

dairying to secure dairy stock at reasonable prices, because if hundreds and thousands of dairy cows were thrown on the market, as in the case of any other commodity in which the supply is greater than the demand, prices would surely drop and the popularity of dairying would receive more or less of a hard knock.

There is sure to be in the near future a greater demand than ever before for the best class of pure-bred sires and pure-bred females of the dairy breeds. We are only beginning progressive dairying in this country and yet our breeders have made rapid strides as official records prove. It is by the records that profits will be made. The cow and the sire of the future must show that they are capable of that class of production which puts them in the list of toppers heading the line of profitable producers. A good dairy cow is a safe investment at any time and she is a good thing to keep on the farm at this time. If she is valuable to keep she is also a safe proposition for the buyer. If some must go, send away the low producers and keep the proven individuals.

Be Provident and Harvest Ice.

We never realize the value of a thing while we have it in abundance, when we are without it we regret our prodigality and lament that we lacked the provident nature in time of plenty. Who has not had that feeling during the sweltering summer days when the milk sours easily and provisions are difficult to preserve. A few tons of ice snugly stored away beneath a foot of good sawdust is worth all the trouble and expense connected with it.

A winter such as we are experiencing provides ice in plenty in most districts of Canada, and if one wishes to be popular with his neighbor there is nothing that will draw friends around him like a few blocks of ice to give away in the warm summer weather. There is something beyond this. It has gotten to be almost a national question concerning our dairy products. From all quarters we hear that the quality of Ontario dairy products could be improved. Western Provinces, although new in the game, are old in successful experience, and have something to tell Ontario already about the manufacture and sale of products of the dairy. In connection with creameries, in particular where collections are only made three times a week, it is necessary to provide some artificial means of keeping the product cool, or an ill-flavored and tainted butter will result no matter how efficient the management of the factory may be. It is the duty also of the farmers to provide their home with ice, and seeing that it is usually quite close at hand and that it can be gathered when the work is not very rushing on the place, there is little excuse in most places for farmers being without that necessary commodity. It is not necessary and in the majority of cases unwise to erect an expensive ice-house. A shelter, good drainage and a foot of sawdust with a little hay thrown on top will keep ice under average conditions, and if farmers do not wish to erect elaborate buildings the storage need not be a prohibitive proposition. Approximately \$60.00 would provide material for a building 10 feet by 16 feet, which could be subdivided into an ice-house proper being 10 feet square, and a small adjoining store room being 10 feet by 6 feet. The smaller room need have no particular insulation, as it would simply be a storage room where the cream cans would be kept in a tank or a box could be provided that would act in the capacity of a refrigerator. However, a small partition in the drive-shed, wood-house or any outbuilding which has drainage and is sheltered from rain will keep ice.

In gathering the ice, of course, particular care should be given to the quality. Layers of ice and snow together are not suitable. A thickness of one foot should be secured if possible, and packed securely in one solid block by breaking the joints and filling the chinks with ice or snow. It is unwise to fill the space between blocks with sawdust. The aim should be to make the air space as small as possible, and in order to do this the blocks of ice should be even and uniform and laid together in such a way that the space between the blocks is reduced to a minimum. With plenty of room there should be one foot of sawdust below the ice and at least one foot around the edges. Between one and a half and two feet of sawdust on top with an additional quantity of hay or straw should, under normal conditions, cause the ice to keep satisfactorily. Allowance should be made for settling in the middle and at the sides, so two feet of sawdust on top is none too much.

Where there is no natural pond or lake in the district, certain communities have co-operated in the formation of such a body of water by damming up a small stream. It should be made as deep as possible in order to produce good quality ice. Where dairying is practiced it is advised to harvest at least one ton of ice for each cow. Two or three tons per cow would be better, but circumstances will govern this.

If possible procure old sawdust, the green material is liable to heat and destroy the ice to

some extent, but if the green material must be used too great a thickness should be avoided, as it will tend to increase the heating propensities. In a case of this kind use more hay or straw.

Advantages of Winter Dairying

Years ago when dairying was not the highly specialized industry that it is to-day, very few cows freshened in the fall or early winter, winter milk in small quantity being procured from "strippers" which would begin their lactation period the next spring about the time the grass was ready to be turned upon. An increased home demand for milk and cream and milk products generally and the comparatively high prices which have ruled in winter have changed the general practice of the wide-awake dairyman, who now plans to breed his cows so that they will freshen in the fall or early winter, and with this change he of course must grow more feed for winter in order to push his cows to their best production. This means more silage, more roots, more clover and alfalfa and a better all round farm. It is conceded by men who shove cows to high records that bigger annual yields are obtained from cows which freshen in the fall. At the beginning of the lactation period a cow always milks well, if she is a dairy cow, and with good feed through the winter her production may be kept high. Then, just at the time when she begins to fall off in flow grass comes and luxuriant pasture grass always stimulates milk flow so that for several months during early summer her flow is maintained at a high level whereas had she freshened in the spring it is more than likely she would fall off greatly in flow at the time of going into winter quarters the following fall. Fall freshening is a good way to increase production. Besides the heavy flow comes in winter when prices are highest. All that is required is to grow considerable corn for silage and clover and alfalfa for coarse roughage and a few mangels for corrective feed. All these crops tend to improve farming practice. Corn and roots, clean land; clover and alfalfa enrich it. More manure is made from better feeding and taken all together, winter dairying is the best dairying. Late February or early March is a good time to breed the cows.

HORTICULTURE.

Experience Inspecting for Peach Diseases---Yellows and Little Peach.

Editor "The Farmer's Advocate":

First I will endeavor to describe the symptoms by which we identify diseased trees. As to the Yellows, can we identify the disease by any set rule? In other words, does the disease, Yellows, always exhibit itself in the same form each year? I find it does not. In some cases the first symptoms of disease will be seen in the red spotting of the fruit alone, there being not the slightest evidence of disease in the foliage, while probably the next season, the foliage would show disease first. The red-spotted fruit, if allowed to remain on the tree, will in the course of about two weeks become as red as blood through the whole flesh of the peach. This is an advanced stage of the disease. Again, the first to be noticed of the disease is a tuft of very slender twigs of a pale willowy color with leaves much smaller than would be found on other parts of the tree. These tufts will be found on the large branches usually not very far from the trunk, and in some cases on the trunk of the tree. Another symptom of the disease will occasionally be found in very tiny little buds or shoots starting out on the main branches usually not far from the trunk. These tiny shoots or spurs are generally not over an inch in length with very slender small leaves, being yellow verging to pink at the edge of the leaf, and apparently are second or new growth which generally make their appearance in July or August.

Another symptom of disease in trees from two to four years planted is a noticeable pale yellowing of the foliage in the branches in the centre of the trees first, and then spreading throughout the trees in the course of two or three weeks. In aged trees the disease does not show itself always on the branches in the centre or body of the tree, but more often on the branches well to the outside or top of the tree. Ordinarily the first symptoms of Yellows and Little Peach are identical, namely—a yellowing of the foliage at the base of this season's growth, and rapidly spreading; the foliage soon begins to curl and cluster, excepting the tips of the branches, which will remain green and healthy looking until probably the next season after the tree has been affected when the tips will also become yellow. After the Yellows reaches an advanced stage, it is readily identified from that of Little Peach disease. In the case of the Yellows there is a premature ripening of the fruit and quite often while the fruit is yet quite green, small swellings

appear just under the skin of the peach (about the size of a wheat grain) causing it to have a lumpy uneven appearance. Another way to distinguish Yellows from Little Peach without the aid of the fruit—there will be found in the majority of Yellows diseased trees a very peculiar bright red blotching on an occasional leaf, though it needs the practiced eye to distinguish between it and the ordinary red leaves commonly found on the trees in the inspection season. I have never seen this peculiar red leaf on trees affected with Little Peach.

The affect of Little Peach disease on the fruit is directly opposite to what we find in the fruit of the trees affected with Yellows. The fruit on trees affected with Little Peach will seldom grow to more than one-third the size it would on a healthy tree, and will be about two weeks later in ripening; it will be found lacking in flavor, dry and slightly bitter in taste.

The inspector must be able to identify the white-fleshed peaches from the yellow-fleshed by the foliage alone, as disease does not affect the foliage of the white-fleshed varieties, and Elbertas in the same way it does the yellow-fleshed peaches. Disease in the Elbertas and in most of the white varieties will not be found curling or clustering, and will remain green for a considerable length of time after being diseased. The foliage will be seen to droop, the leaves on the branches to slightly roll, making the tree have a wilted appearance. In determining whether a tree is diseased by the fruit, care should be taken not to condemn a tree because the fruit is red just at the pit, for several varieties of peaches are always found highly colored near the pit, such as Barnards and Triumphs, etc.

This season my attention was drawn to a very uncommon case of disease in a three-year-old orchard where the disease made its appearance in the tips of the branches and did not extend more than six inches at first. The trees were allowed to stand not marked, to allow us to watch the development of the disease. In three weeks' time it had spread downwards into the body of the tree, the foliage curling and showing a positive case of disease. In my experience as an inspector, covering a period of twenty years, I have never observed a similar case.

Root-gall will cause the foliage to become yellow, and is sometimes mistaken for disease.

Peach-borers when working badly in the trees will cause the foliage to look bad.

Peach-canker will cause a yellowing of the foliage, but usually will not extend to branches that are not cankered.

One would naturally suppose disease would more often be found on poor, impoverished soil than on rich, well-tilled land; but this is not the case, for some of the most badly-affected orchards I have seen were heavily manured, well-drained and well-cultivated; and in other cases neglected orchards were found badly affected. From observation I am inclined to believe that disease will be prevalent in orchards standing on soil where there is an excess of lime, or where there is a soaking of water coming from a limestone formation into the orchards.

The most disastrous results from Yellows and Little Peach I have ever seen were in orchards where there was plenty of limestone rock or where limestone rock was close to the surface soil. The orchard I referred to contained a thousand trees or more and the entire orchard was wiped out with disease in eight years after it was planted. From experience I would say orchards standing near a large body of water (other conditions being equal) have less disease in them than where they are a distance away from water. There is no doubt in my mind but that there are local conditions which seem more favorable to Yellows and Little Peach in some localities than in others. I know of one particular section in this Niagara district where Mildew is more prevalent than in any other part, and there Yellows and Little Peach are also oftener found than in places farther away.

Throughout my experience inspecting for peach diseases I have found that orchards situated near what is commonly called "the mountain," which extends through the Niagara district, have always proved to be the most seriously affected with Yellows and Little Peach. At the base of the mountain there are some sections where at some period of time there has been carried down by large streams of water, soil mixed with limestone, and this covers an area of from eight to ten acres. Peaches planted on these places grow rapidly, but soon die out with Yellows. Again, about half way up the face of this mountain there is a bench or ledge of land, in some places wide enough for planting an orchard, and I have known of several orchards being planted on it, but not one single orchard survived more than seven or eight years before the Yellows wiped it out. Again, orchards planted just on the top of the mountain are badly affected. Along the face of this mountain there is more or less stagnant air, but immediately on the top there is good air drainage yet the stagnant air from decaying vegetable matter on the face of the mountain is