

Suggestions to the New Irrigator

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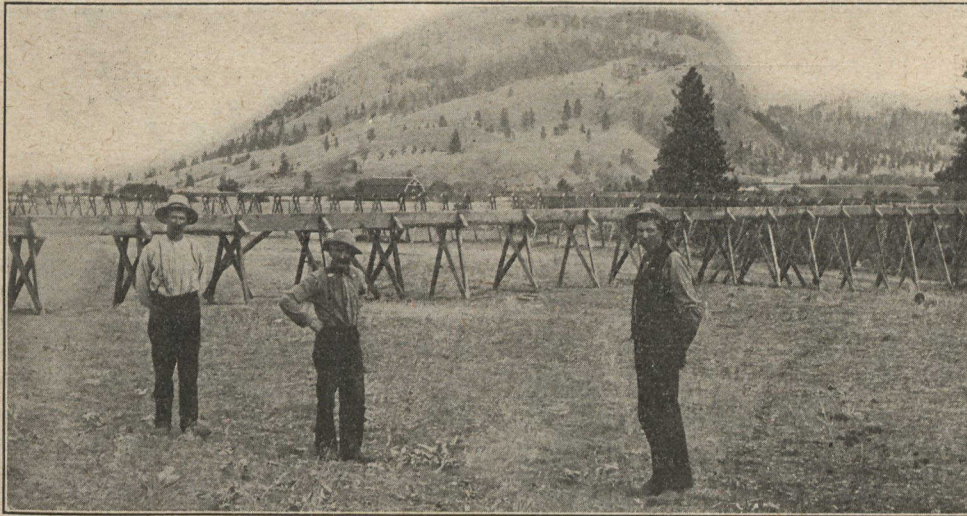
THE important part that water plays in promoting plant-growth is, in an indefinite and general way, appreciated by everyone. Of all the factors having a bearing on plant growth, water

obtained by grading. It is impossible to get the best results on a piece of land of uneven surface. Some portions of it will get too much water, and others too little. For furrow irrigation, the ideal

the tree rows, in which very small streams of water are run for a couple of days, supplied from a lateral along the high end of the lot. By this method the soil is evenly and thoroughly irrigated, leaving the land in the condition it would be after several days of light rain.

The streams entering the furrows from the lateral should be under control, and easily regulated. For this reason, instead of a dirt ditch, a square wooden flume should be made of one and one-quarter inch by twelve inch boards. On the side of this flume next to the orchard and just to clear the bottom, one and one-quarter inch holes are bored every two feet. Each of these holes furnishes the water to one furrow. Over the holes are nailed gates made of galvanized iron two and one-half inches long by two inches wide, the sides of which are turned over to form grooves. A hole one and one-quarter inches in diameter is cut in the gate and a slide of galvanized iron is made to fit in the grooves. By means of this slide, the supply to each furrow can be regulated to a nicety.

Irrigation under these conditions is a pleasure. A man can easily irrigate ten acres in two or three days with absolutely no waste of water.



A Level Stretch May Be Irrigated in This Manner

For orchard irrigating, the furrow system is used. See illustrations on front cover and on page 212.

is next in importance only to light and heat, but even in irrigated countries, the fact that results depend on the amount and times of application, is little understood.

Scientific irrigation is the application of water in such quantities, at such times and in such a manner that, with proper cultivation of the soil, the most favorable conditions for plant life are obtained. There are five factors which influence plant-growth—light, heat, water, soil-texture and plant food. In arid countries, the first two are generally bountifully supplied by nature. The other three the irrigator largely controls. When it is understood that the last two are greatly influenced by the knowledge and skill displayed by the irrigator in the application of water, it will be seen how important it is that an irrigator should study the best methods and have his land in such shape that he can apply these methods.

A settler coming from a non-irrigating country to take up land under an irrigation system would be wise to take certain precautions. He should, of course, ascertain that the water-rights of the system are what they are represented to be, that the water supply is ample, and the distributing system satisfactory.

In the selection of a lot, the main thing to consider, after soil, is the surface of the land, whether or not water can be evenly and easily distributed over it; if not, the proper slope must be

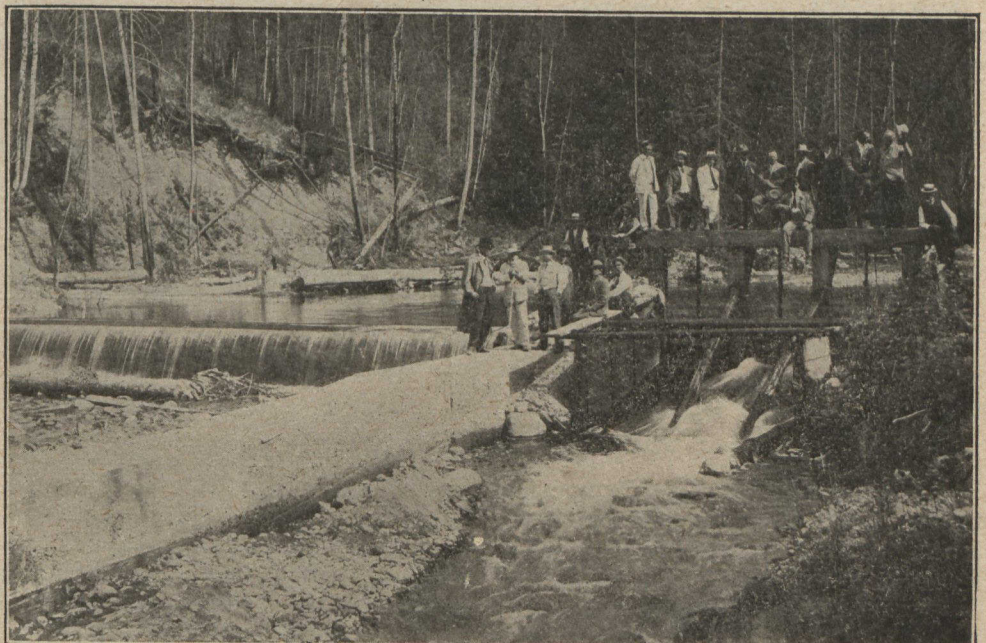
lot should have a gradual slope in one direction of from one to two and a half feet in the hundred, depending on the character of the soil.

BEST SYSTEMS FOR ORCHARDS

Having secured such a lot, the next thing to consider is the method to be adopted for irrigating. For fruit trees, the most satisfactory is the furrow system. This consists of running a number of plowed furrows (the number depending on the age of the trees) between

QUANTITY OF WATER REQUIRED

The quantity of water required to produce the best crops is a matter in which no fixed standard can be made, depending, as it does, on climate, kinds of crops and character of soil. It is almost an invariable rule, however, that irriga-



Irrigationists Visiting Head Gate of Grey Canal

At time of recent convention of Western Canada Irrigation Association