

1895.....	\$128,840
1896.....	50,000
1897.....	130,925

The tenor of the general remarks made by the various correspondents throughout the Province bespeaks in a most unanimous way the general feeling of prosperity and hopefulness that prevails. The following extracts may be taken as a general index: "Prices are good, farmers are paying off their debts. Cattle and horses are in good order. Plowing well ahead."

"The country was never better financially, and never was outdoor labor so far advanced."

DAIRY.

Winter Dairying Pointers.

When a man is going to build a barn, or undertake any effort upon which he desires further light, if he is wise he will investigate the methods of men in like undertakings, whom he is conscious have made a success of that particular branch upon which he desires information. There are among our readers very many engaged in dairying who are making money, while many others are working industriously without making any financial advance. It is for this latter class especially the following series of suggestive letters are intended, while the interchange of ideas will also be of advantage to those who are succeeding and wish still further to improve upon their methods of cow-keeping.

After one has a herd of good cows, perhaps the next consideration is to supply them with proper food, as it is from this raw material that the salable product is derived. If a cow is to do her best she must be healthy; it is therefore important that proper ventilation be secured. After milk of a good quality has been drawn from a cow, to allow it to become contaminated is to court failure; it is therefore of great importance that the hips, udder and sides of the cow be kept clean. It is claimed for dairying that by it the fertility of the farm can be maintained. This is true only when all the manure is returned to the land. See what advice is given below on stable floors, gutters, absorbents, etc. Dehorning is meeting with general favor where by experience its advantages are realized. The contributors of the following epistles speak from experience. Some lines of summer dairying cannot well be carried on without a supply of ice. Winter is the only time of year in which it can be secured. What some of the contributors have to say on this point should bear fruit.

The points already suggested are fully dealt with in the following letters, which are well worthy of a careful perusal. Our columns are open for discussion upon these letters or suggestions upon any branch of dairying not touched upon.

Experience in Feeding Fodder Corn.

My supply of winter food for dairy cows consists of corn fodder, clover, peas and oats sown together and cut green, carrots and mangels. I have had no experience in feeding ensilage. One important advantage to be gained by having a silo is the much less space required to stow away the corn crop. This fall, after filling over grain mows and scaffolding over barn floors, there was considerable of my corn fodder in the field. It remained there till cold weather set in, then it was hauled to the barns and laid crossways on the floors in layers, placing the butts of one layer one way and the next the opposite way, until the whole was secured from the weather. The variety thus treated was Cloud's Yellow Dent. As it grew from twelve to fourteen feet high, it filled the floor from side to side. It was not tied into bundles, but simply laid in armfuls, which saved the labor of tying. In fact, tying is scarcely an advantage, for by the use of a corn-horse with bars across the legs to serve as a ladder to get up to tie the stooks I find that the fodder will cure in about half the time required if tied into bundles while green before stooking, and by tying in two or three places the top of the stook will run up to a point and effectually prevent rain from getting in. When hauling in, if the distance from the barn is not great, a kind of sloop may be used, and every three or four stooks securely bound together as the load is being made, and if to be put on the top of the bays in the barn, it can be elevated by the use of the horse-fork, rope and pulleys.

Of the varieties of corn grown the past season, Cloud's Yellow Dent proved most satisfactory for cured fodder, and much superior to "White Cap." Compton's Early gave a fair bulk of fodder, but got too ripe for fodder, making it necessary to break off the flinty ears, otherwise the grain would pass through the animals undigested. Angel of Mid-night and Salzer's North Dakota gave the lightest crop.

My plan of feeding is to cut the corn fodder one inch long. Peas and oats, half inch; mix them together two to one. The morning feed consists of roots and unthreshed oats. What is left of the straw in the mangers is used for bedding. Watering is done between eleven o'clock and noon. The

stable door opens into a shed which contains the water trough. On cold, stormy days the cattle are let out of the stable two or three at a time, and when they have satisfied their thirst they are returned. On fine days they are allowed to move about in the barnyard for an hour or so. The noon and evening meal consists of cut feed, with the addition of half a bucketful of wheat bran. By this system the cost of threshing and grinding is saved, which amounts to about eighteen bushels per hundred for tolls, etc. I think it would be an advantage to have the water conveyed into the stable, so that the cows could drink whenever they felt inclined. Feeding three times per day is probably more of a habit or custom than a necessity. I have made no comparative experiments in feeding, but with the above rations the milk cows are still giving as much milk as in September.

I think the proper way to admit fresh air is before the animals, and have the foul air escape in the rear. I have drop boards on front of the mangers, which are closed down in cold weather, and left open or partly open, as the temperature may require. To keep the cows clean in winter is considerable of a problem, but I succeed by the use of that arrangement of torture known as the stanchion, which has the feature of cleanliness to recommend it, also convenience. A radical change is contemplated here with something like the following arrangement: Water trough on front of manger, with lid to prevent feed entering, but admitting of being raised by the animal when desiring to drink; Newton cow-tie, or a chain stretched across and sliding on a bar at each side of stall; a clay floor for the front feet to rest on; have the sills of the stalls extend back over the cement gutter within six inches of rear side, and have a wooden grate made by nailing 1x2 inch hard wood scantling across sills over gutter for hind feet; the voidings of the animals will pass through into the gutter, and may be easily removed from rear daily, as may be convenient.

We endeavor to prevent the escape and loss of liquid by using absorbents in a water-tight gutter, such as cut straw, dry muck or sawdust, if the manure is to be put on clay soil. Cement floors are liable to become too slippery and dangerous, but a good cement gutter fills the bill completely.

I have not dehorned yet, but intend to. Several in the neighborhood are highly pleased with the result in their herds. One man said he would not have the horns on his cows again for \$50. It does not seem to effect the milk yield over two or three milkings.

D. P. L. CAMPBELL.

Prescott Co., Ont.

A Successful Holstein Breeder's Methods--Test of Calamity Jane--Filling the Ice House, etc.

For milk cows I want a succulent ration that is easily digested. For our heavy milkers when fresh on winter feed I feed as follows: 6 a. m.—Ensilage, with bran, oat chop and oil cake; the same at 1 p. m. and 6 p. m. Quantity depends upon the capacity of the cow. Feed roots after milking, then a little hay or straw, so the cow can chew her cud. At 9 a. m., 3 p. m., and 9 p. m. I give a mash of wheat bran, sometimes a little pea meal added (this is scalded an hour or so before being fed), then a little more hay. In other words, I do not load all the feed in a cow's stomach at once, but give her two or three hours to take her breakfast, dinner and supper. This is her natural way when at pasture. I know this is contrary to the practice of some good dairymen. This is my way—look to our records for results.

I aim to water a fresh cow in full milk very often; never give over 25 lbs. of water at one time. Calamity Jane, for instance, when giving over 80 lbs. milk daily drank 200 lbs. water daily, with 40 lbs. more in her mash. It stands to reason they must be kept warm, as it is enough work to warm all this water without heating "all America" (outside). All fresh cows require a great deal of water to assimilate and digest their food and give more milk and better quality. Jane drank 85 lbs. water between 6 a. m. and 10 a. m. and tested 3.8 per cent. fat at 2 p. m., officially tested by Mr. T. C. Rogers. How heavy to feed must depend upon the capacity of the cow. She should be fed enough so as not to take too much out of herself. A cow might milk heavy for a short time by drawing on herself, but if allowed to do so she will take it out of her owner later on. Some figures from a recent official test of Calamity Jane, supervised by Mr. T. C. Rogers, O. A. C., shows it pays to feed a cow of great capacity heavy. We fed 27 lbs. of bran, oat chop, pea meal and oil cake, 36 lbs. ensilage, 30 lbs. mangels, 10 lbs. carrots, 10 lbs. hay, in all costing 31 cents per day. We got 31 lbs. butter per day, or butter cost 9 cents per lb., or reckoning the skim milk at 20 cents per 100 lbs. butter cost about 43 cents per lb. We were not trying to see how cheaply we could make butter so much in this test as how much we could make. The cow had been fed very lightly previous to this test for fear of milk fever, and perhaps some of the feed given this week would show later on. Cows that have been milking six to eight months are fed differently, about as follows: Ensilage 20 lbs., with 2 lbs. bran and 2 lbs. oat chop, 10 lbs. roots, and good oat straw morning and night; cornstalks while they last, then hay at noon; that is, now in December and January; earlier, in October and November, feed more hay and roots to keep the cow from

shrinking, as that is the most critical time—changing from summer to winter feeding.

I aim to have the air in the cow stable pleasant to the senses. Ours is an old building and not fixed with the most modern ventilation. I have kept putting windows in the south side until now about one-third is glass. It is not well to keep the stable too warm, so that the dry cows and heifers when they go out fine days to water are not chilled. Fresh cows never go out, and those I desire to keep warmer are blanketed. The chute for the ensilage does double duty, to put the ensilage down and let the foul air out. In runs up to the roof. Other openings for feed are left more or less open, depending upon the weather. Prefer to have fresh air come in from the leeward side through several small openings rather than one large one, but do not allow openings on opposite sides of stables, as that creates a draft.

I have three or four different styles of fastening the cows. Prefer stanchions, and those that swing around so a cow can lick herself. One can't keep a cow clean when tied by a chain. We aim to groom the cows three or four days each week.

My stable has cement floor. We have plenty of straw, which is used for bedding. If not intending to draw the manure to the field, we wheel the manure under a covered shed. There is enough straw in it to absorb all the liquid. Manure from milk cows is so much of it liquid (owing to the great quantity of water they drink, roots, ensilage, etc.) that special pains should be taken to save it well. As regards dehorning cows, we have done a deal of it, and would not have a horn on the place if some judges at the shows would take a common-sense view of it. Cows will herd together like sheep when the horns are off. They hunt some, but can hurt so little that the more timid cows will scarcely make an effort to get out of the way.

I built an ice house, intending to make butter in the summer. So far I have not made butter except in the winter, and though I have a spring house and a large tank in which to put Sunday's milk when sending to the cheese factory, still I fill the ice house, as it is a treat in summer and costs but little. The neighbors like to get a chunk of ice in hot weather to keep their milk over Sundays, and they turn in and help me fill the ice house. A few willing hands one day does the work. Owing to my having a spring I have less need for ice than many, still I want my ice house filled, and so would others if they knew the advantage. My ice house is built on north side of barn, is 10 feet square, 2x4 scantlings for frame, sided inside and out with rough hemlock boards, filled in between with cedar sawdust; mud sills, no floor; roof boards, joints broken. It costs but very little, lumber being \$10 to \$12 per thousand. Any "jack" carpenter can build one. It keeps the ice as good as any, as it is the sawdust that keeps the ice from melting. I have a door in one corner. Short boards are put across inside the doorway as the place is filled up. We cut the ice in cakes as nearly even as possible so they will pack in close and leave but little space between. Some fill space in between cakes with broken ice. I put the ice within a foot of the outside walls and as high as I want, generally about seven feet, then the sawdust is put around it and over it. The sawdust needs to be kept packed down through the summer, else when the ice melts some it will leave holes and let the air in.

Oxford Co., Ont.

GEO. RICE.

Methods of Caring for Dairy Cows at the Nova Scotia Government Farm.

I consider ensilage mixed with cut hay, pulped roots and grain the most satisfactory winter ration. I moisten, mix thoroughly, and feed twice a day wheat bran and crushed oats. If peas could be successfully raised here I think I would prefer them to oats. I take the American standard for a ration and give cows all they will eat. Have water in front of cows all the time and believe it pays well.

Have made no special study of ventilation. We have our barn thoroughly ventilated at the top, but am convinced that there should be some system of receiving fresh air at the ground floor.

Cows stand in rows of individual stalls. The partition between the stalls extends to about two-thirds of the distance between the stanchion and the gutter: cows are fastened with swinging stanchions and Newton bow tie. I prefer the Newton tie. I use cut straw for litter, but still have some difficulty in keeping the cows as clean as I would like.

Use cement gutters connected with underground drains to the manure pit, which is lower than the stable and is also cement and water-tight. The dry manure is carried there in wheelbarrows. Am firmly convinced (after using for several years) that cement makes the best and cheapest floor for cow stables.

I have dehorned cows. From the standpoint of cruelty the practice is not very objectionable, but with the ever-increasing (and much more profitable) system of keeping our cows in the stable from fall until spring dehorning has few advantages. I have abandoned it.

We use a hand separator and sell cream in the summer and do not store ice at present. Believe it to be indispensable to summer dairying and expect to build next year. Will be pleased to have an opportunity of getting the views of others on this subject through your paper.

Truro, N. S.

F. L. FULLER,
Supt. Gov't Farm.

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