

at present, oil cake is the most satisfactory to buy. While it does not carry quite as much protein as cotton seed, it is a safer feed as it is laxative in action, while cotton seed has a dangerous constipating effect. The bulky part of a ration can be made up of hay and silage, with the addition of roots where they are available.

While standard feeds, such as oil cake, bran and oats, are high in price, when their feeding value is considered they form the best combination of concentrates on the market at present. When fed in the ration of five parts oats, five parts bran, and one and a half parts oil cake, the mixture can be used at the rate of one pound for every four pounds of milk produced, providing the bulky portion of the ration consists of a legume or mixed hay, and a fair amount of silage.

I consider these feeds the best even at present prices, because they are safe feeds, their analysis is generally as guaranteed, and they are always on the market. The dairyman who is continually experimenting with new feeds, or combinations of feeds, stands very little chance of securing maximum production, and at present it is safe to say that there are no feeds on the market that are not selling for all they are worth, so that no bargains can be secured. The compounding of a dairy ration under any conditions resolves itself largely into a question of supplying sufficient of the required nutrients to produce milk, at the same time using feeds that can be fed without fear of dangerous results, and in the long run standard feeds are always the most satisfactory.

While maximum production can only be secured by very heavy feeding, there is a point at which further feed fails to produce proportionate results. At present when all classes of feeds are scarce, the individual feeder must determine the point after which further feeding of high-priced concentrates becomes unprofitable. There may be cases where the purchase of expensive dairy feeds is inadvisable, but that is a question for the feeder alone to determine.

Wentworth Co., Ont.

CHARLES M. FLATT.

### The Clover Bar Dispersal.

Wednesday, Dec. 10, the day scheduled for the dispersal of the Clover Bar Holstein herd, owned by the Hon. Peter Smith, proved one of the most unfavorable, in so far as weather was concerned, that Ontario has seen this season. The temperature not only dropped to something near zero, but a thirty-five mile gale also added to the discomfort of travelling public as well as upsetting all arrangements made by the management for selling. The big tent set up just outside of the stable was blown away and the machine shed had to be cleared and brought into use for the selling. The sale, however, started on time, and two and one-half hours was all that was required to dispose of the entire 46 head catalogued. Of this number 11 were calves under six months of age, and 10 others were under two years of age—and with these included the gross receipts reached a total of \$10,165, an average of \$221 throughout. The 16 cows, three years old and upwards, averaged \$320; 5 two-year-old heifers averaged \$190, and the 10 yearlings \$185.50. The four-year-old cow, Annie Abbekerk Wayne, made the top price for the day, going to R. Cooper, of Welland, at \$625. She is a daughter of Count Mercedes Ormsby, and had a 24.17-lb. seven-day butter record made at 3 years of age. The heifer calf from this cow, only a few days old, also went to Mr. Cooper at \$155. As will be seen by the buyers listed below, the cattle were well divided among buyers from nearly every district in Western Ontario. Mr. Smith may well feel that his herd was appreciated. Detailed results follow:

#### FEMALES.

Maple Grove Mercena, Alex. Frame, St. Paul's.....	\$120
Isabella Hartog, H. Waterbury, Selkirk.....	340
Annie Abbekerk Wayne 2nd, R. Cooper, Welland.....	625
Heifer calf, R. Cooper.....	155
Lady Johanna Walker, A. C. Mathews, Sutton.....	310
Nancy Pietertje of Clover Bar, Sir Henry Pellatt, King.....	385
Lily Abbekerk Ormsby, Colbeck Bros., Elora.....	215
Ida Abbekerk 4th, Colbeck Bros.....	275
Lady Paladin 2nd, Sir Henry Pellatt.....	315
Minnie Paladin Wayne, A. C. Mathews.....	380
Isabella Queen 2nd, Alex. Frame.....	200
Belle Cornucopia Clothilde, Sir Henry Pellatt.....	275
Mercena's Sir Posch 2nd, Wm. Jeffery, St. Mary's.....	300
Lady Abbekerk Ormsby, Sir Henry Pellatt.....	410
Francy Pietertje of Clover Bar, T. Moyer, Beamsville.....	170
Emma Hartog of Clover Bar, J. D. Sibbald, Westor.....	245
Minnie Hartog Wayne, A. C. Mathews.....	255
Clover Bar Flossy, Robt. Rae, St. Mary's.....	260
Ida Abbekerk Francly, Jas. Smith, Stratford.....	170
Lady Paladin Francly, T. Moyer.....	220
Clover Bar Nancy, Y. Elgie, St. Mary's.....	130
Violet Rose Hartog, E. Sweitzer, Stratford.....	510
Rose De Kol Belle, J. H. Hyslop.....	130
Rose De Kol Hartog, Sir Henry Pellatt.....	310
Ida Abbekerk Hartog, W. Stewart, St. Mary's.....	230
Lady Paladin Hartog, K. Sibbald, Weston.....	180
Maud Hartog, E. Shillenbenger, Mitchell.....	155
Ida Hartog, J. Smith.....	180
Flossy Abbekerk Kent De Kol 2nd, Sir Henry Pellatt.....	300
Flossy Abbekerk of Clover Bar, Robt. Rae.....	145
Lady Abbekerk Ormsby 2nd, J. W. Bolton, St. Mary's.....	165
Rose Snowball, T. Moyer.....	155
Violet Rose Snowball, E. Schwitzer, Sebringville.....	280

#### MALES.

Ralph Snow Ball, H. Thistle, St. Paul's.....	360
Bull Calf, Wm. Stimacher, Mitchell.....	110

Emma's Sir Francly, A. Telfer, St. Paul's.....	\$100
King Abbekerk Hartog, E. Dinsmore.....	110
Belle's Count Hartog, W. Makins, Stratford.....	100
Prince Paladin of Clover Bar, G. W. Moler, Springfield.....	115
Prince De Kol Hartog, A. Frame.....	140
Queen's Count, J. L. Hudson, St. Mary's.....	110

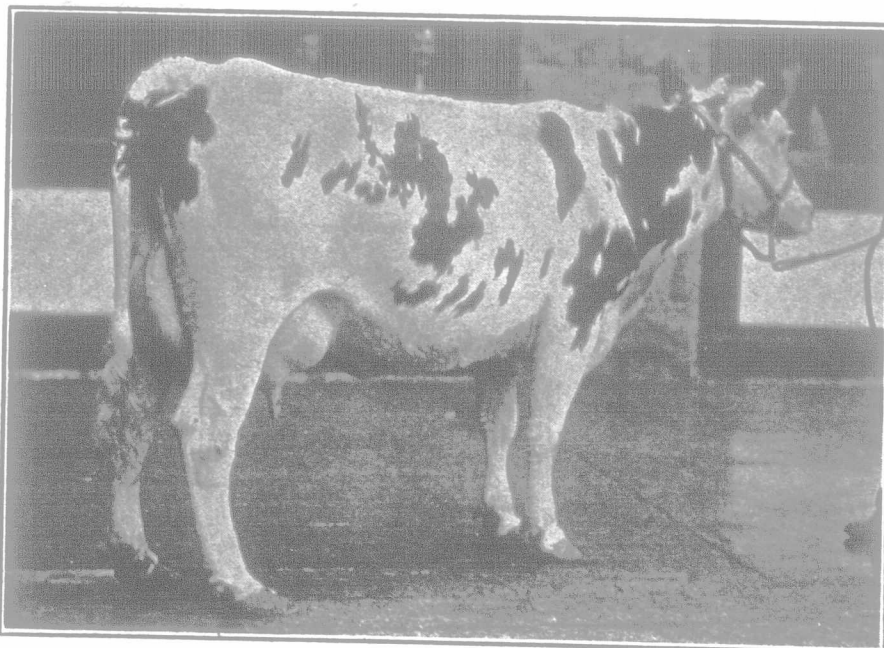
## POULTRY.

### The National Poultry Council.

A communication from E. Rhoades, Ottawa, Secretary of the National Poultry Council, has been received that indicates one phase of the work being done by the Council. It is as follows:

"The Directors of the National Agricultural Society of France have been granted a substantial credit by the French Government for the purpose of acquiring breeding poultry for the restocking of the liberated regions in France. This need was brought to the attention of the Federal Minister of Agriculture by Monsieur M. Chevalier, of the Credit Foncier Franco-Canadien, the Minister referring Monsieur Chevalier to the National Poultry Council.

"The Council is now in communication with the Agricultural Society of France and, pending receipt of information as to the quantity of the different breeds required, the Provincial Representatives of the Council are making a survey of their respective provinces in order to ascertain what stock may be available for export. The varieties favored by the French are the Barred Plymouth Rock, the White Wyandotte, Black Minorca and Rhode Island Red, and also Bronze Turkeys. An appeal is being made by the President of the Council to the Provincial Departments of Agriculture, Agricultural Colleges, and the Canadian Press, to do all possible to assist in the acquiring of the necessary information to carry on negotiations with the Avicultural Society of France, and to take advantage of the opportunity presented to place Canada in a favorable international light as a producer and exporter of breeding



Roxie Colantha Queen.

Winner of Dairy Test, Guelph. Owned by C. E. Best, Jarvis, Ontario.

poultry. The provincial officers of the National Poultry Council are as follows: P. E. I.—Dr. P. C. Gauthier, Vice-Pres. National Poultry Council, St. Louis; N. S.—H. H. Hull, Poultry and Pet Stock Association, Glace Bay; N. B.—A. C. McCulloch, Poultry Division, Department of Agriculture, Fredericton; Que.—Dr. S. Lafortune, Pointe Gatineau; Ont.—Dr. Robert Barnes, Health of Animals Branch, Ottawa; Man.—N. W. Kerr, Vice-Pres. National Poultry Council, Brandon; Sask.—H. M. Arnaud, Provincial Poultry Association, Regina; Alta.—C. M. Baker, Alberta, Provincial Poultry Association, Calgary; B. C.—H. E. Waby, British Columbia Provincial Poultry Association, Enderby, B.C.

"It is interesting to note that in a report issued by the Commissioner General for Canada in France, importations of eggs into that country in 1912 amounted to 303,243 (Quintaux Metriques), the exports for the same year being 51,155. In 1913 the imports fell to 71,162 and the exports 4,600. From these figures it will be seen that prior to the war France was a heavy importer of eggs, and no doubt efforts will be made to bring the poultry population of France above the pre-war level in order that she may be self-sustaining. Canada should be in a position to supply all the breeding poultry required, but it will be necessary for all interested to give all assistance possible to the National Poultry Council in the locating and the selection of bred-to-lay stock."

If you like "The Farmer's Advocate," tell others about it, but if there is anything about it you do not like, tell us.

## HORTICULTURE.

### Spraying Currants to Retain their Foliage.

By L. CAESAR, O.A.C., GUELPH.

Currant bushes, except where grown under shade, commonly lose their foliage many weeks before the arrival of cold weather. Some years most of the leaves fall before the fruit on black currants is ripe, but more commonly the dropping takes place about the middle of August. There is no doubt that this premature loss of foliage prevents the bushes from being as vigorous as they otherwise would be, and the crop from being as large as it should. Of course, whatever dropping occurs before the fruit is ripe, causes the fruit to be of inferior quality. The reason for this will be clear if we remember that all the good that goes to make the canes vigorous, to produce fruit buds, and to feed the fruit, is manufactured in the green leaves. Hence, it is very important to retain the foliage in a green, healthy condition throughout the growing season.

The causes of premature dropping of currant leaves are usually—first, leaf spot diseases which are caused by fungi, and second—drought. Sometimes red spiders and aphids are contributing factors.

#### SPRAYING TO PREVENT LEAF DROP.

Experiments were conducted at Burlington this past season to see whether any of the liquid sprays or dusts would prevent the falling of the foliage. The liquid sprays used were lime-sulphur, Bordeaux mixture and soluble sulphur. The dusts were the common apple orchard dust consisting of 90 per cent. sulphur and 10 per cent. arsenate of lead, the new dust composed of dry Bordeaux powder and talc, and third, dust composed of a mixture of the two just mentioned. Bordeaux mixture was used at the strength of 4 pounds of bluestone, 6 pounds of hydrated lime and 40 gallons of water; lime-sulphur at 1 gallon to 30 gallons of water; soluble sulphur at 2½ pounds to 40 gallons of water. Black currants alone were used in the experiments this year, though red and white currants are equally subject to the dropping of their foliage.

The first application was made on April 29th and 30th, which was just before the wet season began.

At this date black currant buds were bursting, and some of the leaves were about half an inch long. Many of them were about the size of a ten cent piece.

The second application was on May 18, when the blossoms on black currants were on the point of bursting, and had already burst on the red varieties.

Shortly before the third application was made it was observed that all three dusts were almost useless and that leaf spot was developing as rapidly on them as on unsprayed rows. Hence, dusting was discontinued. It was observed also that soluble sulphur, though used at double strength, was not giving nearly as good results as Bordeaux mixture or lime-sulphur. Hence it was discontinued, and Bordeaux and lime-sulphur alone used in the later sprayings.

The third application was on June 6th, when black currant fruit had well set. (Red currants at this time were much further advanced.)

The fourth application was given to only half of the Bordeaux plot and half of the lime-sulphur plot, and was made on July 11th. We do not recommend this date, because at this time the fruit was coloring and the spray stained it, even up to the time of picking. Hence this application should have been made at least a week earlier.

#### RESULTS.

We have already said that the dusts and the soluble sulphur proved unsatisfactory or practically useless. Hence, the only substances that gave beneficial results were Bordeaux mixture and the lime-sulphur, and of these two Bordeaux was so much the superior that lime-sulphur cannot be put in the same class with it.

When the plots were examined by me on the 29th of July just before leaving the district for a month's absence, the untreated rows had begun to lose much of their foliage and many of the bushes were bare, though the fruit was not yet ripe. The Bordeaux and lime-sulphur plots still retained almost all their foliage, but on the lime-sulphur rows there were numerous brown spots on the leaves due to the leaf spot, while on the Bordeaux rows the foliage was almost perfect, and very few of these spots were to be seen.

The plots were not again examined until September 6th. At this date practically all the foliage on the unsprayed rows was dead and had fallen to the ground; on the lime-sulphur rows also, nearly all the foliage was dead, but considerable of it was still hanging on though ready to drop. On the Bordeaux part which had been sprayed three times the leaves were all green except

that those had a good spot; on the beautiful striking color the part of other.

Early in this time as expected Bordeaux This foliage leaves were only three season like three times in good condition spraying for season.

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