Essentials to Success in Breeding and Feeding Dairy Cattle.

[A paper read before the Manitoba Central Farmers' Institute by J. C. Snell, Edmonton, Ont.]

The men who have been successful in originating, establishing and perpetuating distinct classes of pure-bred stock have been men of skill and good judgment, who have had an ideal in their mind, an object and aim which they kept constantly in view and to which they worked. These men have been among the world's greatest benefactors, have been instrumental in adding millions to the wealth of the nations, and their names and work are worthy to be held in lasting remembrance by those who follow them. The originating of a breed is the work of a lifetime, requiring patience, perseverence, and a determination of purpose which will not be swerved from the straight line that leads to the desired goal. It would not be wise for many men to attempt such a work. The man who would succeed here must be a genius. It has been said with a good deal of truth that "there are ten men qualified to be a premier where there is one fitted to be a breeder." The best thing we can do is to take up this work where successful men have left off and study to maintain the excellencies achieved, or to improve on them if we can. The general farmer will wisely hesitate to embark in a business he does not understand, and we would not advise him to put his money into thoroughbred stock until he has learned by experience to improve the stock he has, by grading it up by the use of pure-bred males; then if his tastes run in the direction of breeding thoroughbred stock, let him advance cautiously as his means seem to justify, by buying one or two females of a good sort, and with patience posses his soul till he has bred up a little herd or flock without much outlay of capital. The choice of a breed is always an important matter, but not the most important; there are many good breeds, and the keeping up the standard of excellence of the breed adopted is more important than the choice of a breed. The choice can only be decided by a careful and intelligent outlook, considering the circumstances and surroundings, the soil and the climate, the markets and other environment. When a choice has been made, and it is found from experience to be reasonably well-adapted to the locality and surroundings, the man who takes pride in the breed he has adopted and stands by it through evil as well as good report, is the man who will in the long run prove himself a successful breeder, and will find it reasonably profitable. "Be not carried about with every wind of doctrine," is safe advise to follow in the business of breeding stock as well as in theology. Fashions may change, and booms may come and go, every breed will have its ups and downs, its seasons of posperity and of adversity, but the man who stands by his favorites and keeps them up to the highest standard of the breed will find himself in the long run as often at the top, or "in the swim," as any of his rivals. And since the question, Which is the best breed? has not and may never be definitely settled, he is as likely to be right as any other. Having made choice of a breed, we should next fix in our mind an ideal or standard of type to which we aim to attain, and in all our work the effect should be to maintain a uniform type, to breed so that one animal shall be as nearly like another in general appearance, in stamp and style, as possible, and that of course a good *stamp*. This will involve some sacrifices, as it will necessitate weeding out and sending to market, or the shambles, such animals as do not come nearly up to the desired standard. It will require good judgment in the selection of the proper stamp of sires to succeed each other to carry on the process of improvement. And here a false economy may do much to retard improvement,—may, indeed, upset the work of years. Do not grudge a good price in order to secure the stamp of sire you feel sure you need, if you can find him. The cheapest is not often the best, but the best is often the cheapest if the price is within reasonable limits. "The bull is half the herd" is a strong statement, but as applied to breeding it is not far from right, since he has a part in the production of all the calves in the herd during his regime, while each cow has only part in one calf in each season, as a rule.

In the breeding of cattle, for instance, a man's plans and course will depend largely on what purpose his cattle are intended for. If it is a beef breed he has adopted, his ideal will be a good feeding animal; one that will readily respond to generous feeding by putting on flesh rapidly, and reach maturity at an early age. This demands a broad chest, giving abundant lung capacity. He should have a large heart girth, deep ribs and flanks, strait top and bottom lines, a strong back and loins, long, level quarters, short legs, and be beefed well down to the hocks, and have a soft, mellow skin covered with fine, soft hair, having the feeling of fine fur; these are some of the indications of a good feeder.

If, on the other hand, the object is to build up a dairy herd, and he has chosen to handle a milking breed of cattle, he will look at the matter from a widely different standpoint. In this case, as well as the other, he will wisely give attention, first, to the constitution and feeding qualities, for a cow that has not strong vitality and a good appetite will never make a successful dairy animal, but the type will be different from the beefing animal, and the treatment will require to be different, especially in the first years of its life.

Depth of ribs and consequently capacity for working food into blood and into milk and butter are prime requisites in a dairy cow, but that width of shoulders and chine and brisket are not needed; she should be wedge-shaped, broader behind than before; her handling qualities should be somewhat similar to those of the beef cow. The same soft hair should be sought after, but the skin should not be so thick, and yet not so thin as to be called papery. Particular attention should be given to the development of the milk-vessels and the milking tendency. The udder should be well-balanced, fore-and-aft, and not fleshy, and such that will collapse when milked; the teats of good size and well-placed; the milk veins should be prominent and well-spread. In order to secure all the points, or as many of them as possible, in as great perfection as possible, care must be exercised in the selection of a bull for use in the herd. He should have the points of a dairy bull well-developed, must be free from the broad shoulder tops and broad quarters of the beef bull; he must have a deep body and be a vigorous animal. If his rudimentary teats are large and far apart, so much the better. He should be the son of a mother that is near the ideal model of a perfect dairy cow as possible, and if her capacity for good work has been proved by a careful test, all the better, for appearances are sometimes deceitful and should not be trusted too far. If the sire of your bull is also the son of a cow of known merit, he will be all the more likely to perpetuate the dairy tendency in his offspring.

Then the treatment and management of these two classes of cattle requires to be different. To bring a beef animal to greatest perfection, as a beef producer especially, it should be kept fat from its birth and never allowed to go back, if intended only for a butcher's beast. If it is intended for breeding purposes, a more moderate system of feeding should be adopted with more exercise given, and food not so rich in fattening properties, but should always be kept in thriving condition and should not be put to breeding so early, if a female, as one intended for milking purposes.

The calf of a dairy cow, on the other hand, should not be allowed to suck a cow and get fat; skim milk is good enough for it and better than whole milk. The tendency to lay on fat should not be encouraged. Out-door exercise is essential to develop muscle instead of fat; she should be put to breeding early, to have her first calf not later than when she is two years old. To induce and encourage the milking habit she should be milked a long term before having her second calf—a year at least. This tends to increase what is called persistency in milking. A cow that will continue to give milk the year around is a better dairy cow than one that quits at six months' service. A dairy cow should pay for her feed at least up to within a month or six weeks of producing her next calf, and many are willing to continue giving milk from year to year without a halt, though my own opinion is that it is not wise to allow this, save in exceptional cases. From my own observation I have concluded that a cow does not do as good work the following year, if she is milked close up to calving: but some good dairymen claim that her average work for the year, and in a series of years, will be quite as good or better.

(TO BE CONTINUED.)

A Vice-Regal Dairy Event.

What is termed "the largest creamery in Canada" was formally opened in Renfrew on July 24th, 1895, by His Excellency the Earl of Aberdeen. In connection with the opening of the great creamery was the new town park opening by Her Excellency the Countess of Aberdeen, which two important occasions drew together a concourse of people such as was never before witnessed in the flourishing town of Renfrew. His Excellency, Her Excellency, the Dominion Dairy Commissioner, and others, made brilliant, pithy and practical addresses upon this occasion.

The new creamery is based upon a system long operated with much success at St. Alban's, Vermont. A large central factory is erected and surrounded by seven separating stations. At each of these a separator is kept to extract the cream from the new milk sent in by the patrons, who take the skim milk home with them. The cream is sent into the central factory from two stations by rail, and from the others by wagon. The average daily make is about 1,800 pounds of butter from 50,000 pounds of milk. The price of the butter retail has run from 20c. to 25c.; and at present shows a decidedly upward tendency. There are three separators in the central creamery. The churns, three in number, made of cypress wood, are 10 feet long by 3½ square, and make 65 revolutions per minute. The churning operations average 45 minutes. The farmers of the Renfrew district have not yet had time to thoroughly fall into line with the new conditions, so as to supply all the milk the creamery stations can take. When the new industry has make its full development the output of butter will be very large.

After being fined for watering his milk, a Michigan farmer was expelled from church membership by his minister.

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POULTRY.

Battle of the Breeds.

BY CAPT. A. YOUNG, KENT CO.

I inclose you the results of a test (eight yards) with poultry as to their laying capabilities. The result was somewhat of a surprise to me, as I fancied the Brown Leghorn would lead the score, but I place results as I found them:—1st, Silver Spangled Hamburgs; 2nd, White Leghorns; 3rd, Light Brahmas; 4th, S. G. Dorkings; 5th, B. Spanish; 6th, P. Cochins; 7th, Brown Leghorns; 8th, Silver Wyandottes. About the middle of the season, six Dorkings, four Brown Leghorns, one Spanish and the Cochins and Brahmas wanted to sit, all of which were allowed to except the Cochins and Brahmas. This reduces the average on the Dorkings and others, so perhaps the result is scarcely fair. The annexed table shows the number of fowls in each pen, the total number of eggs laid during the seventy days between March 23rd and June 1st, and the average:

VARIETY.	No. of Hens.	Days.	Average per Hen.	Total Eggs.	Relative Position.
Silver Spangled Hamburg	2	70	49.	98	1st
White Leghorn	1	"	50.	50	2nd
Light Brahma	3	"	35.	105	3rd
Silver G. Dorking	10	"	36.80	368	4th
W. F. B. Spanish	6	"	28.48	171	5th
Partridge Cochin	2	"	30 50	61	6th
Brown Leghorn	11	"	26.27	289	7th
Silver Wyandotte	1	"	22.	22	8th
Total	36	70	32.33	1,164	

I put Hamburgs 1st because I consider 49 eggs a better average for 2 hens than 50 for 1; and I put L. Brahmas ahead of the S. G. Dorkings for the same reason, although, whether the drain on the Dorking average by the reduction of 6 sitting hens would be more than the death of one L. Brahma, and the time lost in breaking the others up, would counterbalance the tabulated results I am not prepared to say.

[NOTE.—We are glad to receive figures upon such work as Capt. Young has undertaken, but are not sure that one season's observations with such uneven pens numerically means much with regard to the laying capabilities of the many good breeds with which he has experimented. Laying hens are like milking cows: the best breeds do not include all equally good individuals, and sometimes an extra performer is found where least expected. We would therefore ask Capt. Young and others who have different breeds of fowls, to conduct these laying experiments with more even numbers in each pen.—EDITOR]

Poultry Pickings.

BY JOHN J. LENTON.

Again we have grown tired. This time it is because Mr. P. H. Jacobs, editor of the Poultry Keeper, still declares it is "lice" when any one writes him that their chickens die. Now, we have lost quite a few this year, and we know it is not lice or the remedies we used on them that killed them. At first, although we could see no lice, we were almost sure they were there. We had them in the brooder, so we thoroughly cleaned it, and then went to work at the chicks until we were certain they were free from the pests. But those chicks would still die. The brooder was run just the same as it had been for previous hatches, and they were fed almost exactly the same. However, we had a few hens sitting, so we concluded to free them from any close companions they might have before the chicks hatched, and then leave the chicks with the hens. We fed these chicks very carefully, and were particular to keep them free from lice. The first thing we knew, they began to sleep on their backs. We began dreaming about dead chickens at night, and in the morning we almost dreaded to go near them. Our constant mental inquiry was "What is the cause?" Was it the dry weather? Was it the extreme heat in the day, and the cool nights? Had the breeding stock strong vitality, or were they (the breeding stock) fed right? Or,——well, we thought of dozens of things; but still we think the real cause has not entered our thoughts yet. However, we are developing the remainder into first-class specimens.

Yakob Pilsener, that interesting writer, was lately asked if lice originate *on* the head, and he wrote back to his questioner that "lies oreegenate *in* der hed." Then the man got mad.

Mr. Pilsener also gives advertisers a grand piece of advice, and we feel certain that if all advertisers would follow it there would not be half the kicking that advertising does not pay. Here it is: "Eef you vant ter sell a sheeken or a lidder uff peegs, don't vas batronizing der shtory und fashun bapers."

Turkeys are one of the most profitable fowls for farmers. Some say they are hard to raise; but we know of several cases where large numbers are raised with very little trouble. Three things are necessary: care, proper feed, and common sense. True, turkeys have many very peculiar complaints, and it is almost impossible to avoid them all. No rules for success can be laid down; where one fails, another succeeds. To those raising these profitable fowls, the experience of prominent men should be eagerly sought after. We have seen specimen pages of Mr. Samuel Cushman's coming report, wherein the diseases of turkeys are able and exhaustively treated. Mr. Cushman is superintendent of the Rhode Island Experimental Station poultry department, and as that is a great turkey centre he has devoted a great deal of time to them.