

may be left for this purpose if desired. The more blossoms you pick the more you will have.

"Thank God for the beautiful flowers
That blossom so sweet and so fair.
They garnish this strange life of ours
And brighten our paths everywhere."

FARMER'S WIFE.

Early Spraying and Pruning.

As the time has arrived for fruit-growers to make it a point to grow only the very best samples of all kinds of fruit, it becomes their imperative duty to be fully prepared to successfully combat and conquer the various fungi and insect pests that are causing and have caused in the past so much trouble and loss to the fruit-growers of Canada. Let me enumerate some of the evils that go to reducing the profits of the horticulturist, viz., the want of sufficient pruning, improper cultivation or no cultivation of the orchard, and the lack of proper fertilizers in the orchard. I fully believe these three items alone reduce the profit one half of what it might be. And next, but not least, is the importance of spraying every fruit tree in the orchard, and doing it at the proper time to produce the best results.

I am sure no fruit-grower in the Dominion need say he did not know what to use and how to use the remedy. Our Local and Dominion Governments have spread information through the agricultural press, Farmers' Institutes and other agencies so cheaply and freely that even he who rides a bicycle may read and learn the whole principles of producing only the best.

During these fine days in March every fruit tree should be carefully gone over and all limbs and branches removed that are injurious to the fruit, also before the buds open very many nests of caterpillar and moths will be found and should be at once destroyed. Then all brush and other unsightly objects can be removed before spring work begins, but, above all, have the spray pump all right to commence operations against the insects before they begin to do mischief.

I have found by experience that a good spraying with sulphate of copper before the buds open will prevent black knot of plums and cherries. Just as the buds are opening, another spraying with Bordeaux mixture, with lime and Paris green added, will thin the insects largely. Then immediately the blossom is mostly off spray very thoroughly, as more insect-life can then be taken than at any future time. Then I would recommend another spraying every two weeks till the fruit is well formed, and if season is wet or unfavorable, another or even two more sprayings may be necessary. I have said nothing here about feeding the trees, for I assume that no sane person would expect to have a good fat pig if it were not fed; neither will an orchard do its best without liberal feeding and cultivation. More about this matter later on.

Whitby.

R. L. HUGGARD, Exptr.

Pruning the Orchard.

Perhaps there is no one little job that the average farmer dreads at this time of the year more than "tendin'" to the orchard. He knows the apple trees must be trimmed; he wishes to do some grafting; he is sure the soil needs fertilizing; and, in fact, the whole orchard needs "toning up." It is not well to prune in winter, as the wounds heal slowly and the action of winds, frost and sun are injurious; nor in early spring, because the sap is active and fairly drips out of the cut. This always causes premature decay and injury to the tree. The time to prune is in early summer, just after the first rush of sap is past. The wounds will then commence to heal over at once.

A travelling pruner is not usually the best man to employ, as he frequently mutilates the trees without judgment and does more harm than good.

A tree that needs pruning badly may have the top branches very crowded. The way to prune this is to take a long step-ladder and a pair of good strong pruning shears; set the ladder just outside, underneath the limbs, and with the shears cut away the small sprigs and limbs that cross one another and crowd the extremities so as to prevent the sunshine penetrating to the center. Cut off the little branches that make the tree a "shady" one. Do not cut out one large, thick, healthy branch, but take away all the young shoots that you can plainly see are not fitted to make permanent bearing branches. The sooner these are removed, the better for the tree. Shoots in the center of the tree not reached by the sun are better removed.

If you notice that a tree is not producing wood, you should find the cause. Perhaps the soil is poor or the roots are robbed or dried. The very best thing to do is to cut back the top. This reduces the work the tree has to do and gives it a chance to recruit.

After pruning, it is wise to clean up the orchard. If this is neglected and the brush left lying around, or even in brush heaps, the embryo insects mature and begin their work. The loose bark should also be scraped off and placed with the brush to form a bonfire. Attention to this at once will save a great deal of loss and vexation as well.

It is important to cover the cuts with some substance that will protect them from the weather. I have used common red paint with good results the last two years. Common grafting wax is beneficial, but perhaps the best thing, when it can be got pure and good, is gum shellac, dissolved in alcohol to the consistency of paint.

As regards the pruning of peach trees, I have found it to be the case that judicious pruning will help a peach tree to bear evenly. An overloaded tree will produce inferior fruit of less value than half the quantity of a better size, and then the overloaded tree is injured so that it will require a year or two to recover. All this overloading may be avoided by judicious pruning. The main branches of a young tree should be early in spring cut back to eighteen inches, being careful to leave on them any sub-branches near their base. The next spring the next crop of branches should be cut back in about the same way, and on half of the sub-branches cut clear away, leaving every other one, and those not cut away should be cut back one-third or one-half. The summer after this the trees should give a splendid crop of fine fruit that will need no thinning. The after cutting-back and pruning should be on the same general plan. As the trees grow older it will be necessary to cut back one-half the main branches near their base at some point just above where a thrifty young twig is growing, so as to form a vigorous head. WM. WILLSON.

Making a Garden—Some Practical Hints.

Our garden is 12 rods long and about 5 rods wide, well fenced. It has an opening, through which a team and any piece of machinery may pass. Everything is planted in rows, far enough apart to admit of cultivation with double team and ordinary field cultivators. One-half of garden is planted to potatoes, alternating sides each year to procure rotation. Late-maturing vegetables are planted on the outer half or more of the other side of garden, the parsnips occupying the very outside row. In case we want them to stand for spring use, they do not interfere with the fall plowing. Early vegetables, or those likely to be off the ground by the latter part of July, are grouped together, and the ground, after they are off, is sown to turnips; or, if we have nice growing showers at that time, we often raise second crop of early-maturing things.

Peas, beets, radish, lettuce and onions we always put out as soon as the ground will possibly do. Last year we had quite a snow after these were in the ground, but it went off with a warm rain, and the plants soon began showing along the rows, while if we had waited, it would have been several days before the ground would have again been fit for working.

Of all varieties of peas tried, none suit me quite so well as Nott's Excelsior; almost as early as the earliest, and such an abundant cropper!—a blue, wrinkled variety, very sweet, and stands early planting better than any other wrinkled sort tried. It needs no sticking, and this alone would recommend it for main crop to most people. The head varieties of lettuce are my favorites. We drill it as thickly as other kinds, and while the plants are young, use out in such a way as to leave an extra fine plant standing about every 8 or 10 inches in the row, which forms nice heads, that stand in all their crispness late into the summer.

Salsify is easily grown, and may be had the winter through by packing in sand or dirt, or it may be left in the ground for early spring use. We stew it in little water and add milk, cream and butter, salt and pepper, and serve just like oysters. I think the soup is improved by adding a few pieces of celery to the stew. Parsley is not liked by everyone as a flavoring, but it is so very nice and attractive when used for garnishing that it should be found in every garden.

Asparagus should be included in every garden. Plants are obtained more cheaply by planting seeds, but a gain in time is obtained by setting plants, either fall or spring. Give the asparagus bed protection during winter. After the ground freezes, we cover ours to the depth of 6 inches with litter from the horse barn. In spring it is raked off and burned, as it is usually coarse, and nearly all the value of it has been washed into the ground by the winter rains. When the brine from the meat is no longer needed, we pour it on the asparagus. It helps keep down weeds, and is said to be a benefit to the plants.

Vegetables are so conducive to health, that at any place in the temperate zone it is folly to be without them for a single day. The one that invariably has plenty of fresh vegetables for his own, besides some to give a neighbor in harvest or at threshing time, is interested in this subject during the entire year, and does not wait until he sees his neighbor's rows of tender green before he thinks of his own, and then has to rake and burn trash before plowing. After that is finished, he finds his garden spot a heavy, wet mass, because the wind and sunshine could not reach it.

Anyone who has been gardening by the old method, in a little spaded patch, using hand labor exclusively, is just wasting that much time and strength. "Turn a new leaf," and turn it completely. Don't waste your strength pulling these machines. The most of us played horse until we were satisfied when we were little. And when tending time comes, if the farmer quits one-half hour earlier at noon or night, once a week, and has a steady team and uses his cultivator carefully, he will in this short time accomplish more, and in just as good a manner, as his wife or daughter could in ten times as much time. Don't be afraid of lightening your wife's burden. She will not become lazy on account of having this done for her. Your table will be more tempting and your fare more nourishing, your store bills lighter, your health better and your brain clearer, by paying attention to the garden at the proper time.—A. M. K., in *Drovers' Journal*.

APIARY.

Queens.

BY MORLEY PETTIT.

"The practical man, contemplating the advisability of entering upon any line of work or business, carefully studies the situation from every point of view, and, when fully convinced of its desirability as a lucrative venture, complies most assiduously with all the conditions necessary to the complete success of the undertaking." So said Mr. M. B. Holmes in a paper on "Queens," read before the Ontario Beekeepers' convention at Niagara Falls last December.

"The splendid hives and foundations of the day are certainly a boon which every true beekeeper appreciates; but the great center on which success most largely depends—that 'center' at which no 'master' beekeeper can err—is in securing 'the good queen' for every colony. . . . I mean the queen that will do the largest amount of work in a given time."

Observation teaches that colonies vary greatly in their honey-gathering qualities, some yielding scarcely any surplus, and others very much exceeding the average. "Take, for instance, an apiary of one hundred colonies, the average annual yield of which is, say, eighty pounds of extracted honey per colony. Now, let us suppose that twenty-five of the one hundred colonies are poor, fifty average, and twenty-five strong, and then try and solve the problem as to how the average yield of eighty pounds per colony is obtained. The poor colonies will gather about half as much surplus honey as the fifty of average strength, or, say forty pounds each; then, in order to get the average of eighty pounds per colony for the whole apiary, the twenty-five strong colonies must gather one hundred and twenty pounds of surplus honey each."

If these one hundred colonies have all received the same treatment, the difference in their work must depend on the quantity and quality of the workers in each. These again depend directly and solely on the laying queens, and "the mere act of tolerating the twenty-five poor queens has incurred an expense of one thousand pounds of honey, when compared with the average colonies, and three thousand pounds short when compared with the strong colonies, either of the items being sufficient to pay for all the good queens required and leave a considerable balance to the good."

"You may change the figures as you desire, and the result will always show that the poor queens are heavy debtors, with no prospect of paying, and should under no circumstances be tolerated. Keep the best, and only the best; the very best are the cheapest in the end, and an economy that prohibits the employing of the best queens is certainly a false economy."

In what does a good queen's excellence consist? In being capable of becoming the mother of a strong and useful colony of workers, for it is by her bees that we know her, and if we have a good colony of bees, we know they must have a good queen. The question of the good queen, then, resolves itself into the question of the good colony. Now, the best colonies are the ones that store the most honey in the supers at all stages of the season. Queens of colonies which come below the average should be replaced by others reared from the best queen in the yard or procured from a reliable queen-breeder. It is as expedient to weed out poor queens in the apiary as poor cows in the dairy.

In order to be good honey-producers, the bees must be (a) *industrious*—two colonies apparently equal in strength do not always gather the same amount of honey; (b) *numerous* in the hive at the right time and of the right age—much depends on having the hive full of bees that are old enough to work as soon as the honey comes; (c) *long-lived*—a short-lived bee requires as much time and food to mature as a more vigorous one, but has its working days cut short; (d) *long-tongued*—the depth of corolla tube in red clover ordinarily prevents honeybees reaching the nectar contained therein, and it should be our aim to develop a strain of bees having tongues long enough to overcome this difficulty. Mr. J. M. Rankin, of the Michigan Experiment Station, reports that they have a strain of Italian bees whose tongues are nearly two-fifths longer than those of black bees and more than one-fifth longer than those of the average Italians. Is it not possible—nay, is it not more than probable—in view of the wonderful success already attained in developing the most desirable qualities in plants and animals, that by always selecting queens and drones from the longest-tongued bees a strain of red-clover bees may be secured, and tons of the choicest honey, now wasted, brought into our hives? Such bees would be a boon to the farmer who is at present struggling to grow red clover seed by the sole aid of bumblebees.

Other characteristics of good bees, space does not permit to mention. Thanks are due the *Canadian Bee Journal* for the stenographic report of the convention.

We would direct the attention of those of our readers who wish to ask us questions to the new conditions at the head of the Questions and Answers Department in this issue,