FARMING, LIVE STOCK, HORTICULTURE AND EVERYTHING OF FARM INTEREST

WISE DAIRYMEN SHOULD PLAN TO OVERCOME LACK OF RAIN

Provision Should Be Made in Case of Drought by Sowing Soiling Crops to Supplement Pasture, Unless a Good Supply of Last Year's Corn Silage is Available.

(By Professor H. H. Dean, Agricultural College, Ontario.)

Last year the writer was in the Ottawa district early in July, and met a number of farmers whose universal complaint was "no rain, no grass, no milk. The wise dairymen of 1914 will be carrying out plans to overcome similar conditions, if they prevail this year. We cannot tell—there may be plenty of rain, lots of grass and good milk flow, but again there may not, hence provision should be made in case of drought by sowing soiling crops to supplement pasture, unless a summer silo full, or partly filled with last year's corn silage is available. A silo of good corn silage is the best insurance policy any dairy farmer can take out. If one has not already been planned for 1915, now is the time to provide the extra three to five acres of corn to fill the summer silo—this in addition to the regular winter corn silage. The silo can be built at odd times during the summer—any time up to September 15 to October 1st, or even later in most parts of Ontario and Quebec, as we are not nearly so much afraid of making silage out of frozen corn as we used to be.

As dairying and hog raising usually go together it is well to take into the calculation the foreign crops that will be suitable for the growing pigs as well as for the cows. Experiments have shown conclusively that the greatest profits from hogs are obtained by using such crops as clover instead of a heavy grain ration. At the Central Experimental Farm green cut clover was found to have a food value of over $6 per ton for pork production.

Alfalfa is Risky.

For the coming season one of the clovers, peas and oats, and green corn may be provided. If alfalfa is available, it makes an excellent green or soiling crop for milk cows, altho many Ontario farmers are growing discouraged in their attempts to grow alfalfa. It is safe to say that no one crop which Ontario farmers have tried to grow in recent years has been the cause of so much loss and disappointment as has this much lauded crop. We are now getting down to brass tacks on the question. It is quite safe to say that the ordinary seed will not produce plants which survive more than one or two winters—most of them will kill out the first year. It looks as if the Variegated and the Grimm, or some equally hardy strain is all that it is wise to sow, and that a farmer is simply throwing his money away buying other kinds. The writer has been one of those who has lost money on common alfalfa seed, hence speaks from five years' practical experience on his own farm.

A safe crop and one easy to grow for green feed is a mixture of peas and oats. Mix two bushels of oats and one of peas, sowing two bushels per acre of the mixture. Sowing at two or three intervals is usually recommended, but unless the season is very favorable, the last sowing will be so rusty the cows will not eat the crop. In all cases it is advisable to run green feed thru the cutting-box and sprinkle on some bran or meal, to induce cleaning up of the feed, otherwise there is considerable waste.

Corn and More Corn.

After the clovers and mixed crop comes the corn, which is the great stand-by for soiling and silage. It is good practice to have some early corn near the stable for green feeding, and this, too, should be cut or shredded, if at all possible, before feeding. In all cases we should prefer to feed in the stable, and not over the fence, as "over the fence is out" in baseball and in feeding cows.

By the time the early crop is done the regular crop of corn should be ready, and in this way the milk-flow is maintained thruout the season. How much money is lost, and how many good records are spoiled by not having sufficient and proper feed for the cows during the summer? All farmers prepare for winter feeding because they know this must be done. The majority of farmers depend upon grass for summer feeding, and there is nothing better provided there is plenty for the cows, but we cannot be sure of grass for the whole season, hence the need for soiling crops. On nearly every dairy form there are stock other than milk cows which have to be fed during the summer. When there is rough or waste land it is customary to turn dry cows, heifers, steers, etc., on this rough pasture, and if they have plenty of water and have salt supplied at intervals they will usually get thru the summer without any extra care or feeding. However, on high-priced, cultivated land, where the pasture area is restricted, it is often a problem to know how to carry the stock other than that which is giving milk, thru the summer season.

Fortunately there are a number of crops which a dairy farmer can grow which are not suited for milk cows because of the danger of tainting the milk, and which crops can be sown after the regular seeding, and on land too wet for grain, mangels or corn. Perhaps the best of these is rape. In the county of Wellington, Ont., where is situated the Ontario Agricultural College, large areas of rape are grown, chiefly as fall pasture for sheep and steers. Most excellent results are got by sowing this crop, and there is no reason why a small area of rape should not be sown on a dairy farm close to the stable for feeding the stock bull, young stock, and more particularly pigs.

Some sow rape broadcast, some drill with an ordinary grain or grass seeder, but the best plan is to manure the ground heavily, cultivate thoroly, then ridge as for mangels or turnips, and seed with a hand or horse drill, sowing from 1 1-2 to 2 lbs. seed per acre. The ground between the rows should be frequently cultivated to keep down weeds, conserve moisture, and give the young plants a good start. When about a foot high, the crop may be cut with an ordinary grass scythe, and the green feed taken to the stable or piggery, altho some turn the pigs and other animals into the crop and allow them to eat it from the rows. There is always more waste by this plan and some danger of the animals bloating.

If not cut too close, there will be young shoots in a short time from the cut stems, and a second crop may be cut later. In fact, we have known a fair crop to start the following spring from roots carried over from the previous season. Crops like rape need to be fed carefully at first until the animals grow accustomed to the feed, otherwise there may be digestive troubles.

Cow Cabbage.

Cow cabbage is another crop which has been grown at the O. A. C. with very good results. The professor of field husbandry, in his report for 1913 says: "In England the cow cabbage is usually transplanted and the plants are placed at a sufficient distance apart to enable them to form heads. In our experiments at Guelph, however, we have treated the cow cabbage in exactly the same way as we have treated the rape. The heads of the cabbage, therefore, have been quite small, the growth being principally leaf and stem. In another experiment in which the cow cabbages were thinned to only 2, 3, 8, 16 and 24 inches apart, it was found in 1912 that the highest yield per acre was obtained from those plots in which the plants were left at a distance of three inches apart, the yield being 26.3 tons per acre on the average. The average yield per acre from thinning eight inches apart were 24.5; 10 inches apart, 22.5, and 24 inches apart, 17.4 tons.

"Comparing cow cabbage and rape, the same report gives the average of five years' tests (1908-1912), as follows: World Beater Cabbage, 26.52 tons per acre; Thousand Headed Kale, 20.97 tons, and Dwarf Essex Rape, 20.2 tons per acre."

Whether or not cow cabbage and rape will taint milk is a disputed point. Some claim that it does and others that it does not. The writer hopes to make some tests on his own farm regarding this question during the coming season. As a rule, dairy authorities have warned cow owners against feeding rape, cabbage, turnips, etc., to cows giving milk. However, we remember that in the Island of Jersey we saw farmers feeding Jersey Kale in large quantities to their cows, and apparently with no bad effects upon the milk or butter. This Jersey Kale or cabbage is a wonderful plant. The leaves are stripped and fed to stock, beginning at one side of the field, and by the time the last of the leaves are removed on the farther side of the field, a new crop has grown on that first cut, and the field is gone over again—three or four times in a year. At the end of the season, the straight stalks are cut for walking sticks, and sold to tourists. Everybody who visits Jersey returns with one or more cabbage walking sticks. Ordinarily the plants grow four or five feet high, but we have seen stalks which were 10 to 12 feet high. In fact, we remember seeing one in a store window in St. Heller, that if we are not mistaken, measured 17 feet in height.

Fall turnips are another crop that dairy farmers may grow with profit, and so far as known, these do not taint milk. These may be grown the same as ordinary or Swede turnips, preferanbly in drills, and cultivated, tho some sow on the flat, some broadcast, and some among the corn for late pasture after the corn crop is removed. The seed is usually sown before cultivating the corn for the last time, and the plants will have quite sized roots on them by the time the corn is ready to cut. We shall mention but one other crop, millet. This can be sown as late as July with a fair prospect of getting a good crop, but O.A.C. experiments indicate that sowing June 1 gave the best yield per acre—9.3 tons of the Japanese Panicle variety. On farms where it is found that clover or other hay crop is badly killed, and one has been uncertain about leaving the crop, but finds by June 1 it would not pay to leave the crop for hay, this land could be plowed and sown with millet. If not needed as a soiling crop, it can be cut for hay, and will make an excellent winter feed.

The dairy farmer cannot have too many crops on his farm. By having a variety, if one fails, then he is likely to have some other to take its place.

DESCRIBED A NEW ARTIFICIAL MANURE

Professor Bottomley of King's College, London, Read Paper at Society of Arts.

In a paper read before the society of arts a short time ago Prof. Bottomley of King's College, London, described a new type of artificial manure. It has long been known that the nitrogen required by plants cannot be obtained by them from the air, but must be presented to them in a fixed form before it can be assimilated. In 1886 it was noted that certain leguminous plants developed on their root nodules containing bacteria, which bacteria had the power of fixing the atmospheric nitrogen. High hopes were entertained that inoculating soils with these nodule bacteria would give a great increase in fertility, but these hopes were almost wholly frustrated. Similarly when Azotobacter was discovered in 1901, and was proved to have greater nitrogen fixing power than any other species it was hoped that the inoculation of the soil with liquid cultures would greatly increase the fertility. Here again the net result was failure.

The matter has, however, been pursued further at the botanical laboratory of King's College, and Prof. Bottomley claimed that these researches had been attended with complete success. It was found that suitably treated peat formed an excellent medium for the growth of this bacterium, and soils which have been treated with this peat have shown a great increase in fertility. Before inoculating the peat with the bacteria in question it has first to be treated with another bacterium which was found to have the power of converting the peat into a neutral substance.

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RECORD OF TEST PERFORMANCES

Ayrshire Cows and Heifers That Have Qualified in This Test During May.

Name of Cow and Owner.	Lbs. Milk.	Lbs. Fat.	Pct. Fat.	No. Days
—Mature Class.—				
Flossie of Burnbrae, 24891, Wilson, McPherson & Sons, R. R. No. 1, St. Ann's, Ont.	14,415	509	3.53	364
Buttercup of Ingleside, 20476, Laurie Bros., Malvern, Ont.	11,594	427	3.68	365
Scottie's Dandy 2nd, 25690	9,921	387	3.90	318
—Four-Year-Old Class.—				
White Rose, 26614, Hon. Wm. Owens, Montebello, Que.	12,636	492	3.89	363
Woodland Belle, 33770, Alex. Hume & Co., Menie, Ont.	10,087	336	3.48	365
Queen of Silver Springs, 30075, T. C. Treverton, R.R. No. 1, Latta, Ont.	8,734	305	3.48	365
—Two-Year-Old Class.—				
Nellie Gray of Hickory Hill 2nd, 38201, N. Dyment, R.R., Hamilton, Ont.	8,056	390	4.84	365
Mabel of Maple Avenue, 32877, S. A. Cleland, Hemmingford, Que.	7,298	343	4.69	365
Beauty, 34229, Jos. Hudson & Son, Lyn, Ont.	6,621	317	4.78	284
Ida of Maple Hill, 31875, S. A. Cleland, Hemmingford, Que.	6,383	318	4.97	363
Stately of Maple Hill, 35666, S. A. Cleland, Hemmingford, Que.	6,075	300	4.93	365

A ten thousand pound record was thought to be something wonderful a few years ago, but now we find a 10,000-pound record for a mature cow is the exception.

It is interesting to notice that as new names, both of cows and owners, appear, they keep up the high average, and follow in the line of large yields of both milk and butter.

It is interesting to notice that so large a percentage of the cows on test qualify in the record of performance test.

It indicates that there are many wonderful dairy cows, whose dairy ability would have never been brought to notice had it not been for this test.

DISTRIBUTION OF PURE BRED HORSES

Three Hundred Applications Have Been Received for Loan of Stallions.

Owing to the fact that the policy of the distribution of pure bred sires started rather late last year, a very few stallions were loaned to the association. This year, however, this particular branch of the work has grown very rapidly. In round numbers some three hundred applications from associations for the loan of stallions for this season has been received.

A goodly number have been asked for from Maritime and Quebec associations, Ontario and British Columbia on the other hand have sent in the fewest applications. From the three prairie provinces have come requests for at least a half of the number applied for. The newly settled districts appreciating the value of pure bred blood have hastened to take advantage of the offer of the branch to supply them with good breeding stallions which otherwise they could not obtain. The adoption by districts of one breed and of community breeding methods will eventually result in the rapid grading up of the horse stock.

Only Canadian bred stallions are purchased by the branch, and these in addition to being good individuals, and registered in one of the stud books, affiliated within the Canadian national record must pass a rigid veterinary examination as to soundness and suitability for breeding purposes.

This distribution in addition to aiding newly settled districts and districts unable to procure pure bred stallions is also providing a market which should eventually make not only for the production of more, but also of an even higher class of horses than heretofore.

NO COMPLAINTS.

VANCOUVER, June 12.—H.L. Drayton, K.C., chairman of the Dominion Railway Commission, which is holding a session here, states, in an interview, that no complaint had been received against the new freight rates tariffs decision.

EXPERIMENTS AT THE CENTRAL FARM

Special Attention Being Paid to Development of Early Strain of Vegetables.

The report of the director of the experimental farms for 1913 contains the following description of the work of the horticultural division.

The area of land in the horticultural division at the Central Experimental Farm, Ottawa, is ninety-nine acres. Fruits and vegetables take up 46 acres, forest belts 21 acres, ornamental grounds, 30 acres, and nursery and rose garden, two acres.

On this land are grown tree fruits, small fruits, vegetables, forest trees and ornamental trees, shrubs and herbaceous plants in more or less permanent plantations and in nursery rows. The lawns are extensive and require much care to keep them in good condition. Owing to the large number of experiments in progress, the work involved in giving the necessary attention to them on this ninety-nine acres is very heavy compared to what it would be on the same area under commercial crops, where the labor involved would be reduced to the minimum.

The division of horticulture may be divided into five parts or heads under which most of the work falls.

Under pomology is included the study of varieties of fruits for the purpose of learning their respective merits in regard to yield, quality and profit. It also includes the identification, classification and description as well as the propogation, planting and care of fruits, with experiments in cultural methods, including spraying. During the last year this part of the work has received much attention. Many varieties have been described in detail on cards, which are filed for future reference. Varieties sent in for identification have been named and the correspondents informed. Many new varieties were propogated for test on the Central and branch farms and for trial in other places and a number of new ones have been planted out at Ottawa.

The vegetable gardening part of the work includes the testing of varieties of vegetables for comparison of their respective merits as regards season, yield, quality, etc., cultural methods, and the study of commercial methods, both in the field and under glass. In 1912 special attention was given to potatoes, tho all the principal kinds of vegetables were under experiment.

The improvement of fruit, vegetables and ornamental plants by cross-breeding and selection, and the study of the laws of inheritance in the different kinds of horticultural plants, is, in brief, the field of work which is covered in plant breeding by the horticultural division. Up to comparatively recent years Canada has depended almost entirely on other countries for her new varieties of fruits, vegetables and ornamental plants, and while many of these succeed admirably in this country, it is felt that if originated in a climate more nearly like that in which they are to be grown, those that show special merit are likely to prove more useful than those introduced from climates very dissimilar. Many varieties of hardy hybrid apples have already been introduced into the prairie provinces and have proved hardier than any previously tested there. Many varieties of apples of handsome appearance and good quality have originated at the horticultural division, and the best of these have been sent out for test to the different parts of Canada to compare with the varieties already on the market. More than two hundred of these new sorts have been propogated and eighty-two of the best named.

A large number of strawberry seedling have been raised and some of the best are being propogated for introduction. Special attention is being paid to the development of early strains of vegetables which will be of great value in the colder districts of Canada as well as in the more temperate parts.

FOOT AND MOUTH DISEASE.

The last report received from the British authorities states that no new outbreaks of the foot and mouth disease have been detected for some weeks. It is to be hoped therefore that the disease has been eradicated. It will, however, be necessary to wait a reasonable time before the issuing of permits for the importation of stock from the United Kingdom can be considered.

SUCCESSFUL BREEDING

Mr. James Tait of Jordan Mt., N.B., reports that he has this summer twenty-one lambs from ten ewes, and at the present time all of them are living. This is certainly a record to be proud of, and many of our Ontario breeders would be very glad to have the same success.

AREAS OF GRAIN CROPS IN CANADA

Bulletin Issued at Ottawa — Local Conditions Satisfactory.

OTTAWA, June 13.—In a bulletin issued today by the census and statistics office, preliminary estimates are given of the areas of the principal grain crops in Canada, as well as reports on their condition, according to returns made by the correspondents on June 1.

The reports show that thruout the Maritime Provinces seeding was delayed thru the lateness of the spring.

In Ontario and Quebec the condition of grain is generally satisfactory, notwithstanding a long spell of dry weather.

In many places, however, the meadows were beginning to suffer from the effects of drought. Conditions thruout the west were reported as generally favorable, tho rains would be welcome, especially in Manitoba and southern Alberta.

On June 1, the condition of field crops, as measured by a standard in which 100 represents the promise of a full crop, was very favorable. The points are as follows: Fall wheat, 79; spring wheat, 93; all wheat, 91; oats and barley, 92; rye, 89; peas, 92; mixed grains, 93; hay and clover, 90; alfalfa, 88; and pasture, 90.

Assuming that the conditions between now and harvest will be equal to the average of the past four years, 1910-1913, the above percentages represent the promise of yields equal to the four-year average in the case of spring wheat, rye and barley, and inferior in the case of oats by one per cent., and in the case of fall wheat by two per cent.

CARLOAD OF BEES SENT TO CLOVER BAR

Trainmen Were Somewhat Scared While Handling the Lively Insects.

A whole carload of live bees has recently arrived at Clover Bar Station, on the G. T. P. R., a few miles east of Edmonton, the shipment coming from Sear, Michigan. P. H. Orth of Clover Bar, who imported the bees, is evidently going into the industry of bee-keeping on a large scale, and the vegetation of Alberta gives every hope of success. The name of Clover Bar itself seems to be an incentive to the cultivation of bees, and Clover Bar honey, when it makes its appearance on the market, should appeal to the imagination of the westerner.

The Grand Trunk Pacific handled the bees quite safely, altho it was somewhat gingerly that the trainmen approached the car. While en route the bees remained quiet in their hives.

WAS UNSATISFACTORY.

F. Nash and Co. state that last week was unsatisfactory in every way on the Montreal exchange. A great deal of the selling has been caused by the stocks being forced to a point where holders could not retain them. They believe a great deal of short selling has been taking place in such stocks as Nova Scotia, Richelieu and Steamships.

LARGER PROFITS BY CO-OPERATION

Striking Figures Were Given at Durham Fruit Growers' Association Banquet.

At a banquet of the Durham Co-operative Fruit Growers' Association recently, Mr. R. S. Duncan, district representative of the Ontario Department of Agriculture for Durham county, gave some striking figures as to the value of co-operation. He gave a table showing the business handled during the past three years, as follows: In 1911 some 4,337 barrels of apples were handled by the association and sold on an average of $2.92 per barrel for 1's, 2's and 3's. In 1912 the association sold 6,080 barrels for an average price of $2.05 for the three grades and in 1913 the output mounted to $21,810.45, and the price was $2.80 per barrel. This is an average price to the grower f.o.b. Port Hope of $2.60. Deducting an item of $1 for expenses of barrel, picking and packing, managers' commission and sundry expenses in connection with the association, it leaves an everage net profit to the grower for 1's, 2's and 3's for three years of $1.60. The average net price to the grower had there not been an association would have been about a dollar, and in fact it was about a dollar to the growers who were not in the association. This is a net gain of sixty cents per barrel to the growers in the association or taking the total yield of 18,233 barrels at 60 cents per barrel, there is a net gain during the past three years of $10,939.80.

RHUBARB IS SOLD IN CARLOAD LOTS

In Hatzic District It is Grown in Larger Quantities Than Any Other District.

Just as some countries are better adapted to certain fruits than others, so small districts a few miles in extent are sometimes pre-eminently fitted, because of soil and climatic conditions to the culture of certain vegetables. This is true of the Hatzic district, near Mission, B.C., in the Fraser Valley of British Columbia, where rhubarb is grown to a larger extent perhaps than in any other district in Canada. It retails at the coast stores at very low prices, from 6 to 11 pounds being sold for a quarter, but even at that price the growers realize a good profit.

The growers have organized a co-operative association, and the rhubarb is sold in carload lots. Before shipping it is all graded and repacked by experienced packers, who are employed by the association. That going but a short distance, to Vancouver for instance, is washed, which gives it a very bright and attractive appearance. The growers, realizing that only thru quality can the future be built up, insist that all the shipments are up to a standard grade, and as the grading is all done by the association, this is more easily controlled than where the product is graded by the growers themselves. About four cars a week are being shipped at the present time. The demand increases every year, and so far the market has remained very firm.

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