

perience in peach-growing. Men succeed best who enjoy working in and among the trees. He takes pleasure in planting and watching the progress and growth of the tree and crop. If we can lengthen the fruit season, more and more fruit will be consumed. The more fruit people use, the more they want. Quality will tell in the end. You can open a man's pocketbook with appearance, but quality will keep it open until the last cent is gone. Never give out that we are going to have a short crop, as then customers think prices are going to be high, and less will be asked for, and prices will drop, whereas, if people expect a bumper crop, there will be strong demand, and prices will soar. He prefers medium-sized, well-rooted trees to plant. Rub off surplus buds during the first summer. Fruit will carry longer and farther if cooled immediately after being picked and placed in good refrigerator cars. The co-operative system of handling fruit is the only practical plan, and the most economical. He called the Niagara District the California of Canada, only the Niagara District is in the center of the territory and catches the consumers on both sides, while California is on one side, like British Columbia.

LIME WASH AND LIME-SULPHUR WASH.

Will you please give me information about spraying apple trees? What can be done against the bark-louse this spring? Will lime wash do before trees bud out? If so, what quantity? Also, directions for spraying against scab and worms? Is kerosene dangerous to the trees?

W. P. H.

The most effective way of ridding trees of bark-lice at this time of the year is to spray with lime wash, which should be made up at the rate of a pound and a half of lime to a gallon of water. If this is thoroughly applied, the caustic nature of the lime causes the scales to loosen from the tree, so that they are readily blown away or washed off by spring rains. To make lime wash, slake 1½ pounds fresh lime in 1 gallon of water. Strain the wash before spraying. Apply with a spray pump to all parts of the tree.

Kerosene, in the form of an emulsion, could be used for the same purpose, but there is always more or less difficulty in making a good emulsion, and, unless properly made, the kerosene is liable to injure the trees.

One of the most effective spraying mixtures for scale is the lime-sulphur mixture, which also acts as a fungicide, and helps to prevent the apple scab. The formula for lime-sulphur wash is 20 pounds fresh stone lime, 15 pounds sulphur (flowers) and 40 gallons water. With warm water, make the sulphur into a paste, put in the lime, and add about 15 gallons warm water with stirring. The sulphur made into a paste may be added after the lime has been slaked. Boil for an hour and a half in a kettle or in a barrel with live steam. Make up to forty gallons. Strain into a spray tank, and apply while warm.

O. A. C.

GROWING ONIONS FROM SEED.

Could you give me, through the columns of your valuable paper, any information regarding growing onions from seed, the names of varieties most likely to do well on black loam with pretty tight bottom, and what is an average crop and price for same?

D. E. T.

Onions will do well upon rich, black loam, but require good drainage. The land should be thoroughly prepared by one or two previous hoe crops, which will clean the land of weeds and weed seeds. The seed-bed for onions should be made firm and mellow, and seed should be sown as early as possible in the spring, at the rate of from three and a half to four pounds per acre, in drills about fifteen inches apart.

The choice of varieties depends largely upon the demand of the market. Some markets prefer the white or yellow, and others the red-skinned varieties. The variety most largely grown is the Yellow Danvers. This is a productive, firm, yellow-skinned variety, which keeps well. The Prizetaker makes larger, finer bulbs, but is not such a long-keeper. Red Wethersfield is one of the best of the red-skinned varieties.

The onion bulbs should be allowed to form on the top of the ground; hence, in cultivating, soil should not be thrown against the bulb. Clean, shallow cultivation should be given frequently enough to keep down all weeds and conserve soil moisture. The wheel-hoe is one of the most satisfactory tools for cultivating onion crop. This can be made to straddle the rows or work between the rows. Hand weeding may be reduced to a minimum by careful use of this tool. If the seed is not sown too thickly, the crop should require but little thinning, as onion bulbs will stand considerable crowding; but for large-sized bulbs, the crop should be thinned out to give room for full development. The crop varies from three hundred to eight hundred bushels per acre, but six hundred bushels is considered a big crop. Prices vary from time to time, but 50¢ at

60 cents per bushel in the fall is considered a fair price. The crop should be harvested as soon as the tops are half dead, and bulbs should be left on the ground to thoroughly dry. The tops and roots should then be twisted off, and the crop may then be stored or put on the market. Unless one has had experience in storing, and has good conditions for it, it is better to dispose of the crop as quickly as possible.

O. A. C.

H. L. HUTT.

CANADIAN APPLES IN AUSTRALIA.

There were imported into Australia, by the Canadian-Australian steamers, 19,831 boxes of apples, in three shipments, the receipts being, for October, 6,772 boxes; November, 8,163 boxes; December, 4,896 boxes, writes J. S. Larke, Canadian Commercial Agent in Australasia, to the Department of Trade and Commerce at Ottawa. There were, in addition, a few boxes that came by freight steamers from San Francisco, but the shipments on these slow steamers were a complete failure. Nearly all the apples arrived, apparently, in good condition. A quantity were carried on deck, and, where these were sound, they had lost their flavor. Those carried in cool-storage were prime on receipt. Some of the apples were first-class fruit, free entirely from disease, and passing without difficulty. Others, from California, were affected with codling moth, and had to be treated. It is stated that any future shipments affected in this way will be destroyed on arrival at this port. The apples suited to the market, especially those from one orchard in Oregon, brought high prices, varying from 15s. to 20s. per box. Those unsuited to the market brought from 10s. to 12s. per box. It is said that a few of these apples were of British Columbia origin, but of this I have no evidence, and was unable to locate them. The fact that one United States shipper continues to send such large quantities of apples to this market supports the statement that I have made in previous years, that the Australian market is the most profitable market for the British Columbia grower open to him. A Canadian paper informs me that buyers were paying a very high price for shipping Ontario apples to the Eastern United States. The prices there had been so high that Western United States apples were also being sent there. Nevertheless, the finest grower in Oregon found it to be still more profitable to send his fruit to Australia. The price stated to me paid for first-class British Columbia fruit was from one dollar to one dollar and a quarter per case at Vancouver, which was certainly a dollar a case less than the fruit would have brought by shipping to this market under proper conditions. There is, however, this objection to the British Columbia apple, that the average of the best fruit is too large in size, giving too few to the box. Nearly 20,000 cases of apples were disposed of at different points at the prices I have named, and more than justifies my statement that this market would take 15,000 cases when properly handled.

APIARY.

REMOVING BEES FROM THE CELLAR AND OTHER SPRING BEE WORK.

The general rule is to leave bees in the cellar until some trees, shrubs or plants yield pollen. This is a good rule to follow, if the bees remain quiet till this time. You see, when set outdoors, the bees commence to rear brood. Pollen is necessary for this; it is used for preparing the larval food. If there is no natural supply of pollen yet, what is the use of setting out the bees? But there are times when it is necessary to remove them from the cellar, pollen or no pollen. This is when they, for some reason, having wintered poorly, become uneasy, and spot and soil the hives with their excreta. Out with them when such conditions exist, so they can cleanse themselves, and not eventually die in befouled hives.

When bees have wintered well, they will not become much roused-up during the setting out. Matters can also be helped along this line by opening doors and windows of the bee cellar the night preceding the setting out. At first, when fresh air is admitted, the bees will roar somewhat, but, it being dark, not many will crawl out. The next morning they will have quieted down.

Before taking a hive out, the bees should be smoked. I also make quite a good deal of smoke in the cellar. All the bees will "smell" some of it then, and they are not as likely to come out, as the frequent opening of door and admittance of light will tend to make them do.

When a colony is set on its stand, it should be smoked some more. Then, the entrance is to be contracted, so a few bees only can pass at a time. A piece of lath of a length to fit between the side bars of the bottom-board, with the right-sized opening (about 2 by 2 inches) cut in one edge, can be used as an entrance contractor. But the entrance can also be contracted with sand or

sawdust, preferably the latter. Why all this talk about contracting entrance? Well, if the opening is large, the bees will come out with a rush, and in great numbers at one time, thus not marking their location properly. After having taken their cleansing flight, they will enter almost any hive. This would not matter if all hives got their proper share of bees; but some hives will "draw the crowd," and be full of bees at evening, while others will have but a handful. If such depopulated colonies do not die soon after, they certainly will not build up for the white-clover harvest.

If the bees, by entrance contraction, are compelled to come out slowly, they generally will mark their location. Remember this, and act accordingly, for it means more surplus.

If I can do so just as well, the hives are put on their old stands. It really isn't important, though, as I have not noticed that, when a colony is placed in another part of the apiary, any bees will go back to the stand they occupied the previous season.

Though all colonies may have had about the same amount of stores the fall previous, some hives will be much lighter when carried out, this because some colonies consume more stores than do the average ones. As they may run short before fruit bloom, I mark such colonies. Then, as soon as the weather permits, they are examined and the deficiency supplied. I insert frames of sealed honey. Such are saved from the previous season. I don't like to feed sugar syrup or liquid honey in early spring, as it rouses the bees to excessive brood-rearing. Of course, if frames of sealed honey are not to be had, then I would give sugar syrup. Enough should be given to last until the bees can get nectar from natural sources, which here is fruit bloom.

Examination of colonies to see if there is a deficiency of stores should not be made the same day the bees are set out from the cellar. The bees would come out at the top as soon as a cover is removed, and not mark their location properly. Wait for this till the first warm day after setting out.

All of the colonies should be examined, anyway, the first day suitable after setting out, this to ascertain queenlessness, besides the lack of stores. I don't look to see the queen. If there are eggs in the hive, I know that this colony is in possession of a laying queen. Any colony that has no eggs or brood a week or longer after having been set out from the cellar, is either queenless or in possession of a very poor or worthless queen.

It hardly ever pays to send to southern queen-breeders for a laying queen. The bees of a queenless colony are old, and, by the time a queen can be introduced, there will be comparatively few bees left. If such a colony does not become extinct, it very seldom will build up for the surplus nectar flow.

I prefer to unite queenless colonies with other colonies, choosing those weakest in numbers. The queenless colony is set over the hive it is to be united with, with a wire-cloth division board between the two stories. After the two colonies have been thus left for several days, the wire-cloth is removed and the queenless bees of the top hive shaken off the combs to unite with the lower hive. The bees of both hives must be well smoked before the uniting, so they will not fight.

The combs of the queenless hive containing the most honey can be put into the lower hive after an equal number of least-filled combs have been removed.

When examining colonies for lack of stores or queenlessness, hives should never be left uncovered long. Though it may be quite comfortable to the apiarist, the hive's heat will escape rapidly in early spring. This results in chilled brood, which gives such a colony a great setback. At 65 degrees F., or higher, brood combs can be handled with no danger of brood being chilled. When working with bees at a lower temperature than this, I throw a quilt over the hive as soon as cover is removed. This is rolled back for the removal of frames, and the hive again covered as soon as possible.

If some of the colonies are dead, the hives can be set to one side. Those combs that contain quite a little honey yet can be used for feeding colonies deficient in stores. When there is only a small amount of honey in the frames, they should be put into hives and stacked up outdoors, a cover put on top, and the entrance contracted so only one or two bees can pass at a time. The outdoor bees will then slowly remove the honey. I do not feed the honey in such frames until a short time before fruit bloom. To feed early stimulates the bees more than is desirable.

When constructing a new bee cellar, several years past, I put a large window in one end of the foundation. Through it hives can be set out, but it takes two persons for the setting out. It is much easier work than carrying hives up a stairway.

Wisconsin.

F. A. STROHSCHNEIN.