

The soil where the lucerne does the best is on a clay loam sloping toward a stream.

Mr. McKee believes that, while the extensive growing of lucerne for soiling might not be advisable under ordinary conditions, every farmer who can do so should grow a piece of it as a provision against short pasture, which so often catches stockmen unprepared. The advantage of lucerne is that if not required for soiling it can be cured for hay, and there is no doubt that on high rolling land it would pay to grow a considerable acreage of it for hay alone, if no summer feed were required. The difficulty, of course, is in curing it, but when the acreage is not too large this can usually be managed fairly well, and when got in in reasonably good condition it makes the most palatable and nutritious fodder for all classes of stock.

Dairying.

Stable the Cows at Night.

The recurrence of frosty nights should remind dairymen to stable their cows at night, giving them something to supplement the watery, frosted grass, which does not contain so much nourishment as summer pasturage, being particularly lacking in the heat-producing elements which are needed now to reinforce the animal body against the chilly autumn weather. We do not believe in coddling cattle, but there is a difference between acclimatizing and "roughing." If the object of keeping cows were mere existence it would be all right to inure them to exposure, but, seeing that our purpose is profitable milk production, it behooves us to keep the animals in comfort. Human beings who let their systems run down in the fall by wearing little or no underwear until late in the season, and by other indiscretions, invite colds and all kinds of maladies during the ensuing winter, while those who protect themselves from autumn inclemencies by donning early their warm clothing and by strengthening their systems with good nourishing, heat-producing food, stand the trying winter season much better. It is so with cattle, only, seeing they are not subject to "colds" and such disorders, people conclude they are "tough." The thinking herdsman, however, sees the results of exposure in decreased milk yield, staring coat, thin condition, lack of thrift during the winter, a weak and poorly nourished crop of calves, and in general reduction of size, production and profit from generation to generation.

In the case of dairy cows, their natural thin fleshing, the sensibility of their mammary organism, and the strain on their systems of abnormal milk production—for abnormal production is the whole purpose of our selection, breeding and development of dairy stock—render them especially susceptible to weather vicissitudes, and should commend them to consideration on the score of humanity, if not of profit. Even with feeding cattle, while they have nothing to use their energy but maintenance of tissue and heat production, and hence can better stand the cold, still it does seem that the practice is irrational which leaves steers out with no protection until away on in November and then takes them up and confines them for months in stalls, with scarcely a chance to exercise, until driven to the shipping depot. It is a wonderful evidence of the inherent vigor of the bovine race, that it has stood so well as it has inbreeding and pampering on the one hand, and inhuman neglect and exposure on the other. What are not the possibilities of a rational management which, while avoiding enervating coddling, will also avoid injudicious, wasteful exposure? The answer is suggested by the difference in results obtained by thoughtful, considerate herdsman, on the one hand, and, on the other, by men without the instincts of live-stock husbandry, who, though working with equally good conditions as the former class, never get results that will bear calculation with paper and pencil. There are the cows that produce 100 to 125 pounds of butter per year, and there are the young cattle that sell as three-year-old feeders for two or three cents per pound.

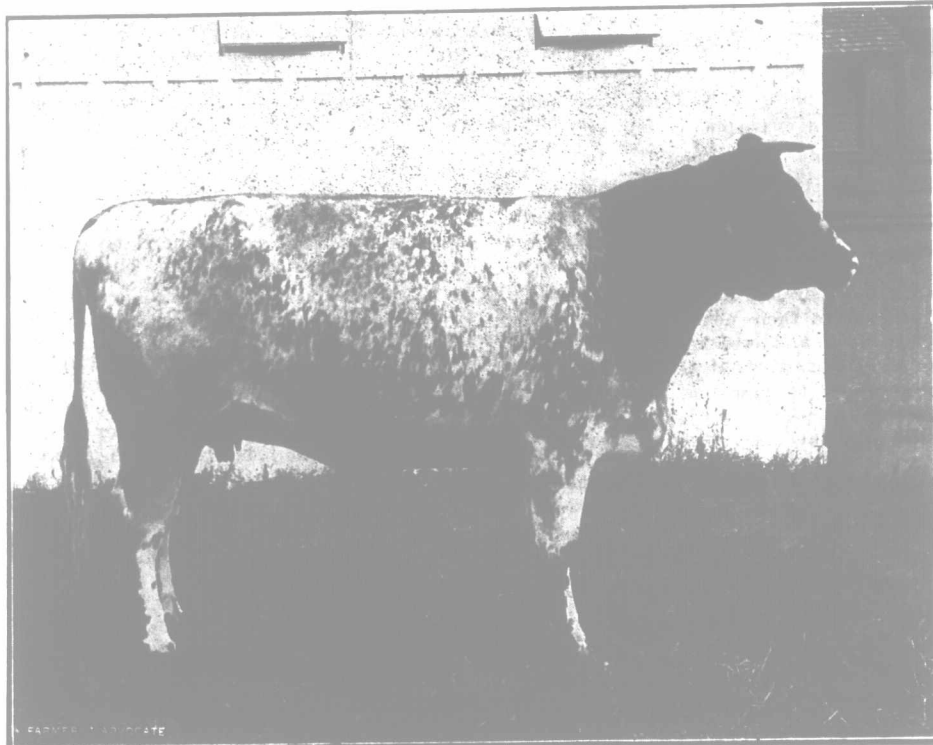
Now is the season to ponder these things and to reform by stabling the cattle, particularly the cows, on chilly evenings, and feeding a little hay, silage, roots or cornstalks, together with a moderate ration of meal, thus not only benefiting the cattle, but sparing the pastures, which usually suffer from too close cropping in the fall. The returns of this little care and feed will be immediate and continuous. They will keep coming all winter, next summer, and the year after, yielding back principal and interest besides, compounded monthly at a high per cent.

Well summered is half wintered, provided the summer gains are not offset by injudicious management, allowing the animals to run down and their blood to get thin and watery before going into winter quarters.

Pure Milk Supply.

The milk usually supplied to the residents of small towns throughout the country is in many cases very little short of filthy. Did you ever look calmly into the bottom of the glass after swallowing the first two-thirds of the thin blue fluid sometimes served up at our country hotels? It's fortunate for the milkman if you haven't. Frequently—far too frequently—you will find dirt, pure and simple dirt, laden with divers cultures of germ life, floating serenely in the refreshing (?) glass. Is it any wonder that we occasionally have outbreaks of typhoid and other infectious diseases? The safeguarding of the public health demands more care in the handling of milk for human consumption.

For the dairyman the motto should be: "Cleanliness is the best policy." The amount of milk annually consumed in our cities and towns would be greatly increased could the users only be assured of the purity of the supply, and even better prices could be obtained for milk that was milk, pure and clean, and not compounded with offensive matter. We know some milk dealers who are making money by close attention to this matter. The opportunity is there for others. Clean up and supply a first-class article—something that will grade A 1, pure, and the returns in the increased demand for your product will be proof of the truth of the words of one of Canada's best-known dairymen, "It pays! It pays! It pays!"



Lady Dorothy 41st = 54109.

Imported two-year-old Shorthorn heifer, third-prize winner at Western Fair, London, Ont. Property of E. C. Attrill, Goderich, Ont. To be sold at auction on the Western Fair Grounds, London, Ont., November 2nd.

A Few Dairy Truths.

The stable for the winter should be warm and comfortable, well lighted, and the whole whitewashed, which will add very much to the light and sanitary condition.—Hy. Glendinning.

Thoroughness in everything is the keynote of success. A thorough workman never says, "There, that will do," but "There, that is it," and this is what every young man in the dairy business should learn, that nothing is ever good enough if it can be made better, and better is never good enough if it can be made best.—Prof. G. L. McKay.

"We have discovered this truth," says Prof. Dean, "when a cow reaches a certain production if you push her beyond that point the milk is produced at more cost. Every 100 pounds of milk which a cow produces beyond her natural limit of production costs from one to three dollars; hence our dairymen have to study more closely how they can feed their cows economically in order to produce milk at a profit. It is not altogether the quantity of the yield which should receive attention, but the net profit the cow turns into her owner's pocket in twelve months is of more importance."

"A barn," said John Gould, of Ohio, before the Eastern Ontario Dairymen's Association last January, "is so much enclosed out of doors. What is out of doors? Pleasant sunshine, uniform temperature, dry ground, water in brooks warm as dish water, succulent foods and pure air. That is June. Now, if I put all four of these into the stable—sunshine, light, air, dryness and succulent food, I have got summer there. A cow does better in winter than in water, because she has better winter conditions. Some men get away from nature and put their cows out on a cold day to freeze, and put them back into the barn to thaw."

out. * * * One thing we have to get into our stables is light. There is no microbe in the world can stand sunshine fifteen seconds, except the political microbe."

Washing-up in the Factory.

Washing, says John Schield, in Cheese and Dairy Journal, may be divided into three distinct parts. First, washing all the dirt off, or loose from the object. Second, rinsing or cleansing; this process removes all the dirt washed loose in the previous act. Third, proper drying.

The main job is washing the dirt loose. Here a proper understanding of the work to be done is required if good results are to be had. Besides this there is needed warm water, washing powder, a brush and lots of elbow grease, directed by a will and a determination to reach every crack and corner.

Right here is where a great deal of poor work is done. Everything may be at hand to do good work, except elbow grease and the disposition that is satisfied only with thorough work. I have in mind two men, both working under me at present. One of them when washing separator disks and covers throws water on the object in hand and slides the brush gently over it. No thought of pressing the brush down on to the thing to be washed, neither the inclination to obtain the best result. There is a lack of the proper understanding of what is aimed at in washing.

The other man is a cream hauler. He also throws the water on the cream floats and covers, and gently slides the brush over them. I suppose they think that

this is good enough, and to be sure you cannot see anything on the disks and covers when they get through. All cream and sediment is off, or seems to be off. However, when you come to handle those utensils later on, you can feel that they are almost greasy enough to slide out of your hand. They were not washed clear down to the metal, because the brush was only drawn over the surface lightly, instead of being rubbed good and hard. When I wash them they feel clean; the feeling in my hand tells me that that hand is holding clean metal, instead of a greasy object. Things washed carelessly will come out greasy, even after being rinsed in hot water.

After washing comes the rinsing. I wonder how many factories there are where they do not rinse things

off after they are washed? The most common way is to have a sink where the water is heated to the right temperature in the sink. Everything is washed. First the separator, and then everything else that can be taken to the sink. There is no rinsing, because there is no hot water reservoir or vessel of any kind where hot water can be kept. Imagine, for instance, the condition of that wash water after one or more separator bowls and covers have been washed in it! Now comes the tub and the disks; they, as well as all the rest of the utensils, may get a thorough washing, but whatever happens to hang onto them from that wash water simply stays there and goes into the machine again, and from there into the milk the next morning. Even if all the utensils happen to be steamed, does it look appetizing to use these things over again without first rinsing?

Suppose 25 persons eat at one table. After the meal all the dishes are washed in a pan, all in the same water. One person does the washing, another wipes the whole batch with the same towel. Would this look clean and appetizing to anyone watching the performance? Here we have about the same kind of work done as when we wash everything in a factory in one water and do not rinse in clean water afterwards.

Even if there is no other way of getting hot water than some kind of a barrel or wash sink, one does not need to wash in these receptacles. An ordinary wash-tub will answer the purpose very well. Wash everything in this tub, and then you have the clean, hot water in the barrel or sink for rinsing. Submerge every piece after it is washed in scalding hot water for a moment, the longer the better—then put it away on a shelf to dry. You have now done a thorough job at washing. If the articles are then steamed after they come out of the hot water all the better, but it should not be necessary under ordinary conditions. Besides, steaming tends to make a factory more damp in winter, and it is worse on the walls and ceiling.

It is a little thing to keep clean in a creamery is