

An Earth Mulch For Root Protection

J. A. Johnson, Grimsby, Ontario

IN the peach orchards of Mr. Hamilton Fleming, Grimsby, a corner of which is shown in the accompanying illustration, fall plowing is practised previous to the time of freezing with the object of leaving a loose mulch of earth to prevent the frost taking too severe a hold on the fibrous roots of the trees. The depth of plowing is only three inches, no deeper. Thus, there are three inches of non-frost conducting earth to act as a protection in winter.

Last year we tried as an experiment a cover crop of clover growing side by side with a patch that had been fall-plowed as has been already described. In the clover-sown portion, the frost penetrated more quickly and more deeply and remained considerably longer than in the fall-plowed portion. This showed the value of loose earth in resisting the inroads of frost, in comparison with the tightly packed and more solid form incidental to a cover crop. Besides, the solidity imparted to the ground by a cover crop, the packing of the ground during the picking season also affords reason for fall plowing.

I do not approve of an annual cover crop, believing that it collects the moisture that is essential to the full development of tree and fruit. On land that is deficient in humus, however, a cover crop sown once in, say, every three years may be beneficial.

As evidence of the success of the foregoing method, my experience of the past

condition, producing poor fruit and little of that. Owing to the practice of the method mentioned, improvement is so marked that the orchard now yields large crops of fruits that can truly be stamped "Fancy."

As soon as the land permits in spring, plowing is commenced. The soil is plowed away from the trees and at a depth of about three inches, no more. Immediately following the plowing, the cultivator and harrow are brought into use. At least once a week and, in dry seasons,

twice a week, the orchard is gone through. This is continued until the middle of September. The land is then given a short period of rest. This allows chickweed and other light weeds time to grow until time for fall plowing.

NOTE.—Mr. Johnson's theory in respect to fall plowing is interesting. Expressions of opinion in regard to it from those who have followed the practice and from others, will be welcomed for publication in THE CANADIAN HORTICULTURIST.—Editor.

Why We Prune

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(Continued from last issue)

IN recent years an investigation of the dormant period of trees and of problems relating to their hardness is throwing much light upon the subject of pruning. This applies with particular force to pruning the peach.

For better understanding, let us adopt a somewhat technical conception of what is meant by the dormant period. Ordinarily we speak of the dormant period of a tree as being that period between the shedding of its leaves in autumn and its starting into new growth in spring.

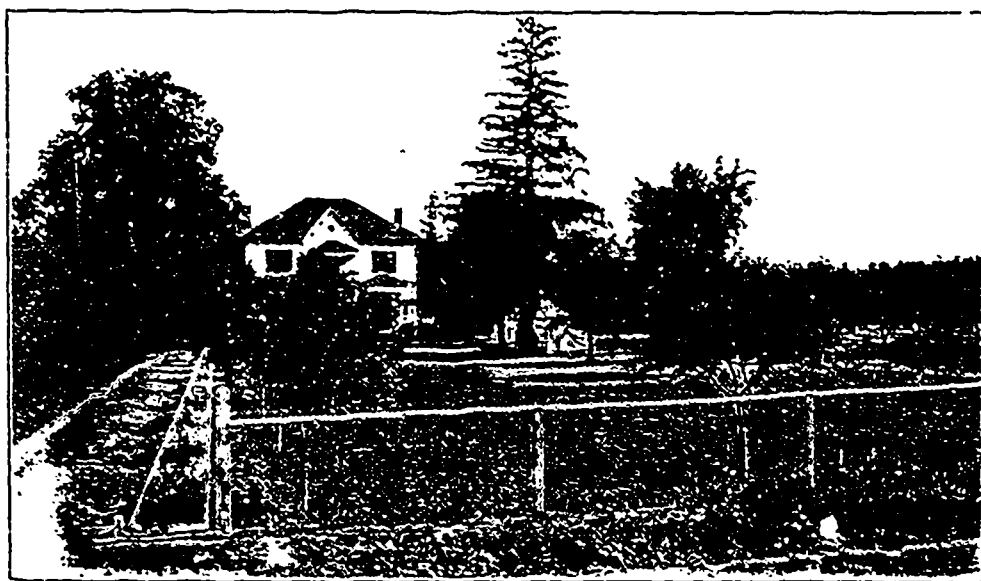
Investigation has recently shown that during the first half of this winter-rest, our fruit trees are in a deep sleep, from which they cannot easily be awakened, but that during the last half of it they

planted in the greenhouse during the first half of winter, it will lie dormant until about midwinter. If it is brought to the greenhouse in midwinter or later, it will promptly begin to grow. The same thing may be shown by bringing in peach twigs and putting them in a vase of water in a warm room. During the first half of winter they remain dormant, but they are ready to begin growth any time after midwinter.

Much of the winter killing of peach buds is due to the fact that they start into slight growth on warm, sunny days during late winter, and this growth renders them too tender to endure subsequent cold. Much of this injury may be avoided by inducing their true dormant period (that deep sleep from which they are not easily awakened) to continue until later in the winter. The earlier a peach tree sheds its leaves or stops growing, the earlier its dormant period begins and the earlier may the buds become ready to grow if warm, sunny, winter days prevail. The later growth is kept up in autumn, the later will the trees shed their leaves and the longer will their dormant period continue.

If peach trees in this climate are cut back severely enough in winter so they grow late the following summer and shed their leaves after cold weather comes on, their buds are not likely to awaken into growth until danger of winter-killing is past. This may not apply in colder climates than ours, in which tender, late growth may be killed by excessively low temperatures, even though dormant.

Finally, the man who prunes should understand the habit of each kind of tree with which he works. He should be able to tell the age of the tree by the character of the limbs. It is desirable to be able to observe how much length growth has occurred during each year of the tree's history. The difference between fruit buds and wood buds should be dis-



A Beautiful Lawn and Home in the Famous Niagara Peninsula

Residence of Mr. Hamilton Fleming, Grimsby. A corner of the Peach orchard is shown. This is managed by Mr. J. A. Johnson.

ten years with all kinds of fruit and with various soils is that I have never lost a tree by winter killing. In 1905, Mr. A. Burland purchased this farm and placed me in charge. It was then in bad

(particularly the peach) may easily be forced into growth, providing warmth and moisture are supplied.

One may easily test this point. If a peach tree is taken from the open and