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Where the forest maintains the fruit-grower's water supply. Looking toward Penticton, B.C., showing the Giant's Head Mountain and benches, with the famous Summerland orchards.

COUPLING THE FOREST TO THE FRUIT FARM

By Geo. P. Melrose, District Forester, Vernon, British Columbia.

How British Columbia's Richest Valleys Depend Upon Natural Water Storage of Wooded Mountains.

The Okanagan Valley is one of the richest and most productive of any of the valleys in British Columbia. Its annual export of fruit alone is well in excess of two and a half million dollars, and vegetables, dairy products and livestock amount to as much more.

The valley is in the heart of the interior Dry Belt of the Province, and has an almost semiarid climate with an average rainfall of about 12 inches in the north and 10 inches in the south. The summers are long and dry, whilst the winters are short and have a light snowfall. The bulk of the precipitation occurs during the winter months.

Distributing Water.

Agriculture in the valley is dependent entirely upon irrigation and numerous water distributing companies and corporations with hundreds of miles of ditches and flumes handle the water between the mountain streams and the farm lands.

As mentioned before, the bulk of the precipitation occurs in the winter in the form of snow. It is heaviest in the mountains and often very light indeed in the valley. This snow lies in the hills all winter and as spring and summer follow it gradually melts, first at low levels and last of all in the high peaks, and finds its way into the streams.

Luckily, the mountains surrounding the Okan-

agan Valley from which it secures its irrigation water are covered with a bountiful growth of trees. The forest extends unbroken from one end of the water shed to the other and from near the bottom of the valley to 5,000 feet above it. Upon these forests depend the whole success of the irrigation systms and the fruit and produce growing of the valley.

A steady supply of water during the growing season of the year is what is required for proper irrigation. The forest makes this possible in the following ways:

First of all they protect the winter snow from quickly melting by shading it from the direct rays of the sun and protecting it from the winds. The snow melts much slower in the woods than in the open, as everyone knows who has been in the woods in the early spring and seen the banks of snow there, while in the open the grass was already green. Thus the run-off from the snow is distributed over a longer period and held till well towards the growing season.

In the forest there is a continual fall of leaves, twigs and cones that gradually decay and form a spongy, half rotten top-layer to the soil called "humus." When the snow melts this humus soaks up an enormous quantity of the resulting water and holds it like a sponge. After the snow has all disappeared and surface run-off ceased, the "humus" starts giving up its mois-