st, 1911 and 1910, respectively, and a ten-year average of 93.2.

Sugar Beet Industry.

In a recent address by the Earl of Denbigh, on the subject of Beet Sugar as a British Industry, the speaker referred to the fact that in addition to the sugar produced, the residue formed an excellent food for dairy cattle. He also pointed out that bakers' yeast was now being made in Austria from sugar beets in a more economical way than from any other source. Lord Denbigh also stated that alcohol for industrial uses could be obtained in large quantities from sugar beets, and mentioned that there was an enormous market for this product and that twenty-two million gallons of this spirit were made in France in 1905, while Germany in 1903 used forty-nine million gallons for industrial purposes, while only five and one-half million gallons were used in the United Kingdom.—E. D. Arnaud.

The Coming Corn Show.

To Ontario corn growers the big event of the coming year will doubtless be the Annual Convention and Show, to be held at Windsor, Ontario, February 11 to 14, 1913. The best authorities on corn culture have been enlisted to take part in the program.

Horses

The Ontario Guelph, Ont. classed down goes down fair ever held was superb heaviest draught horses, shown years. A in this Province proved tendance was show, all pnesday whe through the brought out financially It was tr tion to the lack of acc ever. To task which face. Not pens inadeq the seating arena is fa the real fa cares to s in full vie a standing other proje Dominion, laid in the be done, crowded ou because of exhibiting intention o be held in center and large indu there Guel greatest w However, r and the fa is provided the accom ing, but su

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