

HORTICULTURE

Another Nursery Scheme

The practice of some United States nursery firms operating in Canada and trying to sell stock by false representation is becoming altogether too common. References to schemes of this kind have appeared in these columns many times. Recently the attention of The Canadian Dairyman and Farming World was drawn to a troop of agents operating around Aylmer and St. Thomas, Ontario, who claim to be connected with a Michigan firm, which we fail to trace in the National Nurseryman's Directory. They are offering all kinds of absurd inducements, which include a four-year guarantee and a verbal agreement to trim the trees every year for four years. They are approaching farmers with bottles of prepared fruit, and also a bunch of root-grafts, which they use to demonstrate the inferior practices of the Canadian nurserymen. If they drop across a farmer who knows nothing about root grafting, (and there are many of them) they try to convince him, that they have a method in Michigan, of grafting apple trees and other stock, that is known only to themselves, and which cannot fail to result in strong thrifty trees, which will grow ahead of any stock, propagated under Canadian systems.

Canadian nurserymen, who propagate their apple trees by grafting, use exactly the same methods as these Yankee people, only perhaps it is done a little bit better. It may not be amiss to point out to our readers, who do not know, the method followed by Canadian concerns. The strongest of the young stocks, that have either been grown at home or imported, are kept in cool cellars during the winter, until about the beginning of January, when the grafting takes place in these cool cellars. Whip or tongue-grafting is the method usually employed. The only advantage one nurseryman may have over another is;—that he uses a whole root for his graft, and discards the first and second cuts. By the first and second cuts, we mean, long tap or finger roots, that are cut from the stock when the grafter is trimming his roots, and these same roots that are cut off are sometimes used by nurserymen and sometimes discarded. There is but little advantage in using the whole root, and this is no reason why the strong root trimmings should not be used, if they are thrifty enough to take a scion. Our leading nurserymen make a practice of grafting entirely on the whole root.

It is plain to anyone who knows the first thing about grafting, that the United States agents referred to are inventing some new scheme to gull the poor farmers again, and we would like the opportunity of warning our readers against them and their methods.

Importance of Moisture Control

F. T. Shutt, M.A., Chemist, Dominion Experimental Farms.

We have come to realize in these later years that one of the most important problems in agriculture, is the control, the regulation of soil moisture. It is a large subject, and, if discussed fully, would involve the question of drainage, a matter of considerable interest to the orchardist, and the question of aeration of the soil, and several others. I propose mentioning two phases only, phases that immediately touch upon our work under discussion in recent issues of The Canadian Dairyman and Farming World—cover crops in the orchard.

All the soil-formed food that plants absorb must be in a state of solution before the crops can utilize it; the feeding rootlets can only appropriate as it was highly-diluted food. In or-

der to obtain their food from the soil, crops require vast amounts of water. It has been estimated that at least 500 lbs. of water are taken up by the roots for every pound of dry matter stored up in stem, leaf or fruit. During the growing season then we are to understand that there is a constant stream of water passing through the tissues of the tree, parting with its dissolved material to build up here and there the various parts and organs of the tree, and finally transpired by the leaves of the tree, and so returned to the atmosphere. In this way probably more than one thousand tons of water an acre each season are absorbed by the roots of a mature orchard, and this in addition to the water retained in the tissues of the tree and fruit and that lost by capillarity and surface evaporation.

What is true of the tree, is likewise true of the grass. To produce a crop of hay will require at least from 500 to 600 tons of water. Unless the season is one characterized by an abundant rainfall there are few soils that can support both grass and trees with all this moisture, and, as I have already said, it is the trees that suffer.

It is essential then that while the tree is making its growth, and its fruit filling, there should be a sufficiency of soil moisture. This, as we have seen, is not likely to be the case if during that period a second crop—a soil feeder—is grown on the same area.

But it will not merely suffice in many districts to leave the trees the undisputed crop upon the soil during this growing season. In soil that is bare of foliage and left undisturbed, capillarity is set up and surface evaporation takes place. How can this be prevented? By occasional cultivation. The dry earth mulch so formed breaks up the capillary tubes, and thus arrests evaporation. It seems clear then that cultivation should be practised during the spring and early summer. Is it essential or desirable that it should be continued throughout the season? I think not.

Some few years ago we determined during the autumn and winter the moisture content in the twigs of 10 varieties of apples. These apples included some of the hardiest and some of the most susceptible to cold of the varieties that can be grown in the Ottawa district. Our results showed that the hardiest were those containing the least water. Indeed the order of their moisture content, was the order, or practically so, in which the horticulturist, Mr. Macoun, had arranged the varieties, according to observed hardiness. This goes to support the view that growing tissue contains more water than mature wood, that cessation of growth and early maturity of the wood may be induced by limiting the soil moisture supply, and that such mature wood is better able to withstand very low temperatures. It seems quite probable from the results of this investigation that the character of the autumn, both as to rainfall and temperature, may have very much to do in determining the immaturity of the trees during the following winter.

Arguing from these premises, it is clear that to check the growth of the orchard trees in the autumn, by the abstraction of soil moisture, is very desirable. This can be accomplished through the growth of the cover crop sown in July.

Fruit Inspection

The staff of Dominion Fruit Inspectors has been substantially increased for this season by the appointment of additional inspectors. An inspector will be stationed at Port Arthur and Fort William, who will watch shipments to other points between The Soo and Winnipeg.

It is intended to give particular attention to shipments in bond via the Niagara River. Shippers using this route are warned that it may be necessary to detain cars at the frontier in order to make a proper inspection.

If you have a photograph of your orchard, small fruit patch, vegetable garden, flower garden or lawn, send it to The Canadian Dairyman and Farming World for publication. To make its appearance more interesting, by an letter describing the scene and how you grow the trees or plants illustrated.

It won't cost you much to sell that farm if you advertise it for sale in The Canadian Dairyman and Farming World. See particulars in our

METALLIC CELINGS

Are Artistic,
DURABLE, SANITARY,
and FIREPROOF
Easily applied, Cannot
Crack nor Fall Off

Send us a sketch showing shape and exact measurements of your ceiling or walls, and we will submit designs, estimates and illustrated booklet free.

WRITE US NOW

Metallic Roofing Co.,
LIMITED

Manufacturers
TORONTO & WINNIPEG

POTASH

Is an absolutely indispensable ingredient in a completely balanced Fertilizer for all farm and garden crops and orchards, and can be obtained from all leading fertilizer dealers in the form of highly concentrated forms of

Sulphate of Potash and Muriate of Potash

The accompanying photograph shows the profitable result obtained by an intelligent system of fertilizing.

EXPERIMENT ON HAY

Conducted by MR. E. EMSLIE
Oakville, Ont.



	PLOT I	PLOT II	PLOT III	
Fertilizer Per Acre	130	130	130	Sulphate of Potash
	800	120	120	Acid Phosphate
Yield per Acre in pounds	2335	4234	3204	Nitrate of Soda

This experiment shows an increase of 1000 lbs. directly due to the application of POTASH

For full particulars and free literature regarding this highly important "Plant Food" Write

The Dominion Agricultural Offices of the Potash Syndicate

1102-1105 Temple Building, Toronto, Ont.

HOW TO BUILD A GOOD FENCE

Everyone intending fence building should send for our folder on Erecting Fences. It is full of valuable information on fence building, tells how to erect fence wire and has an article copied from Bulletin of the Dept. of Agriculture on the subject of the best material for fence posts and how to make them economically made at home. Don't fail to write for a copy. It's free.

Dept. C Hamilton, Ontario. THE HAWK WIRE FENCE CO., Ltd. Winnipeg, Manitoba.

It is desirable to mention the name of this publication when writing to advertisers

