

All club-rooted plants should be burnt, and, if a field is infested, it should not be planted again to cabbage, cauliflower or turnips for some years. Heavy liming, 75 bushels per acre, gave good results in some cases in checking the disease. Diseased plants should not be fed to stock, as it will be spread again through the manure.

The germ of potato scab does not thrive well on acid soils, and is worst where soils are alkaline. Ashes, lime or stable manure generally favor scab. A clover sod will generally produce clean tubers. Rotation of crops is always advisable. Avoid scabby seed, and treat all diseased tubers with formaldehyde solution. For the blights, nothing yet discovered can take the place of Bordeaux. This, if properly applied, and the work done thoroughly, will prevent blight. Thoroughness, and proper mixing of the materials, was all-important.

INSECTS ATTACKING VEGETABLES.

J. M. Swaine, Macdonald College, spoke on "Insects Attacking Vegetables," such as the flea-beetles, potato-beetle, squash bug, cutworm, etc. For the cutworm, he recommended 1 pound Paris green to 40 pounds of bran. The bran is dampened, and the Paris green well mixed into it, and this poisoned bran is well scattered around the plant. They will feed on this, in preference to the plants. For the cucumber beetle, he advised the use of Bordeaux as a repellent spray; it had proved satisfactory. For the potato beetle, he thought one pound Paris green to 50 gallons of water plenty strong. The reason why better results are not obtained, and stronger than this quantity used, is that the Paris green is not kept well agitated, and not thoroughly applied.

Emile Le Plante, St. Jerome, Que., gave an inspiring address on the value of such organizations as this. "The sections making progress," he said, "are co-operating as you are, aiming to make improvement all along the line. There is not much difficulty in finding those who will criticise the work you are doing, but the good you are doing counterbalances all such criticism. Secure more agricultural papers. Keep adding to your library. Procure the best books you can get, and study them, and give the boys on the farm a chance to get the latest information possible." He referred to the growing of cauliflower from observations made in some of the best cauliflower districts around New York. His address was right to the point, and gave many valuable hints. The Government of Quebec is fortunate in having in their service Mr. La Plante, who is a well-informed and interesting speaker.

TOMATOES UNDER GLASS.

"Tomato-growing Under Glass," was the subject of an address by Prof. Blair, who pointed out that it was doubtful whether profitable tomato crops could be secured during January and February. Experiments conducted would indicate that plants started July 1st, and benched in August, which would finish their crop early in January, followed by a second crop started the last of October, and benched in January, which would give fruit during latter part of March, April and May, were the most profitable.

Onion-growing was discussed by Wm. C. Dreher, of Macdonald College, who pointed out the importance of making better use of the hand wheel-hoe. This tool is not used to any extent by onion-growers, and, if they once adopted it, they would find the cost of growing this crop greatly lessened. He also advised the use of the slatted crate for the proper curing of onions. Onions, as a rule, are stored in too great a bulk after taken from the field, and are liable to heat and grow, as a result. The crate is convenient for handling, and through them the crop can be handled more economically.

ASPARAGUS.

"Asparagus-growing" was treated by Stanton Jack, of Chateauguay Basin. He advised the use of one-year-old plants. Too much fertilizer could hardly be used, and this should be applied in the spring and early summer, after the cutting had finished. During August and September was when extra care should be given, for at this time the plants were storing up energy and food for the next spring's crop. The roots should be given lots of space; six feet between the rows, and 18 inches apart in the row, was not too much.

The meeting continued to a late hour, and all expressed themselves as well pleased with the meeting. Thanks were expressed to Prof. Blair and others from Macdonald College for interest in their behalf.

Robert Shepherd, of Parkside, Aston, Preston Brook, England, a subscriber to "The Farmer's Advocate," was winner in the Royal Prize-farm contest in the large arable class for this last year. His farms consist of 420 acres, although he began in a small way with about 120 acres all of twenty-two years ago.

Demonstrate Ontario's Apple-growing Capabilities.

Editor "The Farmer's Advocate":

The apple-growers of Ontario should seize the opportunity now offered them of holding a National Apple Show at Toronto next fall.

One of the developments brought about through our short crop of apples has been the increased offerings to our consumers of high-grade Ontario apples in boxes. Heretofore, our better grades of apples went to the Old Country. We have wrapped in tissue paper and tiered in boxes our choicest apples, and been pleased when they sold in the Old Country for from 6s. to 10s. per box. This year they are selling here for that much. If our short crop will make our Ontario consumer better acquainted with our high-grade apples, we apple-growers will never regret it.

This season we have United States boxed apples offered in our markets. We have seen an apple inferior to many of our Ontario apples selling to Ontario consumers for more money than the home product, and mainly because offered attractively. We apple-growers have neglected to cultivate our home markets with high-quality apples, and the demand is being supplied with high-priced foreign oranges and apples.

The apple should be more largely filling the place now filled by oranges. There is no denying the fact that the box is the only package in which a fancy apple should be offered to the consumer. Canadian consumers, as well as foreign, like an apple clean and without a bruise, and many are willing to pay for it; and the box, assisted by paper wrappings, can carry such apples.

Our Governments cannot do a better act to assist the apple industry than in furthering the National Apple Show at Toronto next fall. It will educate our growers to raise cleaner apples and pack them better, and it will also educate our consumer to appreciate a good apple, attractively offered him.

Elgin Co., Ont.

United States Standards for Paris Green and Lead Arsenate.

By "The Insecticide Act of 1910," which became effective in the United States on the first of January, 1911, Paris green is considered adulterated if it does not contain at least 50 per cent. of arsenious oxide; on the other hand, it must not contain arsenic in water-soluble forms equivalent to more than 3½ per cent. of arsenious oxide, and no substance may be mixed with it so as to lower its strength. Lead arsenate is counted adulterated if it contains more than 50 per cent. of water, or if its total arsenic is equivalent to less than 12½ per cent. of arsenic oxide, or if it contains arsenic in water-soluble forms equivalent to more than .75 of a per cent. of arsenic oxide, or if any substance is mixed with it so as to lower its strength. If lead arsenate contains more than 50 per cent. of water, it must be labelled "lead arsenate and water," and the extra percentage of water must be plainly stated. Any other insecticide or fungicide is considered adulterated if its strength or purity fall below the standard under which it is sold, or if any substance has been partially or wholly substituted for it, or if any valuable ingredient has even been partially removed, or if it is intended to be used on vegetation, and is injurious to vegetation. If the designation of an article imports the presence in it of a certain substance, that substance must be present in the customary amount.

Any insecticide or fungicide is misbranded if the label bear any statement, design or device that is false or misleading in any particular, either as to the character of the article or as to the place of manufacture. And the term "label" is defined so as to include any circulars, etc., that are packed with the article or referred to either on the label or on the circulars accompanying the article. If the contents are stated in terms of weight or measure, they must be correctly stated.

Holdings of Apples.

Of the total holdings of apples in storage, both box and barrel, in the United States and Canada, the States of New York and Illinois hold almost half of the total, says P. W. Hodgetts, Director of the Fruit Branch, Department of Agriculture, Toronto. Another quarter of the total, or about 900,000 barrels, is held in Missouri, California, Ohio, Massachusetts and Washington, these States standing in importance in the order named.

A close calculation indicates that present holdings are short of the same time last year by nearly 400,000 barrels, or about ten per cent. The shortage is chiefly in the stocks in Canada and Nova Scotia, the holdings in the United States being about the same or a little less than a year ago.

The figures include both box and barrel stock. The box holdings are about double what they were at this time last year, the total number of boxes being about 5,500,000.

THE FARM BULLETIN.

Programme of the Ottawa Live-stock Show.

The following very interesting programme of judging and addresses has been arranged for the coming Eastern Show:

TUESDAY, JANUARY 17th.

- 8.00 a.m.—Judging Poultry.
- 1.30 p.m.—Judging Beef Cattle, Sheep, Bacon Hogs, Poultry.
- 4.30 p.m.—Judging Horses.
- 4.00 p.m.—Address: "Paying for Milk by Cheese Factories, According to the Percentage of Butter-fat and Casein in the Milk." By H. H. Dean, Professor of Dairy Husbandry, O. A. C., Guelph.
- 4.30 p.m.—Address: "The Care of Milk on the Farm." (Illustrated by stereopticon views.) By Geo. H. Barr, Chief of Dairy Branch, Ottawa.
- 7.30 p.m.—Judging Horses.
- 8.15 p.m.—Judging Beef Cattle.
- 9.15 p.m.—Judging Horses.

WEDNESDAY, JANUARY 18th.

- 8.30 a.m.—Judging Poultry.
- 9.30 a.m.—Judging Sheep, Swine, Seeds, Horses.
- 10.30 a.m.—Address: "Classification of Horses at Shows." By Wm. Smith, President Ontario Horse-breeders' Association, Columbus, Ont. Discussion by M. Cumming, B.A., B.S.A., Principal, College of Agriculture, Truro, N. S.
- 11.00 a.m.—Address: "Training Horses." By F. C. Grenside, V.S., Guelph.
- 11.30 a.m.—Address: "Why not Horse-raising on the Same Business Basis as Dairying?" By M. Cumming, B.A., B.S.A., Principal, College of Agriculture, Truro, N.S.
- 1.30 p.m.—Judging Horses.
- 2.30 p.m.—Address: "Pastures and Supplementary Fodder Crops." By C. A. Zavitz, Professor of Field Husbandry, O.A.C., Guelph; C. R. Klinck, B.S.A., Guelph.
- 3.00 p.m.—Address: "Growing Roots." By Thos. McMillan, Seaforth.
- 3.30 p.m.—Address: "Storage and Feeding of Roots." By J. H. Grisdale, Dominion Agriculturist, Experimental Farm, Ottawa.
- 4.00 p.m.—Address: "Production of Eggs." By W. R. Graham, Professor of Poultry Husbandry, O. A. C., Guelph.
- 4.30 p.m.—Address: "Feeding and Selling Poultry." By F. C. Elford, Manager Poultry Department, Macdonald College, Que.
- 8.00 p.m.—Public Meeting will be held in the lecture hall, at which prominent public men will deliver addresses, and a musical programme will be rendered.

THURSDAY, JANUARY 19th.

- 9.30 a.m.—Judging Beef Cattle.
- 10.30 a.m.—Address: "Beef Cattle Industry in Ontario." By Thos. McMillan, Seaforth. Discussion by Robert Miller, Stouffville.
- 11.00 a.m.—Address: "Underdraining" (illustrated by stereopticon views). By W. H. Day, Professor of Physics, O. A. C., Guelph.
- 1.30 p.m.—Judging Horses.
- 1.30 p.m.—Auction Sale of Seed Grain.
- 2.30 p.m.—Addresses: "Corn." (a) "The Seed," by E. D. Eddy, B. S. A., Seed Department, Ottawa; (b) "Seeding, Cultivation, Harvesting and Preservation," by John Fixter, Farm Superintendent, Macdonald College, Que.; (c) "Feeding," by J. H. Grisdale, Dominion Agriculturist, Experimental Farm, Ottawa.
- 8.00 p.m.—Judging Horses.
- 8.00 p.m.—Annual Meeting Poultry Association of Eastern Ontario.

FRIDAY, JANUARY 20th.

- 10.00 a.m.—Sale of Cattle, Sheep and Swine Carcasses, and Dressed Poultry.
- 10.30 a.m.—Judging Horses.
- 1.30 p.m.—Auction Sale of Pure-bred Cattle.

Railway Statistics.

During 1910 an addition of 627 miles was made to the railway mileage of Canada, but some 4,500 miles were in June last "under construction." Railways were aided to the extent of \$1,789,723 in subsidies during the year, bringing up the total from the Dominion to \$146,932,180; from the Provinces, \$35,837,060; municipalities, \$17,903,823. In addition, 55,292,321 acres of land were granted, of which 32,040,378 were alienated. The outstanding capital liability of the roads was equal to \$52,361 per mile. The increase of service was 3,211,267 passengers, and 7,640,608 tons of freight. Canada has the largest average passenger and freight haul in the world. Gross earnings and operating expenses both increased, but the net earnings were \$53,550,777, or 32.3 per cent. over 1909.

Electric-railway mileage increased from 989 in 1909, to 1,049 in 1910 with a net increase of