

with it. Prevention is better than cure, therefore don't let him run about the stall after taking his meal, or he will pick something up. Let him have his meals regularly, not a feed and a fast. Don't keep changing his food to force him. I let the calf suck the cow three times a day for the first four days, and see that he has his fill every time. After the fourth day I leave him with the cow morning and evening, and milk the cow quite dry each time. I then find out what milk she has to spare, and if she runs short, give him another cow's, but if milked quite clean she will do her best to provide for the calf. At noon I give some balls, made as follows:  $3\frac{1}{2}$  lbs. of wheat flour, a handful of ground linseed, and a pinch of salt mixed together; warm a good handful on the stove and beat up an egg, and use enough milk to make it into a thick paste. Make this into balls about as large as walnuts, and give to the calf. After the first two or three times there will be no trouble in getting him to like them. As the calf gets older increase the quantity of the balls. Some farmers mix a spoonful of gin with each lot, but I think it good enough without. If you do not like to let the calf feed upon the cow, see that it gets plenty of milk from the pail, but give it as quickly as you can after drawing it from the cow.

### Thoughts From the Boys for the Boys.

Each month as the essays come in our confidence in the abilities of our young stockmen grows stronger. Though we estimated highly the capacities of our young friends, yet we must acknowledge that we were not prepared for such an outpouring of wisdom and sound common sense as that which monthly reaches us from our boys on questions that even many older stockmen would hesitate to write upon. Boys, we are indeed pleased to find you taking such a very active interest in this department. Do not, however, feel bound to discuss only those questions that we set from month to month, for if you have any experience in stock or farm matters that you think would benefit others to know by all means let us have it. The object of this department is to stimulate our farmers' boys to give more attention to the stock of the farm so that they may grow up well informed stockmen deeply in love with their work. Sit down and write us at once.

ANDREW GOODCHILD, OF CRAIGLETH, ONT., sent in an essay on the care and management of fowls during the winter months, throws out some thoughts that we think worthy of being reproduced. He writes: "The fowls must be fed three times a day in the morning, with grain; at noon with scalded bran sprinkled over with a little black pepper, boiled potatoes, and scraps left over from the table, also a little boiled meat; at night with grain. They should also have a good supply of nests, so that any of them may lay without being disturbed." Though this essay came too late to hand for our competition yet owing to its excellence we have reproduced part of it.

LAURENCE HOGARTH, OF BROOKLIN, ONT., in an essay on the feeding and care of veal calves strongly advocates the feeding of clover hay for this purpose. This we endorse for there are few foods that will give better results than this either for calves or milking cows. Clover hay is a rich food, and not only that but cattle are very fond of it. Of course a great deal depends on how successfully it was cured and saved. If cut when just nicely in blossom it will be more eagerly eaten by cattle, and will give better returns than that cut after the blossoms have disappeared. Our essayist has done well to recommend that it be kept before the calves for they will early learn to eat it, and they will start to nibble at it long before they could be induced to eat any quantity of hard and dry timothy.

HENRY HOGARTH, OF BROOKLIN, ONT., (age 12 years), favors us with his views on the question of raising calves for the dairy. The essay is written well for one of that age, and contains many good ideas. He says: The first thing necessary to be done is to select a calf of a good milking family. There is more in this advice than many think there is. By careful selection of the bull, seeing that he also is of a good milking strain, by inquiring into the milking powers of his dams and also looking carefully into the records of the cow, we greatly increase the chances of the calf becoming a first-class milker. It is folly to

expect to raise a good dairy cow from a calf that is by a sire and out of a dam that are not of good milking strains. Our essayist has not given this feature too much prominence. We are prevented by want of space from giving more of this thoughtful essay.

ROBERT HENDERSON, OF ROCKTON, ONT., (12 years old) writing on the care and feeding of veal calves for the spring market says in respect to the method of feeding them just before marketing: They should have a few pulped turnips with salt and chopped peas and oats, the latter mixed in equal quantities. This would be a good course as there are few foods that are more often used for fattening purposes than turnips, peas and oats, and experience has shown them to be amongst the first for fattening calves or steers. The turnips, though not a rich food, are very valuable for fattening purposes as they have a peculiar effect on the animal, keeping the digestive organs in excellent running order. Their value does not consist in being a nutritive food, as 100 lbs. of them often contains as much as 90 lbs. of water. Peas and oats, however, are very rich, and for this reason it is well to feed the mixture with such a food as turnips, as advised by our essayist.

R. D. W. HUBBARD, BURTON, SUMMERY CO., N.B., gives expression to many sound ideas in discussing the question of raising calves for the veal market. He makes the statement: The stockman's first care is to have his cow in proper condition before calving for the offspring's vigor depends principally on the health and condition of its mother before its birth. It is generally admitted by all observant breeders that the dam has most to do with the constitution and healthiness of the offspring whether it be a calf or colt. This being so it is necessary in the first place to breed only from well matured cows that are robust and healthy. In the second place, as our writer says, it is important to have the cows in good healthy condition at the time of calving. It is a question whether we attach enough importance to this. To give abundance of rich milk a cow must be in good condition and healthy, and to nourish a calf rightly it is necessary that the milk flow be abundant and of good quality. It is true that the milk may be made so by adding flax seed, etc., but at the same time if the cow giving it is not robust and healthy the milk is apt to effect the calf materially in its growth.

W. D. ATKINSON, OF AMHERSTBURG, ONT., sent us an interesting essay on the feeding, care, and management of the foal during the winter months which we cannot let pass without noticing. From his we take this note: "As to the feed they must have food that is adapted to forming bone and muscle, and the more of these a young horse possesses the better he will be prepared for the work he will have to do in after life. One of the best foods for growing colts is good wholesome oats and bran about equal parts, with the addition of a little oil cake, which may be fed twice a day, or still better three times, and at regular hours. Begin with a small quantity at first, and gradually increase until the feeder thinks that he is feeding enough. The reason why I do not state the amount to feed is that all horses do not require the same feed to keep them in good growing condition; give them good wholesome hay, which if cut is much better." There is a great deal of good practical common sense in the foregoing. First, he speaks of feeding colts foods good for the production of bone and muscle. There is a great deal in that. Sometimes colts have what is known as "rickets," or weakness of the bones, which is due to the fact that they have not been fed such bone-producing foods as oats, or bran, etc. The course of feeding given in the forementioned essay is as good, if perhaps not better, than any we have received in that respect alone. The foods recommended are good, and the hint thrown out to increase the quantity gradually according to the wants of the colt that is being fed is sound practice, and one which those who are fond of fixed rules overlook to their sorrow. All colts vary so much in their peculiarities and capacities that the feeder must show his skill by feeding each such quantities as he thinks best for them.

## The Dairy.

### Notes on the Convention of the Creameries' Association.

The fifth annual convention of the Ontario Creameries' Association opened in the thriving town of Seaford on Tuesday, Jan. 14th. It fell to my lot to deliver an address at its close, summing up its work. In compliance with your request for a brief report of the proceedings, I send you the gist of that speech.

President Derbyshire had taken pains to provide for the reporting of the meeting in the large daily papers. His example in this respect commends itself, and should be copied by others in charge of important gatherings.

Mr. McFarlane, the chief analyst of the Inland Revenue Department, read a useful and interesting paper on "Dairying in Denmark." The main points brought out were the benefits of co-operative or partnership butter-making; the advantages of winter butter-making; the payment for milk according to its butter-making value, and the payment of a premium above wages agreed upon to a butter-maker whose product brings the highest market price.

Governor Hoard of Wisconsin gave two of his inimitable "talks" on "The Dairy Temperament in Cows," and "Cheapening the Cost of Production." He advised breeding for a special purpose, and ridiculed the practice of breeding a large cow of small profit-making capacity. The capacity of the cow can be enlarged by careful feeding on the cheapest suitable rations. He cited the experiments made at one of the American stations which proved that the *best cow* on the *best ration* produced milk at a cost of 1.26 cents per quart; the *best cow* on the *poorest ration* produced milk that cost 5.18 cents per quart; while the *poorest cow* on the *best ration* made milk at a cost of 4.26 cents per quart. At the Fort Atkinson creamery, he had paid one patron in 1888 at the rate of \$70 per cow for the butter-fat of the milk of each of 30 cows in his herd, and had offered the same patron \$15 besides for the skim milk of each cow. Another patron received only \$40 per cow for the butter-fat. When the market price comes down, the capacity—the milking talent of the cow—should be enlarged. When he found a cow ambitious in the wrong way, he sent her to the butcher. He was more ambitious to have the cow make butter worth 25 cents per pound than beef 3 cents. He recommended the feeding of hogs, to have them fit for the market, at about 160 to 200 pounds live weight. Up to a weight of 50 pounds live weight, a hog makes the largest increase for the feed consumed; up to 100 pounds, 10 per cent. more feed is required for every pound of increase; up to 150 pounds, 17 per cent. more feed will be consumed; up to 250 pounds, 24 per cent. more feed will be used for each pound of increase; up to and over 300 pounds, from 34 to 48 per cent. more feed is eaten for each pound of increase. He found skim milk to be worth 22 cents per 100 pounds for making pork when hogs sell for \$4.50 per cwt. By the use of corn ensilage, the cost of feeding a milking cow may be reduced from 24 cents to 9 or 10 cents per day.

Prof. Robertson, in a talk on "Winter Dairying," said the popular conception that dairying is concerned only with the production and manipulation of milk, and the manufacture of butter and cheese, is an erroneous one. Dairy husbandry is an occupation of wider range, and has for its aim the production of fine food of concentrated quality. The three-fold aim of the dairyman's work is to produce and manufacture food, to maintain fertility in the fields, and to provide occupation at remunerative rates. He should dispose of his product at the time when the terms of market exchange are most in his favor. That is, the winter time for butter, the summer time for cheese, and the whole year for beef and hogs. The cow's earning season should begin between October and December. Corn ensilage of excellent quality can be provided in Ontario at a total cost of \$1.75 per ton in the silo, and every two tons of it will feed as far for milk or beef as one ton of hay. Butter can be made in creameries at one-sixth the expenditure of labor required in small dairies. The quality can be made uniform, and thus