

to act as checks to accuracy. We then have three rows of stakes across the field one way, and two the other way. Now stretch the wire at right-angles to the three rows of stakes, and proceed to plant the trees at each mark on the wire. In order to make the wire taut and secure, an anchor stake is used at each end, and a block and tackle at one end to stretch it. The work of planting may now proceed across the field one row at a time, and each tree will come exactly in its place, without any special effort of sighting by the planter. The wire should be remeasured after planting ten or twelve acres, and any inaccuracies due to stretching corrected, which may be easily done with the movable marks.

Topical Fruit Notes.

The nurserymen have started delivering their stock, and ground is being prepared for thousands of new orchards throughout the Provinces. Are you one of these planters, and if so, are you seriously into the business? This question is pertinent, because it has been stated on good authority that not over twenty to twenty-five per cent. of trees planted ever attain a profitable position in the economy of the owner, and some even place the percentage lower. That is, a great many of the trees and orchards never attain any considerable age, and thus never become a productive factor. This is owing to the orchards not being planted in suitable localities, sites or soils; to carelessness on the part of the planter, or to absolute neglect in later years. The climate may prove too severe, varieties may be injudiciously chosen, transportation facilities may be inadequate, or there simply may be too small profit in periods of overproduction (or lack of demand or distribution, as you wish to call it).

Well, supposing you are serious in your undertaking, to begin with, it will pay you to give considerable care to the young tree. Very likely, it has been packed away all winter in a storage cellar with many thousands of such trees, with general attention given to the multitude, but little care to the individual. It may be that it is packed roughly in a big box, and then sent on a several days' freight journey. By the time you get it out of the shipping box, that tree needs particular attention.

First, if you are getting the trees from an agent at a distributing point, be sure and have some sacks or blankets to cover their roots in your wagon as you are hauling them home. The sun is merciless to the careless. Then, as soon as you get home, moisten the roots by placing them in running water or by throwing water over them from a pail, and as soon as possible heal them until ready for planting. If there is not too much to be done, the planting might be done at once, and thus save the extra work of healing in; but, in any case, the fundamental principle to be fully recognized is to keep the roots from drying out. It cannot be impressed too deeply on intending planters that they are handling a living organism which has been uprooted from a suitable environment, and, until planted again, which is surrounded by most unfavorable circumstances for retaining its vitality.

The distance apart to plant trees varies considerably, and depends on the kind of fruit, variety, soil, method of pruning adopted, and choice of the individual grower. It would be unsatisfactory to recommend any definite distances here; the planter should consider the above factors, study neighboring conditions, and take advantage of any expert advice he can get near his home, such as that gladly given by the District Representative of the Department of Agriculture. Many of our growers plant on the square system, others plant slightly closer in the rows than between rows. Thus, peaches might be planted 18 x 18 ft., or 18 x 20 ft., in the latter case having the wider spaces running north and south. Other average distances, as used in the Niagara district, may be mentioned, as follows: Plums, 18-20 ft.; cherries (sour), 18-20 ft.; cherries (sweet), 25-30 ft.; pears (standard), 20-25 ft.; pears (dwarf), 12-15 ft.; grapes, 9 x 10 ft.; currants, 4 x 5 ft.

Before planting, any broken and bruised roots should be cut back, and, in general, the whole root system should be pruned to about from 3 to 8 inches. There is no use in filling the hole up with a lot of straggling roots, and more injury than good is done. All the fine rootlets and root-hairs have been destroyed in digging from the nursery, so that the tree has to produce new rootlets and feeding fibres. This it can do better if cut back as mentioned. The top, also, should be cut back severely before or after planting to counterbalance the checking of the root system and to outline a strong and open frame-work for the tree.

With reference to the root pruning of young trees, G. Harold Powell, of the U. S. Department of Agriculture, some years ago conducted extensive experiments, and drew the following conclusions, in brief:

1. That trees with roots pruned to about 3 inches did best; that trees with roots pruned

from 6 to 8 inches also did well; but that stub roots did very poorly.

2. That new roots arise (a) from near the end of the pruned roots, (b) from fibrous roots, (c) from adventitious buds at the base of the tree, (d) sometimes from the sides of larger roots, (e) seldom from the callus.

3. That the direction which a new root system assumes is governed by the character of the soil; by the distribution of plant food and moisture in it; and by the natural habit of the tree. The roots seek the strata of most congenial moisture and accessible plant food.

4. That there is an individuality of root systems. They differ in various varieties and species. There is a wide variation in the form of roots, in the direction they take, in their size, in their distribution on the tree, and in the manner of branching. The apple and pear differ from the plum and peach, in having a large number of small and fibrous roots arising from the body of the tree.

5. Earliest growth in spring takes place at the expense of the reserve food stored in the tree, in its branches and roots. So the roots should be able to supplement this at an early date.

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Georgia and California have been the pioneers in the pre-cooling of fruit, and in many cases have brought it from the experimental stage to that of commercial expediency, both with citrus and deciduous fruits. Oregon and Washington fruits are now receiving attention, and last summer, experimental work in pre-cooling cherries, raspberries, loganberries and prunes was conducted by their Department of Agriculture. Their results so far indicate that pre-cooling is a big aid in helping the refrigerator car to maintain a low and uniform temperature during the entire trip. Pre-cooled cherries, at the end of fifteen days, showed less decay than unprecooled by 4.1 per cent.; loganberries, at the end of ten days, 25.6 per cent. Indications point to a successful outcome of the work. Will our Department be at work this summer?

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"What is there in a name?" A dispute is at present to the front in Oregon over the spelling of Oregon's famous apple, the Spitzenburg, or Spitzenberg. See? The question is, shall we use "e" or "u"? The Federal Department of Agriculture favors the "u," but reminds the Oregonians that, according to the ruling of the American Pomological Society, the accredited name of the variety is "Esopus." In many places the name is combined, and it is known as the "Esopus Spitzenburg." Familiarly, we like "Spitz." It eats well, at that.

However, there is a great deal in a name, as evidenced by the universal use of "brands" by Western fruit-growers. Eastern growers will come to use them more frequently as their value dawns upon them; for, what is the use of putting up first-quality fruit, and not letting the consumers know where to get more of it. By your brand ye shall be known. An extensive dealer in citrus fruits told me that, until recent years, he would always pay 50 cents a case more for a similar grade of oranges from Redlands than from Riverside. Now there has come to be not such a discrepancy, if any. Why? Because the brand told, and the Riverside growers have improved their article until it would compete with the better Redlands brand. Watch the auction markets and note the regular premier position taken by certain well-established brands. It takes time to earn such a reputation, but it is worth a lot when one gets it. This use of a brand is of especial value to co-operative societies where smaller local associations sell their output through a central sales agency. Each local association must be given credit purely on a basis of quality or grade of fruit put out, and this can be adjudicated to a great extent by the consumers or buyers, who are willing to pay a better price when they know that they are getting better quality of fruit. However, don't let anyone run away with the idea that this can be accomplished at once. It takes time to establish a brand, as it does a business. But it all works out that there is something in a name that has something at the back of it which is good, bad or indifferent.

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Walter E. Biggar, of Winona, has been appointed Provincial Inspector of fruit-tree pests. Mr. Biggar has been for many years one of the inspectors for the Township of Saltfleet, in Wentworth County, and it has been largely owing to his careful and intelligent work that that township has long held a premier position in its control of those tenuous diseases and insect pests that require a relative enactment and communal effort to successfully combat them. The appointment is a great one amongst those who know him, and should prove satisfactory to the Province at large.

W. R. D.
Wentworth Co., Ont.

Exhibition Apples for London.

The Department of Agriculture shipped lately to Wm. Hutchison, Exhibition Commissioner, London, what is believed to be the finest lot of exhibition apples ever sent out of Canada.

The apples were collected last fall under the direction of J. A. Ruddick, Dairy and Cold Storage Commissioner, by members of his staff who went direct to the orchards at time of harvesting, making their own selections and packing them in a special manner. As soon as possible after packing, the apples were placed in cold-storage, and held at a temperature of 32 degrees. By these means it has been possible to preserve, in excellent condition even such early-maturing varieties as McIntosh Red and Fameuse.

All the fruit-growing Provinces are well represented in the collection, which comprises nearly 800 boxes. Some of these apples will be shown at the great International Horticultural Exhibition to be held in London next month, and the balance will be used to continue the exhibition at the Crystal Palace.

THE FARM BULLETIN.

The Wonderful Du Pont Road.

Probably the most remarkable object-lesson in road-making ever given on this continent is that afforded by the public-spirited generosity of Coleman du Pont, in his native State, Delaware. By itself and tributary roads, the value and productivity of a wide belt of farming land should be promoted to their fullest development, in so far as a public highway makes this possible. It will run through a variety of country, and the road-bed will be laid down according to different systems, including surfacing in relation to automobile traffic. Accurate records will be kept not only of construction cost, but of subsequent upkeep for years, so that the relative outlay and efficiency will in due time be determined. The road will be 110 miles long, beginning at the north-east, and running right down through the State. It follows the course where the greatest number of feet of right of way have been offered free by the people. Thus, those who desire the road most, receive it. The whole right of way is 200 feet wide. At present, the central 40 or 50 feet is being constructed as a first-class road, and, as the country develops, provision is made for two trolley tracks, two side roadways for heavy freight traffic, and foot-walks at either side, with rows of trees. As described by Mr. du Pont, himself, in the Scientific American, the main roadway will be built of water-bound macadam or concrete base, on top of which will be laid asphalt and stone mixed, or a surface composed of water-bound macadam, with a half-inch covering of asphalt and trap rock, to make it dust-proof and water-proof. Width will vary according to the probable traffic, the narrowest part being 20 feet, 13 feet of which will be metalled, and curves limited to five degrees. As to the possibilities of future development in fruit and vegetable farming in the country drained by this road, some idea may be formed from the fact that already, at one shipping-point alone 62 carloads of strawberries and 63 carloads of peaches have been forwarded in one day. When completed, therefore, the du Pont road will be one of the greatest and busiest in the United States. Now, suppose that a few of our Canadian millionaires get busy with similar good-road schemes to make themselves famous as public benefactors.

N. S. Agricultural College Growing.

The 1911-12 session at the Nova Scotia Agricultural College closed on Friday, April 12th. The session has been by far the most successful in the history of the institution, the attendance in the regular course having been 80, in comparison with 65 the previous year, and the short course 312, in comparison with 230 the previous year.

In order to accommodate the increasing number of students at the College, considerable additions will be made to the institution during the ensuing summer. An addition will be added to the main building, which will increase its capacity about two-thirds. A separate horticultural building and greenhouses will be erected, and a new horse barn will also be erected during the summer.

It is extremely satisfactory to note the progress that has been made at this Agricultural College of the East, not so much because of the institution itself, but because it is indicative of the new interest in Maritime Agriculture, which spells a new life in these Eastern Provinces of Canada.