

Advocates Co-operative Orcharding.

It is too early yet to speak definitely of the probable effect of the severe winter on the fruit buds and trees, but no doubt the buds of a number of the tender varieties of cherries, peaches and plums will be killed. I think the trees will be all right. We have not tried any of the winter washes, either for scale insects or to retard growth. The first spraying in spring that we use is two pounds of copper sulphate to one barrel of water, before the buds burst; this is for the black spot on the apple. We also use the same mixture on plums and cherries for black-knot. We have no scale insects but the oyster-shell bark-louse, and for this we use one pound of whale oil soap to seven gallons of water, when the insects are running. Judging from experience at our station, apples, and more especially the long-keeping commercial varieties, such as the Spy, Baldwin, Greening, and a few other sorts for the Manitoba and the Northwest trade; Baldwin, Greening, Ben Davis, and a few other varieties for the export trade, are most deserving of particular attention by farmers of this district. Another variety of fruit that is much neglected is the cherry. We do not grow one-third cherries enough for the local markets; as Mr. Dawson, of Toronto, says he had orders for 15,000 baskets last season, but could not supply them, for the simple reason they could not be got.

There is a most noticeable improvement in the cultivation, pruning, spraying and general management of the orchard, but the picking, grading, packing and marketing of the products of the orchard are greatly neglected, but this we expect to remedy as soon as we can establish sufficient co-operative shipping associations, under the central packing-house system. This is, I believe, the only way along with the fruit inspection that our apples will be packed honestly, and put on the market in that condition which will command the prices that the grower should receive to make apple-growing profitable. At Walkerton we have been shipping our apples under the co-operative plan for the past two seasons, and this year we are going to adopt the central packing-house system, and I believe this will give such an impetus to apple growing that this district will become one of the leading fruit districts of Ontario.

Walkerton, Ont.

A. E. SHERRINGTON.

How to Plant Trees.

J. H. writes: "Kindly give directions for planting trees next spring. The land is new, heavy clay, has been spaded once. Trees to be planted, plum, cherry, pear and peach."

Heavy clay is not a congenial soil for cherry and peach, though plum and pear will do very well, climatic conditions and other things being suitable. However, if the land is well and deeply drained they may do fairly well. In such a soil it would be an advantage to have the land in ridges, made by plowing several times in the same way, something like a turnpike road, and planting the trees on those ridges. When planting the tops should be cut back sufficient to balance the roots, which are always more or less injured by removal. The peach especially should be well cut back, but on all the trees some of the terminal shoots on the center stems should be left, as these facilitate the upward flow of the sap when growth begins. The holes for the trees should be dug large, and, if possible, a lot of loamy soil should be worked in firmly about the roots, especially the small fibers. The trees should be planted slightly deeper than they stood in the nursery.

If the soil is to be cultivated between the trees by the growing of small fruits or some kind of hoe crop, it will not be necessary to mulch, otherwise the soil around the trees should be well mulched to retain moisture. This is important, as if trees become stunted in the first year's growth they are not likely to ever do well after.

If the roots of the trees have been allowed to become dry before planting, make a puddle of soil and water like thin mortar, and put the roots in it for twenty-four hours before planting.

Black Currant Bushes.

Have several black currant bushes that never bear any fruit of any account. Are well cultivated and manured, also pruned, but can't get them to bear. Grow lots of fine, healthy-looking leaves.

J. B. EPPLETT.

Perth Co.

Ans.—If the plants are well cultivated and pruned, it is difficult to understand why they do not fruit well. You do not state whether they are all of one variety, or what variety they are. Black currants are sometimes badly infested with oyster-shell bark-louse. Examine closely and see if these are infested, and if so spray them with fresh lime whitewash, one pound of lime to a gallon of water; when the first coat dries white, give a second spraying. Do this early, while plants are dormant. If there is no scale, and they are all of one variety, plant a few of some other sort alongside of them—Black Naples or Lee's Profit, for instance. Try also covering the ground

about them deeply with mulch, sufficient to hold the moisture all summer, and keep down grass and weeds, and keep them well pruned.

Pruning.

By W. T. Macoun, Horticulturist, Experimental Farm, Ottawa.

A tree is pruned principally to get large, good and highly-colored fruit in paying quantities. Judicious pruning also promotes the growth of the tree and gives it a good form, which helps it to withstand the strain of a heavy crop of fruit and prevents it from splitting, which often occurs in badly-pruned orchards. Trees pruned to low heads are better than those with high ones. The fruit is picked easier, there are not so many wind-falls, and the windfalls are not so much bruised. A trunk from three to four feet in height is quite high enough, and many good orchardists now grow their trees with little or no trunks, and find this method very satisfactory. In the colder parts of this country low-headed trees are not so subject to sunscald as those with high heads. Many trees have been ruined in Canada by injudicious pruning. A tree has, perhaps, been growing for eight or ten years without having been pruned. At last the lower limbs interfere too much, in the farmer's opinion, with the cultivation of the ground. They are thereupon cut off, and the trunk is lengthened, but at what a sacrifice. The tree may, by having its trunk thus suddenly exposed, suffer badly from sunscald, but even if it does not the cutting off of the lower branches forces the growth of the tree upwards, and the fruit becomes more difficult to pick from year to year. Trees should be pruned back and opened up from the top and outside, rather than from below and inside. This will cause the buds to develop at a reasonable distance from the ground, and this arrangement of the fruit buds will be better. Pruning should be planned to obtain the largest crop of fruit of the highest grade, with the least spread of branches. Often the whole ground is taken up by trees with long, bare limbs, having fruit buds only at the extremities of the branches. This condition can be avoided to a large extent by judicious pruning. Pruning is usually done during the latter part of March and April. Wounds often heal quicker when the pruning is done a little later on after growth has commenced, but it is not often practicable to prune at that time. Further information regarding pruning may be found in the bulletin on apple culture by the writer.

Sugar-beet Settlements.

To the Editor "Farmer's Advocate":

Sir,—I noticed an article in the March 3rd issue of the "Farmer's Advocate," stating that the prospects for farmers to make money out of sugar beets are good, and that two of the factories will get more beets than they did last year. Well, that may be true, but there is one company that will not get many beets, in this section at least. About one year ago, this company had men getting people to raise beets in this section, and a number took contracts, but last fall shipped the beets to the Wallaceburg factory instead. We took seed for one acre, and had seven tons for our trouble, which were shipped about November 20th last, and since then we have never been able to get any satisfaction from said company, and neither has anyone else that we know of here. I would like to ask you if it is any wonder that some papers are publishing pessimistic reports about the beet-sugar industry? There undoubtedly is money in raising beets, if companies pay enough and use us farmers right, but the way we have been treated would make any person disgusted. We contracted to supply what we raised at \$3.50 per ton, delivered at our station, less fifteen pounds of seed at fifteen cents per pound. So you see we would not have made very much if we had been paid promptly. I notice in a daily paper that J. W. Garvin, of Peterborough, and several others are trying to get a bounty on sugar from the Government. The next thing they will want the Government to do will be to pay for the beets they have bought. If the sugar industry in Ontario is run on this plan, there never will be money in it for anybody but the factories. F. W. SCOTT, Hastings County.

[NOTE.—We are advised by the Secretary-Treasurer of the Wallaceburg Sugar Company that they contracted with the company referred to by our correspondent for the beets delivered to them last fall, and received part of those grown, for which settlement was made last fall by payment in full to the said company. What disposition was made of the money, or whether the farmers were paid by the company referred to, the Wallaceburg Company is unable to say. It would be unfortunate if the progress of a promising industry should be hampered in any locality by the non-settlement of transactions as referred to. If such be the case, steps should certainly be promptly taken to put the matter in question in satisfactory shape.—Editor.]

APIARY.

Gilt-edged Buckwheat Honey.

The production of buckwheat comb honey during a good season is quite simple, and consists in boxing all strong colonies. Sometimes the conditions are such as to produce a swarming mania. Especially are such colonies disposed to swarm as have old queens. They are usually the colonies we "shook," or the new swarms, and are not on a full set of combs. When the season is not very good, and we care not for any increase, a very good way is to unite two and two of such colonies and shake them. Later these shaken swarms may be reinforced with bees from upper stories, the same as was done during the white honey season. But one must feel his way. This reinforcing at this season of the year does not always work. Sometimes the added bees are unmercifully slaughtered. If the bees are disposed that way, better not try the experiment a second time. In order to obtain the finest honey I shake on but five frames or a half-story, the latter giving the best result. Only starters are used. The brood combs obtained are massed together on as few hives as practicable; and when the season is over, the swarms that were shaken on half-stories are placed back on to these same combs; those shaken on full-sized frames receive enough of the combs of honey and brood to fill up their hives. When this is done as soon as the honey-flow ceases, in this locality about Sept. 7th, the colonies so treated will usually be in good shape for winter. If wintered in the cellar they come out just as well in the spring as others that were on a full set of combs all the time.

When the buckwheat season begins I often find myself with colonies that were tiered up with those sets of brood-combs from the latest shaken swarms. Sometimes there are three or four sets of these combs on one stand piled up, with an immense quantity of bees in them. The colonies with queens of the same year's rearing are simply reduced to one story about Aug. 6th, and the sections are applied (only small starters in them). A large yield of fine buckwheat comb honey may be expected of them. The colonies having old queens are shaken on half-stories; starters only both in frames and sections. At this time of the year there is little danger here of pollen being stored in the sections. These colonies will produce the honey that will tickle the palate of the epicure (if it is buckwheat), and take the cake at the fair if the judges know their business, and not give the all-worker comb honey built on comb foundation the preference. F. GREINER.

Naples, N. Y., Dec. 22nd.

Cellar Wintering.

I am much interested in wintering bees in a cellar with a furnace. I had a furnace in my cellar for several years until last season. Did I have the courage to try to winter bees in such a place? The main part of my cellar where the furnace is, is 20x20; then there is an L 9x14. This I partitioned off by setting 2x4's up on end and siding up on both sides. This left a space of four inches, which I packed with sawdust. This is a non-conductor of heat. I have a door through this partition, connecting the two cellars. I have a north window and outside door in this "cold storage," as I call it. In this room I have all my vegetables for winter use. Last winter I placed 22 colonies of bees in this storage place—the lightest I could pick out. I kept this place as near 45 degrees as possible by opening the window. If it got too cold I opened the door, letting in some heat. Now, how did the bees come out? Just perfectly clean, and as sweet as when put in. When I set them out they spotted but little. I don't think they consumed over three pounds each while in the cellar. Now, I have over 30 in test this winter; and, say—what a fine place to keep vegetables! This could be kept nearly at the freezing-point.

If any one having a furnace in his cellar will partition it off with a sawdust packing, he will find it all right. I could not see that fresh air from the windows did any hurt so long as it was dark. I darken the window from the outside.—[W. D. Soper, in Gleanings in Bee-culture.]

Sanitary Squad of Bees.

Bees ventilate their hives and keep the air pure by having a sanitary squad beat the air into motion with their wings, after the manner of our own electric fans. This ventilating squad is relieved every half-hour. Other facts no less remarkable are related by Dr. Henry C. McCook, President of the American Entomological Society, in an article on "Insect Commonwealths," in Harper's for March. The cleanliness of both ants and bees—in both cases immaculate—is not the only virtue in which their example might well be followed by mankind.