

of seedling trees are also being grown. A few of the varieties that have shown the greatest hardiness, such as Duchess and Hibernial apples and several of the hybrid apples, such as Whitney, Martha, Transcendent and Prolific, are being propagated for sale. All these apples and crabs are grafted on roots of the hardy Russian crab known as *pyrus baccata*. This gives them a hardy root system which will stand any degree of frost we are likely to have, even with bare ground.

Mr. Buchanan strongly advises planting only small trees, which are grafted on these hardy roots. The trees should be trimmed even, so as to branch from near the ground, as shown in the illustrations. A long, bare trunk should always be avoided. That is why the tree fruits brought in from the East and the United States, he says, are useless here. They are too large, are trimmed up too high, and are grafted on tender root stocks. The seeds for growing apple stocks for grafting are usually purchased in the open market, or are procured by washing out the pumice from the cider mills. The sticks or roots obtained from such seed are therefore usually tender. In our trying climate large trees should never be planted, and the purchaser should always know what class of root stocks have been used upon which the named variety he is getting has been grafted.

The whole secret is thorough preparation of the soil, firm planting of the trees, and thorough cultivation of the plantation after it is planted. If the cultivation is continued for about three years, the trees become branchy enough to shade the ground and so consume for themselves all the moisture they require.

Your correspondent says further, that with watering, they have every chance of living.

This is very misleading, and I am sorry "one who knows" does not know a better way to grow his trees than to bother with watering them.

There are many thousands of trees growing in South Alberta today which never have received a drop of water from artificial sources, either irrigation or otherwise, and the sooner "one who knows" and every body else knows it, the better.

I cannot place too much stress upon this, because only too many in the country have this idea, and it is utterly wrong.

Many of these plantations have about 90 per cent of the trees living after two years, with an average height of four feet. They were all seedlings when planted.

Then he says it is no trouble to "transplant trees in the valleys." Why in the valleys any more than on the level land? The valleys are usually as dry and windswept as the level lands, and the latter usually have better soil.

The statement that sufficient of the natural soil being retained on the roots of transplanted trees is

necessary for success is about the only thing that is true in the whole article. That is perfectly true, it is a most important thing, indeed, but it is only one point of importance.

Such trees should not be too large, not over six to eight feet to get the best results, and they should be branchy and taken from the open ground. Half the branches should be removed to balance the top growth with the mutilated root system. The top should not be cut off. This applies of course only to deciduous trees such as are usually found in the river bottoms, and which I suppose are meant in this case.

And I am afraid there is a reason against our "enjoying the delicious stuff called maple sugar." At least when we do so, it will not be because we have just made it freshly from sap from our own sugar maple trees, grown on our own farms.

The elevation will forever cut us off from that. Not that the sugar maple will not grow in some districts, but it never will be size enough, or vigorous enough in our time.

And the only drawback, he says, to growing trees is the dry weather. I think I have cleared that point up, but it may be interesting to your readers to know that our trees actually winter better in the dry years than they did during the wet ones. They are ripe and not sappy when the first frost comes in the fall and therefore well



APPLE TREES IN NURSERY ROWS.

able to resist whatever fortune may send in the way of frost during the winter.

ARCH. MITCHELL,
Forest Plantation Inspector.

POULTRY

The Incubator Problem.

The man with an incubator is or should be thinking about getting it in shape for operating. No person knows all he would like to know about artificial incubation. There are so many small matters to be looked after in running an incubator and to much detail to be learned by experience that even the oldest poultry man is still acquiring knowledge on artificial incubation. In this connection any person who has handled an incubator can help or be helped by others, who have had a little experience, although an incubator is a simple machine, and the directions given with it are easily followed. Much of the trouble of handling an incubator is with the eggs, or the condition of the stock from which the eggs are taken rather than with the machine.

Generally speaking a large percentage of weak-germed eggs, eggs unfit for hatching, can be hatched by natural when not by artificial means, and for this reason, the eggs for the incubator should be laid by as robust, vigorous a flock as it is possible to keep. Many poultry men have found it almost impossible to get a high average of fertile eggs from hens kept inside, while with hens which spend most of their time in the open air much better results are obtained.

Nature obviously is very kind to the hen tribe, as she provides fine weather, fresh air, vigor and vitality at a season of the year when the hen instinctively wants to set. We would like all our readers who have had anything to do with incubators to write us their experience and to ask for suggestions if they have any difficulties.



APPLE TREE IN BLOOM.



CRESCENT STRAWBERRIES AND DR. REIDR RASPBERRIES AT THE BUCHANAN NURSERIES.

The Buchanan nurseries are located on the Assiniboine river a few miles west of Winnipeg. The electric street car from the city, runs through the property which is situated on either side of the Portage Avenue road. The portion of the property under cultivation for the nursery is on the river bank a quarter of a mile from the road. Persons interested in either fruits, shrubs, trees or flowers, should visit the nurseries when in the city, and they will be made welcome.

Just as Easy to Grow Trees.

EDITOR FARMER'S ADVOCATE:

In your issue January 10, on page 49, you have a short paragraph on "Trees in Southern Alberta," over the signature "one who knows." Will you kindly allow me a few words in reply, as the statements may be somewhat misleading to your readers.

First, your correspondent says that it is no easy thing to start young trees on the prairie. This is utterly wrong, and it is time that every settler coming into the country should know it, especially in the dryer parts of Southern Alberta.

The Forestry Branch has many plantations in South Alberta and those who are careful to follow the instructions given them, have no difficulty in starting their trees.