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## Practical Irrigation in British Columbia

Harvey Thornber, B.S., Assistant Horticulturist, B.C. Dept. of Agriculture.

**I**RRIGATION, in itself, is not a difficult art. Anyone can learn to make the furrows and apply the water. The greatest difficulty seems to arise when the relation between irrigation and plant growth is not well understood. The varying requirements for different soils and different crops, one year with another, tend to confuse the beginner more than does the mere application or distribution of the water. In order to make myself clear, I will discuss a few of the most important points which a beginner should know.

The first thing to consider in starting on an irrigated tract is the preparation of the land. A few dollars extra per acre spent in preparing the land often means many dollars saved during the life of the orchard. The best preparation is none too good. Many people feel that the planting of the trees and the turning on of the water are the main operations necessary for the production of an orchard. This mistaken idea is partly due to misleading advertisements and to a lack of experience on the part of the beginner.

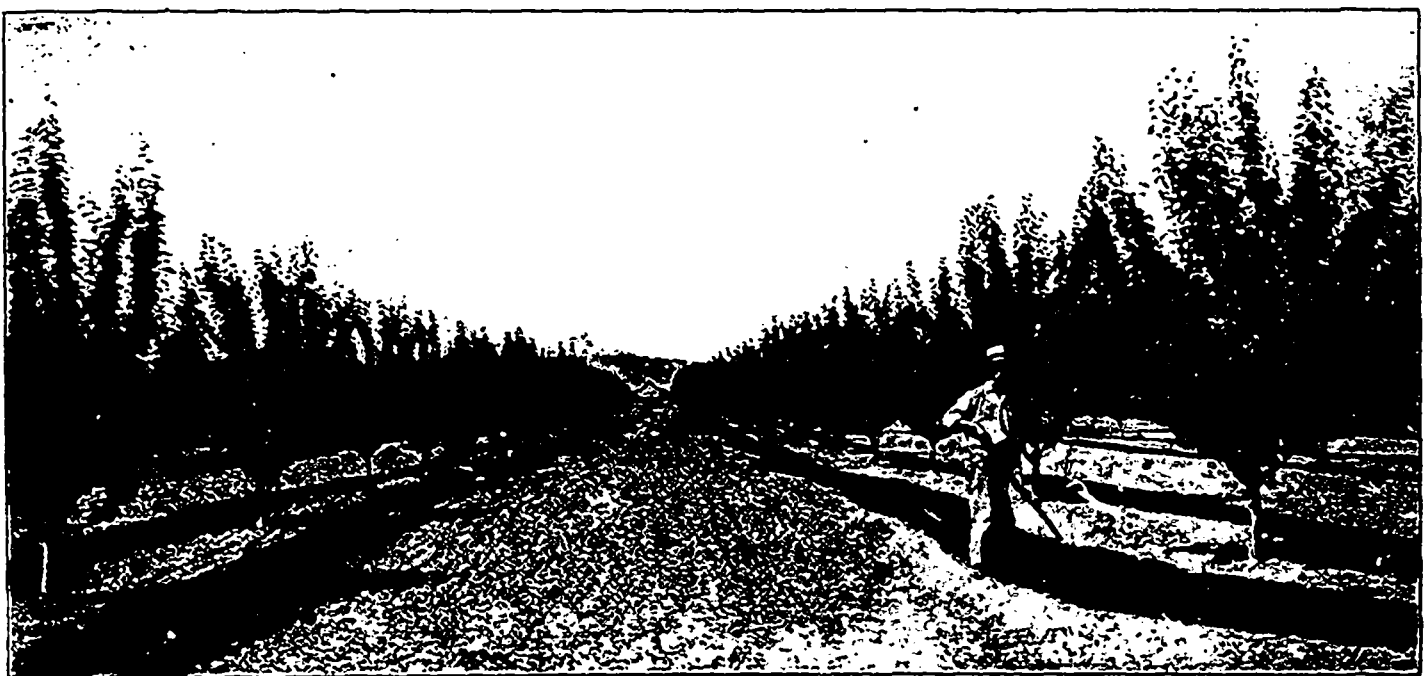
The land should first be cleared of all stumps, rocks, or brush and then plowed. If any large holes or hollows exist they should be filled before plowing. All "fills" should be permitted to settle before any trees are planted. This settling can best be secured by planting some annual crop on the land for the first year. A cover crop, which may be plowed under in the fall or spring, is best because it adds the much-needed humus to the soil, thereby making it more congenial for the young trees. Vegetable crops, such as potatoes or other root crops, are often used, but are not always successful. After this crop is either removed or plowed under the levelling may be completed. The best tools for levelling with are the ordinary road graders or slip scrapers. If the land is fairly level the "planer" or "smoother" may be used very successfully. Its construction is described in Circular No. 14 of the British Columbia Department of Agriculture.

The land having been well prepared, the planting is next in importance. In case the land is nearly level, any desired

system may be used as regards the irrigation. The square plan, with the fillers in the rows in the same direction that the irrigation ditches are to run, is a favorite. This makes it possible to irrigate the fillers and standards from the same ditches, which is advantageous, especially in the young orchard. However, if the land is too steep for irrigating directly down the hillsides, planting on the contour or in such a way that the water may be used on a smaller grade will often decrease the cost of irrigation later.

The head ditches may be located as soon as the planting plan is decided upon. These are placed at intervals across the field, depending upon the contour of the land and the texture of the soil. If one has a clay or loam soil the ditches may be farther apart than on a sandy or more porous soil. The average distance in a clay soil is six hundred feet, while in a sandy soil three hundred feet is sufficient. Slight variations from these are necessary for special conditions.

The construction of these ditches



Irrigation is a feature of many of the best orchards in British Columbia. The well cultivated orchard of Mr. Mansfield at Kelowna is shown

(Photo by G. E. Hudson)