

Dairy.

Small Dairies.

BY PROF. L. B. ARNOLD.

While there are some large and fine dairies scattered through all the dairying districts, the dairy-men of Ontario—and the same is true in many places in the States—are largely in the habit of keeping only a few cows for sending milk to the factories, the main business of the farm being devoted to growing grain, wool, horses or other stock. Where factories, receiving the milk of 1,000 cows, have it supplied by from 80 to 130 patrons, the dairies average only from seven to twelve cows, and a large territory must be traveled over to collect the milk. These little dairies are an unfortunate item in the dairy interests of the Province. They are quite apt to be so much neglected as to seriously depress their annual returns, and to make the production of the milk, of which butter and cheese are to be made, cost more than it ought to, or need to. To assent to the fact that it costs more to produce milk from a small dairy than it does from a large one, requires but little thought from the average farmer. It is evident also that it costs more, proportionately, to deliver small messes of milk to a factory than it does large ones, and if made into butter or cheese at home it costs more relatively to manufacture the milk from a few than from a large number of cows. It must be plain, then, that if dairying is entered into as a business of the farm, it will pay better for the proprietor to keep as many cows as his farm can well carry, or as his help can manage. There is a marked advantage in making dairying, when undertaken at all, a prominent feature in the farm management. When the farmer's attention is divided between dairying and raising, wool, horses and beef, the dairy, especially if a small one, is very sure to be but indifferently looked after. Where but five or six cows are kept on a large farm the average yearly yield of milk per cow is almost sure to be low. The dairy not occupying much of the farmer's thought, he is not careful enough in the selection of cows. Poor ones are permitted to remain in his herd for years perhaps, while none but the best should be retained, simply because he does not give them attention enough to discover or appreciate the difference between good ones and poor ones.

If, from drought or miscalculation in providing, the food supply of his stock is scant, the cows being little thought of will very likely be the first to suffer, whereas they should be the very last. Where milk is not more a specialty, a falling off in the yield is generally but little heeded, and the cows dry down, to continue so for the remainder of the season. Provision is seldom made in such cases against a long drought by preparing a field for fodder, corn, or other green soiling crop, an item which would be strictly attended to if milk was considered an important element in the farmer's income. The milking, too, in these little dairies, is quite apt to be irregular, especially in the hurrying season of the year, nor is the winter care what it should be, or would be, if milk had a more important place in the revenue of the farm. Many other items, which ought to be looked after, and would be looked after in larger dairies, are apt to be neglected in smaller ones, all of which tend to diminish the returns from the few cows kept below what they might be. While a large number of cows are relatively more profitable than a few, it does not follow that it is best to devote a farm wholly to cows. Mixed farming pays better. It divides the labors of the year more equally over the different seasons, preventing a crowd of labor at one time, for which high wages must be paid,

and comparative idleness at another when wages are low. It enables the farmer to raise many supplies which otherwise he would have to buy, and enables him to live more within himself. Mixed farming allows of using the fertilizing material of the farm to the best advantage and ample time for breaking up and reseeded and for carrying on a sufficient rotation of crops to prevent exhaustion and to keep the farm in good condition, if not to improve its fertility. More cows than most of the dairy-men keep who supply milk to the factories—enough at least to command a careful attention from their owners—I am confident would make a better balance in the labors and the products of the farm and enhance its income, and at the same time improve its productiveness by preventing the exhaustion which is sure to follow a single line of cropping.

Butter Preservatives.

BY PROFESSOR G. C. CALDWELL.

Several notes have appeared in recent journals on processes for the preservation of butter. Mantetti, in Italy, has tried the effect of a much more thorough washing than is usually practised, the operation being continued till the wash-water was quite colorless, but the butter kept sweet only a few days longer than another sample washed as usual. The addition of two, three, and five thousandths of salt caused the butter to keep sweet five, fifteen and twenty-five days longer than butter without any salt; with one or two thousandths of borax the butter kept sweet from fifteen to twenty days longer than without any preservative. Concerning this last mentioned substance our Consul in Florence wrote to the Commissioner of Agriculture that very successful experiments had been tried in Italy on its substitution for salt in the proportions in which salt is usually added; but since scientific men disagree as to the harmlessness of borax in food, there is some reluctance in respect to the adoption of this preservative. Professor Beechi, director of the Experiment Station in Florence, has found borax in the well waters of the city, and in the air, as well as in some mineral waters of good reputation; and he therefore concludes that, at least in small quantities, the substance is harmless. He preserves his own butter by mixing with it as thoroughly as possible about one-sixteenth of its weight of pure calcined and very finely powdered borax; the flavor is not affected at all, and the butter keeps admirably.

A new process brought out in Germany consists in covering the butter with a layer about an inch in thickness of a strong solution of sulphate of lime, a chemical that is in somewhat common use for the preservation of cider. Butter thus treated kept quite sweet in a damp cellar through three weeks in July, at a temperature of about 59° Fahr., while another sample not so treated, and unsalted, was quite spoiled. From England comes the account given in the London Times, of a test of a new patent preservative. The butter, into which a trifling quantity of the material was worked, costing about one cent per pound of butter, after being wrapped in a muslin cloth, was put into a firkin without any salt, and left, fully exposed to the air, on the premises of the Aylesbury Dairy Company, from the 1st of July to the 1st of October, and was then as sound and as fresh as at first, having only a little less aroma; about 1 per cent. of salt may be added to flavor the butter thus preserved to suit the fancy of those to whom perfectly fresh butter is too tasteless. It is affirmed that butter salted in the usual way with from 5 to 6 per cent. of salt will be driven out of the market in consequence of this new discovery. If it bears the test of trial on a large scale, it will certainly cast everything else into the shade in the line of butter preservatives, and will be a great boon to those who are forced to use butter that must be put up in a way to keep for a long time. —[Semi-Weekly Tribune.]

[We drew attention to the new patent preservative in our January number, and have since written to England and Scotland concerning it, but have not succeeded in gaining any information.]

MILKING.—The faster and more gently a cow is milked the greater will be the amount given. Slow milkers always gradually dry up a cow, and for the reason that if the milk be not drawn about as fast as it is given down it will subsequently be withheld, and that withheld is, as a matter of course, what is known as the strippings—in fact, the upper surface of milk is the udder.

Garden and Orchard.

Planting Shade and Fruit Trees.

We have repeatedly referred to the planting of shade trees and windbreaks. The complaint is often heard that the early settlers did their work so thoroughly in clearing the lands about their new homes as in many instances to leave scarcely a tree standing. The remedy is in our hands. Let us plant without stint wherever we have found it well to do so. Throughout the country it is easy to get young trees from the borders of the native forests, but we would prefer buying young trees from reliable nurserymen. Their trees are better supplied with fibrous roots, and when planted carefully there can be no failures. We will give a few hints for planting. First select the ground to be planted and prepare it by good deep ploughing or digging. The mellowed soil for the newly planted trees the surer and better their growth. In taking up the trees for transplanting let care be taken to take up as much of the slender roots uninjured as possible. Great injury is often done by breaking and mangling the roots. Keep the roots well covered and moist till planted. Dig the holes for the trunks large, that every root may be spread out where it is to grow. When covering them see that each individual root be in contact with the soil, and plant them leaning a little to the south, or rather the south-west, as by this means the inclination of the top will partially shade the stem from the baleful influences of the sun when most powerful.

VALUE OF LEAVES AND WOODS MOULD.—Decayed leaves and mold from woods are of considerable fertilizing value. They may best be used by making litter of them to absorb the liquids of the stables and yards. There is a large quantity of acids (chiefly tannic and gallic) in leaves, and the mixing of these with manure tends to neutralize the acids and increase their usefulness. As they are very absorbent, being able to hold 180 per cent. of their weight of water, they may serve a useful purpose as litter besides being increased in effective value. If this cannot now be done, the leaves, &c., should be spread on the plowed surface and mixed with the soil by harrowing. To plow them in would not be so well as to keep them near the surface where they would be benefited by exposure to the atmosphere. They are found very useful as garden mulch.

Mr. Saunders, President of the Ontario Entomological Society, says in regard to insectivorous birds: "The greater experience I have with these, the more convinced I become that comparatively little help is got from birds in keeping in subjection injurious insects." He considers it a great mistake to protect the robin by legislation. Apart from any consideration of insectivorous birds, the insect world would and does to a large extent take care of itself, and when an injurious species increases beyond its normal limits, its natural insect enemies also increase, and soon become sufficiently numerous to reduce the number of injurious insects to their natural proportions.

Mr. Thomas Meehan, after remarking that many young hedges are ruined by being pruned too young, says that the more he sees of the workings of the following plan, the more he is satisfied that by adopting it a better hedge—especially of honey locust, and other deciduous kinds—can be secured in half the time and at half the cost than by any other method: "It is best to let these grow until the stems are two inches thick at the ground, then saw them to within half an inch of the ground. They will then push up a perfect wilderness of young sprouts, which can be pruned into shape the same season. On this plan the young hedge plants are often two years wholly untouched."

In properly evaporated fruit not only is there no loss in any good quality, but there is an actual development of sugar due to the ripening process, varying from five to twenty-five per cent. The cell structure, flavor and tenderness of the fruit are preserved, and when treated with water, it is easily restored to its former condition, thus solving a problem no less important than the supply of wholesome, nutritious, fresh, ripe fruit—for by this process decay is arrested.