

THE DAIRY.

Maine Dairy and Breeding Problems.

THE CO-OPERATIVE BREEDERS' ASSOCIATIONS.

Touching Breeders' Associations, the testimony of Leon S. Merrill, State Dairy Instructor, addressing the Maine Dairymen's Association early last month, was to the effect that members had already so improved their stock that the people of the State had begun to sit up and take notice, and the supply of well-bred animals could not keep up with the demand. A step in the right direction here is the refusal to sell or interchange unworthy males, and a statement to that effect was received with applause by the convention.

EDUCATION OF PRODUCERS AND CONSUMERS.

From the observations of Prof. J. O. Jordan, Milk Inspector, of Boston, temperature and bacterial content of market milk are controlled by legislation. Thorough cleansing and sterilization of packages at a central point is the rule, and prohibition of the sale of loose milk is coming in 1910.

That producer, dealer and consumer needed education that should teach cleanly and sanitary methods of producing and handling cream and milk was forcefully brought home to the audience in an illustrated lecture by Prof. I. C. Weld, U. S. Department of Agriculture. Some of the slides shown were familiar to many: the sediment in the bottom of the bottle, the hair in the milk, the flies walking over the utensils or the dust collected on them; the one-can milk-vendor, with the bare-foot, unkempt boy as assistant, that picks up a little summer trade where laws are lax; cans sitting near fish and oil in the grocery; the array of bottles half-filled, some sweet, some sour, sitting in the pantry window—all testified to the need of enlightenment.

The creamerymen in Maine are on the right track in demanding milk from tuberculin-tested herds, with sanitary environment. A better price is paid for such product by some of the creameries, and the creamerymen would be glad for the State Board of Health to dictate officially in the matter.

The fact, advanced by E. L. Bradford, the manager of the Turner Centre Creamery, that over 200 tons of butter were imported into Maine from Western States and Canada, to be used by dairymen, because they could not afford to use their own product, showed another phase of the dairy industry.

BUTTERMAKING AND MARKETING.

Professor P. A. Campbell, University of Maine, Chair of Animal Industry, delivered an able address upon buttermaking. Perhaps, as important points as any were the use of a starter which would tend to produce butter of a uniform flavor, and packing attractively. The pound package, bearing the maker's stamp, parchment-wrapped, with fold underneath, slipped in paper cartons having the trade-mark of the maker printed thereon, was, he thought, the ideal way of marketing the prints.

SOME CORN YIELDS.

The heavy yields of corn reported from a few sections—600 bushels from a little over three acres, grown by Dr. H. M. Moulton, Cumberland Centre, and 6,325 pounds, raised by Dr. G. M. Twitchell, Auburn, on his best acre of flint corn—could be duplicated by any, Prof. Hurd thought.

NEW IDEA IN BREEDING: BREEDING FROM KNOWN PRODUCERS.

The new idea in breeding, the use of males known to get producers, was the prominent feature of a paper read by Dr. C. D. Woods, Director of the Maine Experiment Station, and prepared at his request by Dr. Raymond Pearl, Biologist at the Experiment Station. In the experiments at the Station, breeding from hens in advanced registry had given progeny with no better performance qualities than those not in this registry; in fact, not quite so good. This had started breeding off on another tack. Considering this high-producing power as only one factor, males which had a certain number of daughters in advanced registry were used as breeders, and indications at the present time pointed strongly to successful issue. Dairy experience seemed to confirm the new idea, in so far as data from its limited application could be learned. The whole idea was to an extent in embryo, but if the Dairymen's Association desired it, and would raise funds to maintain it, scientific investigation would be started by the Experiment Station. Prof. Sanborn, of Gilmanton, N. H., concurred in the ideas advanced by Dr. Pearl. His idea was to cling to tested males and females, and study blood lines for perpetuity. He expected as much from the feeder's as from the breeder's art.

At the annual business meeting, W. G. Hunton, Readfield, was elected president; L. E. McIntire, Waterville, vice-president; Leon S. Merrill, Solon,

Dominion Crops for 1909.

The fiscal estimates of production and value of the field crops, and the per-cent. number on hand, and conditions of live stock in Canada have been given out by the Census and Statistics Office at Ottawa.

The estimates are based on the reports of a large staff of correspondents in every Province of the Dominion. From the Northwest Provinces, in addition to the regular correspondents, the office received reports from over 1,000 postmasters.

An area of 30,065,556 acres of field crops has yielded a harvest which, computed at local market prices, has a value of \$532,992,100, as compared with \$432,534,000 from 27,505,663 acres last year. The details of area, yield and value for each kind of crop are shown in the following table:

	Area 1909 acres.	Yield 1909 bush.	Value 1909 \$
Fall wheat ...	662,100	16,095,000	15,842,000
Spring wheat ...	7,088,300	150,649,000	125,478,000
Oats .....	9,302,600	353,466,000	122,390,000
Barley .....	1,864,900	55,398,000	25,434,000
Rye .....	91,300	1,715,000	1,254,000
Peas .....	395,300	8,145,000	7,222,000
Buckwheat ...	282,440	7,806,000	4,554,000
Mixed grains ...	582,100	19,391,000	10,216,000
Flax .....	138,471	2,213,000	2,781,000
Beans .....	55,970	1,324,600	1,881,400
Corn, husk'g ...	352,570	19,258,000	12,760,000
Potatoes .....	513,508	99,087,200	36,399,000
Turnips and other roots.	248,047	107,724,600	18,197,500

Tons.  
Hay & clover 8,210,300 11,877,100 132,287,700  
Fodder corn... 269,650 2,779,500 15,115,500  
Sugar beets... 10,000 86,000 500,000

The principal grain crops of the country are wheat, oats and barley, which this year aggregate in area 18,617,900 acres, and in value \$263,710,000, against 16,297,100 acres and \$209,070,000 in 1908. Hay and clover from 8,210,300 acres have a value of \$132,287,700, against 8,210,300 acres and \$121,884,000 in 1908. Rye, peas, buckwheat, mixed grains and flax, grown on 1,487,311 acres, have a value of \$26,707,000, as compared with 1,525,700 acres and \$23,044,000 in 1908. The hoed and cultivated crops of beans, potatoes, turnips and other roots, corn and sugar beets, grown on 1,449,745 acres, have a value of \$84,852,500, as compared with 1,471,913 acres and \$78,535,000 last year. Fall wheat, with a yield of 24.31 bushels per acre, shows a value of \$23.93 per acre, as against 24.40 bushels and \$21.10 in 1908. Spring wheat, with 21.25 bushels, shows \$17.70, against 16 bushels and \$12.84 in 1908. The averages for both crops are 21.51 bushels and \$18.23 per acre, against 17 bushels and \$13.80 per acre in 1908. The total value of the wheat harvest in the Northwest Provinces is \$121,560,000, and in the rest of the Dominion \$19,760,000, as compared with \$72,424,000 and \$18,804,000 last year. For the other crops of the Dominion, oats show averages of 38 bushels and \$13.16 per acre, against 31.64 bushels and \$12.15; barley, 29.71 bushels and \$13.61, against 26.79 bushels and \$12.23; rye, 18.78 bushels and \$13.73, against 17.05 bushels and \$12.57; peas, 20.71 bushels and \$18.36, against 17.09 bushels, and \$14.46; buckwheat, 27.64 bushels and \$16.12, against 24.55 bushels and \$14.47; mixed grains, 33.31 bushels and \$18.75, against 32.73 bushels and \$17.43; flax, 15.98 bushels and \$19.94, against 10.76 bushels and \$10.46; beans, 23.67 bushels and \$33.61, against 27 bushels and \$33.08; corn for husking, 54.62 bushels and \$36.19, against 62.45 bushels and \$32.32; potatoes, 192.96 bushels and \$70.88, against 132 bushels and \$63.21; turnips and other roots, 434.29 bushels and \$73.36, against 373 bushels and \$64.58; hay, 1.41 tons and \$16.11, against 1.39 tons and \$14.84; fodder corn, 10.30 tons and \$56.06, against 11.27 tons and \$45.35; and sugar beets, 8.60 tons and \$50, against 10.07 tons and \$53.52 per acre.

The value of all field crops in Prince Edward Island is \$9,213,900; in Nova Scotia, \$22,319,300; in New Brunswick, \$18,150,900; in Quebec, \$90,071,000; in Ontario, \$200,398,000; in Manitoba, \$74,420,500; in Saskatchewan, \$97,677,500; and in Alberta, \$20,741,000. In 1908, the value of the crops in Prince Edward Island was \$9,408,000; in Nova Scotia, \$20,083,000; in New Brunswick, \$18,042,000; in Quebec, \$80,896,000; in Ontario, \$185,308,000; in Manitoba, \$66,660,000; in Saskatchewan, \$37,614,000, and in Alberta, \$14,522,000.

The condition of the new crop of fall wheat this year was 93.33 of a standard, as compared with 75 per cent. last year. In Alberta there is an increase of 21 per cent. of fall-wheat seeding, and in Ontario an increase of nine per cent. over the area sown last year.

The per-cent. number of live stock on hand this fall, compared with last year, and the per cent. of standard condition, are shown in the following table.

Live Stock.	Per cent. number com- pared with 1908.	Per cent. of standard condi- tion.
Horses .....	101.75	98.58
Milch cows .....	98.56	97.92
Other horned cattle.....	92.80	97.70
Sheep .....	95.43	98.73
Swine.....	89.02	98.35

Rate of Seeding Alfalfa.

Southern Alberta seems rather far afield for most of our readers to go in quest of alfalfa information, but an experiment conducted on the Dominion Branch Experimental Farm at Lethbridge is worth noting. The experiment, which seems to have been on irrigated land, was to compare different rates of seeding alfalfa. While unusual conditions reduced the advantage commonly to be expected from thick seeding, still, the difference in yields, as indicated by the test, are quite sufficiently marked to point to the advisability of sowing not less than 20 pounds of seed per acre. Following is the statement, as announced by Superintendent W. H. Fairfield:

On account of not having any old land, it was not thought advisable to plant a very large acreage of alfalfa in the season of 1908, but in the latter part of May of that year a few acres were sown. One of the experiments was to determine the best quantity of seed to sow per acre. The following table gives the results obtained during the past season. It would be only fair to mention that an exceptionally fine stand was obtained. Just after the seed was sown, very timely rains came, and practically every seed grew, a condition that cannot always be relied upon. This should be borne in mind in studying the results:

Amount of seed.	1st Cutting June 24th.	2nd Cutting Aug. 4th.	3rd Cutting Sept. 13th.	Total yield for season.
Lbs. Tons	Lbs. Tons	Lbs. Tons	Lbs. Tons	Lbs. Tons
5 1 1,840	2 1,000	1 220	5 1,060	
10 2 200	2 1,280	1 1,040	6 520	
15 2 680	2 1,480	1 1,180	6 1,340	
20 2 200	2 1,680	1 1,220	6 1,100	
25 2 0	2 1,400	1 1,280	6 680	
30 2 280	2 1,520	1 1,200	6 1,000	

The second cutting was not cured quite as dry as it might have been before it was hauled to the barn, consequently the yield on the second cutting for all of the plots is a trifle high. As mentioned above, an extremely good stand was obtained on account of the rains coming when they did and the seed-bed being in such an ideal condition. Under ordinary circumstances, such conditions cannot be relied upon, and so five or ten pounds of seed, as a rule, do not give as good a stand as was here obtained. Observation and experience in the district would indicate that 20 pounds of seed on irrigated land is about the right amount to sow."

Hard vs. Soft Maples: Planting, Etc.

I have to put out six maple trees on my new lot, and I would like the following questions answered. The soil is real old clay: Which are the surest to live in low clay, hard or soft maple? What is best time to set them out? Can it be done at all in the fall? What is the largest size it is considered safe to move? Should anything be put in the ground as a fertilizer? What soil should I take them off? How much is it necessary to cut branches down if a good large root is taken? What I must have is some good shade in as quick a time as possible.

The most important difference between hard and soft maple as shade trees is that the hard maple, although slower in maturing, makes a much more durable and permanent tree, whereas the soft maple is more likely to be broken by storms. Either of them will thrive fairly well upon good clay loam, if it is not too stiff a clay. If the land is particularly heavy, I would recommend American elm, rather than maples. The best time to transplant trees is early in the spring, as soon as the ground can be conveniently worked. It might be done in the fall, but there is always more or less danger of losing trees transplanted at this time. The most satisfactory size of tree for transplanting is one from an inch to an inch and a half in diameter. The tops should be cut back more or less severely to correspond with the amount of root left when the trees are dug up. It is usually best to head them back to about five or six feet in height. I would not recommend putting fertilizer of any kind in the hole where the tree is to be placed, unless it has been thoroughly mixed with the soil some time previous to planting. A good plan is to spread a mulch of good stable manure on top of the ground after the tree has been planted, to act as a mulch and to retain soil moisture, which enables the trees to strike root readily.

H. L. HUTT.  
O. A. C., Guelph.

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