

lovely and secluded valley, ten miles long and from one to three miles in width, known as "Upper Alsea Valley." The soil is the rich, deep alluvium common to the bottom lands of that region, and yields abundantly in grain. Grass is excellent and unfailing the year round, and with an inexhaustible supply of fine water it would seem as if nothing were lacking that is desirable for embarking in the dairy business. The population of the valley is about 350, who present the appearance of thrift and prosperity. From there to the coast the mountains are but a succession of high and broken hills. The river descends 1,000 feet in passing from the valley to the ocean, entering the estuary known as "Alsea Bay" ten miles from the sea. Flowing into the lower stream are Five Rivers and Deep Creek, along whose fertile bottoms many families have settled. There is room for many more in this region on the bottom land of the streams. The low land yields abundant crops of vegetables, hay, grain and fruit.

Yaquina River is of considerably greater magnitude than the Alsea, and flows from the summit of the mountains westward to the ocean. In its course it receives the waters of numerous tributaries, some of them of considerable size and draining a large area. It thus acquires a large volume of water. It is navigable on tidal water as far up as Elk City, a distance of twenty-five miles above its mouth. It has a course of about forty-five miles. Along its valley, and for miles on either side, the mountains were swept by great forest fires years ago, and are almost devoid of standing timber. A luxurious growth of giant ferns has sprung up, usurping the place of other forms of vegetation, among which the burned stumps of trees may be seen. So thick is this growth that at a distance the hills present the appearance of being covered with a thick carpet of grass. Under the fern there grows the wild pea, giving nutritious food in winter to thousands of cattle. In the gulches and along the tide sloughs fine timber, both fir and cedar, is found, and considerable lumbering is being done. Four saw mills are at work, the bulk of their product being consumed by the Oregon Pacific Railroad. Yaquina Bay has also sent many ship loads to the San Francisco market the past few years. Along the streams is found a growth of hard woods, such as curly maple and knotty ash.

Farming and stock-raising is carried on in a small way along the river and bay, but not on an extensive scale in any instance. No such broad levels are found as are required for large fields of grain, and though the range for cattle over the hills is very wide, no one has entered extensively into the stock or dairy business. Near the water are narrow and level strips, and small areas of cultivable land are to be found among the hills. The soil has been enriched by the ashes from the burned forest which have mingled with it, and yields abundantly on the bottoms and among the hills when the ferns have been conquered. Potatoes are everywhere a fine crop, both as to yield and quality, and large shipments are made to the San Francisco market. Other vegetables thrive, and the local market is well supplied with as fine

vegetables of all kinds as can be produced in Oregon. The advantages offered here for stock raising have been but slightly appreciated. Grass sown broadcast soon attains a thick and vigorous growth, furnishing excellent food for cattle in a region wholly free from lasting snows. The natural meadows, also, along the water-courses, supply excellent grass and clover for dairying purposes.

Fruit culture has attracted considerable attention, and has been entered upon quite extensively by several parties. The largest orchard is on the south bank of the Yaquina, some five miles above its union with the bay. Work in planting the orchard began in 1875, and the trees are now getting into good bearing condition. There are 4,000 prune trees, 500 plum, 1,000 apple, 500 pear and a general assortment of cherries, apricots, chestnuts, walnuts, almonds and small fruits. There are several other fine orchards, some of them quite large. That important fruit interests will be developed here cannot be questioned; and the outlet to market afforded by the Oregon Pacific Railroad and the connecting steamers which enter the bay, gives to the Yaquina region all the needed shipping facilities.

Yaquina Bay, now attracting so much attention as a port, is destined to become a still more important receiving and shipping point for the Willamette Valley than it now is, as soon as the projected improvements, now far advanced, are completed; not only that, but when the harbor is rendered accessible to large ocean sailing ships, and the railroad connections spoken of below are made, it is expected to take rank as a port for foreign commerce, to pass over a transcontinental route of which this will be the deep-water terminus. At present Yaquina Bay can be entered only by vessels of draught up to 15 or 16 feet, but it is susceptible of great improvement. A sand cliff rises abruptly on the north side of the entrance to a height of 200 feet, while on the south the land is comparatively low and flat. In this respect it somewhat resembles the entrance to the Columbia, materially differing from it, however, in width. The channel across the bar outside the entrance is about 2,000 feet long, is narrow and straight, and in rough weather is clearly defined by a line of breakers on either side. All but 600 feet of this distance is comparatively deep, the remainder being shallow and until the Government works now in progress were undertaken was, within certain and regular limits, shifting. In summer the north winds were accustomed to pile the sand in from that direction, gradually pushing the channel to the south, while the southerly gales of winter forced it back again. More properly speaking, there were three channels—"North," "South" and "Middle"—each of which in its turn received the main current. The bar consists of sand resting upon a ledge of rocks, being now 12 to 13 feet below the surface at low tide, and the rocks 24, the rocks being occasionally swept bare by action of the current. To make this action a permanent one is the design of the work now in progress by the government engineers. A jetty is being run from the point south of the entrance, which is to be extended