

VAST EMPIRE AWAITS THE IRRIGATOR

Though Oregon Already Has 600,000 Acres Under Ditch, Double That Area Can Be Made Productive by Irrigation—Plans of Government

By Frank Ira White.

WITH an area approximating 600,000 acres of land under existing ditches, owned by individuals and corporations, or included in United States reclamation projects or under construction, Oregon is rapidly advancing to a high rank among the irrigation states of the Union. According to the estimates of authorities there is more than 1,000,000 acres and possibly as much as 1,500,000 acres of land lying East of the Cascade mountains that can be brought under irrigation at a cost more than justified by the productive power of the land and which will be gradually added to the highly profitable areas of the state as soon as railroad transportation is afforded.

Two Government projects, the Umatilla and the Klamath, the first at the north end of the state, near the Columbia River, where transportation facilities are afforded by both rail and water, and the Klamath, an interstate project, with the greater area in Oregon but a portion of the land to be reclaimed and watered lying within the State of California, comprise about 220,000 acres. The various Carey act segregations approximate about 250,000 acres, of which the greater area is in Crook County along the banks of the Deschutes River. The remainder of the total irrigated area of the state is watered from canals built by private enterprise or corporations formed by individuals interested locally and these are chiefly in Umatilla, Baker, Wallowa, Union, Crook, Klamath and Lake counties.

In each of the counties named, together with Grant, Harney, Wheeler, Morrow, Gilliam and Wasco, are considerable districts with favorable topographic conditions and water supply which could be utilized with conservation for making land of low value under natural conditions very valuable and fit for intensive agriculture. Not less than 100,000 acres of counties upon which water will eventually be distributed through canals and laterals are at altitudes varying from a few hundred feet above sea level to 400 feet, but at much lower elevation than hundreds of thousands of acres of prolific lands of the Rocky Mountain states where irrigation has been practiced for centuries locally and the results are entirely satisfactory.

Where the mass of population, as in the Pacific Northwest, is concentrated, there is a predisposition to the belief that elevation precludes impossibilities in the growth of vegetables, fruits, grains, grasses and vegetation common to the same latitudes throughout the world. This is an erroneous conclusion as demonstrated by the marvelous yields and crops of crops raised at high elevations in Malheur, Klamath, Crook and Lake counties.

At the National Irrigation Congress exhibit of irrigated lands produced at Safford, Ariz., September 2-7, last, Malheur County won first prize on fruit in combination with the display from Klamath County, entered the Oregon exhibit, and Klamath County won first prize on wheat, oats, barley, forage and the best from a single garden. This was in competition with exhibits from the irrigated states and with displays aggregating a value of many thousands of dollars.

From the enactment of the National Irrigation act, under which the reclamation service operates, Oregon has been the largest contributor to the fund realized from the sale of public lands and the proposed reclamation fund. The state has therefore been awakened by this fact and the projects approved within its borders are commencing to realize the importance of development and its consequential benefits. While the ratio of receipts for public land sales have declined since the enactment of the act compared with the previous years, Oregon still holds second place in the aggregate contribution to the fund.

The proposed measure, designed to bring more than 500,000 acres under water, which was investigated and finally abandoned by the reclamation service, it is deemed probable will be revived in time which will be carried out by the Government Engineers. The Silver Creek, Ana Creek, Chewaucan, Silver Creek and Owyhee projects are also prospective enterprises that at an early date may be taken up by the service.

After prolonged negotiations between the principals in the Carey act projects and the state officials, the latter will supervise such irrigation works and secure compliance with the law under which such enterprises have been organized, matters of interest and misapprehension regarding the price to be charged for water and paid by persons who acquire the lands by homesteading, were adjusted during 1907 and it is expected a better price of labor and material the acreage price within some of these projects has been considerably increased. Questions involved in the extraordinary measures, progress of the adjustment were fully covered in the news columns of the Oregonian during the year. Within the past month patents have been issued by the Government covering 33,000 acres of this land.

In the Willamette, Umpqua and Rogue River valleys, where the annual rainfall would seem to preclude any need for irrigation, it has been demonstrated by progressive farmers and fruitgrowers that the yield may be greatly augmented by the application of water during the dry period of the Summer and Fall seasons. Many garden tracts and some hay and alfalfa fields are watered in the valleys of these valleys of Western Oregon are watered from laterals brought from streams that come from the slopes of the Cascades, Calapoosas or Coast Range Mountains.

Doubtless the future will witness the building of great works to distribute water over areas that have never known the splendid cereal crops since the pioneers first came to the Oregon country, but under the magic of scientific application of moisture during the dry seasons will respond with greater tonnage and better quality, diversified in character, the soil enriched by a silt making these favored regions more than ever before comparable with the fields of the Pharaohs.

Lying East of the Umatilla River and south of the Columbia, surrounding the towns of Umatilla and Hermiston is the region to be quickened by the waters of the Umatilla project. About 20,000 acres in extent, the canal and distributing system is to be fed from the Cold Springs reservoir, under the auspices of the Reclamation Service and to be completed early in 1908. The reservoir is to be supplied by a canal 2 1/2 miles in length conveying the water from the Umatilla River at a point about three miles above Echo. The feed canal has been constructed under contract, as have portions of the distributing system, and the water supply will be secured by pumping plants operated by electric power.

will probably not be in excess of 200,000. The first unit of the main canal was completed in the Spring of 1907 and water furnished through the new canal for the acreage under irrigation previously from the Ankeny Canal, which the Government had acquired by purchase.

Water was not in readiness as early as necessary for the best results in irrigation, and incidents of first use of a new canal system prevented full irrigation of the acreage already under cultivation. However, the distributing system is now completed and the canal in condition to furnish water as desired for the 15,000 acres or thereabouts that is included under the first unit. The first unit was constructed under contract, but owing to inability to secure what was regarded as satisfactory bids, the work done during 1907 was under force account, including laterals of the distributing system and work on the Keno canal on the west side of Link River at Klamath Falls.

The Klamath project is unique among Government irrigation works, embracing as it does the drainage of large areas of swamp land, the soil of which is peat

of the basin, one branch passing through Lost River Gap to reach lands in Poe Valley, and the main flow to be carried under Lost River by means of an inverted siphon, for placing the water on lands in the Merrill section.

At Clear Lake, the head of Lost River, will be built a storage reservoir which will impound flood waters that annually inundate the swamp lands and flat areas bordering Lost River in Langell Valley, from which will be carried a siphon through Lost River Valley and irrigate the greater portion of the section tributary to Bonanza. Lost River empties into Tule Lake, a broad expanse of more than 94,000 acres in extent at the northern side of the famous Modoc lava beds, and having no visible outlet, until very recently, when an underground opening was revealed by the forming of a whirlpool near Scorpion Point.

At some time Lost River found its outlet through a channel that made it tributary to the Klamath River, but this channel, now known as Lost River Slough, has united the waters of the two streams in recent years only during the

\$376 an acre. But it is not likely the Gravensteins of Coos Bay will ever again be sold at that low figure. The lands within the area tributary to Coos Bay which are especially adapted to fruit growing include many thousand acres. Apples are grown on either bottom or up-land, but the orchardist who has given closest study to apple-growing in this section prefers bench or upland. This land can be had at \$20 to \$50 an acre, and the prediction that all the west slope of the Coast Range mountains will ultimately be covered with orchards, in harmony with the economics of nature.

APPLES OF MOSIER VALLEY UNEXCELLED

Even Hood River Orchardists Admit That Product of Nearby District Equals Their Own.

By J. M. Mosier. MOSIER is the one place in Oregon that raises apples equal to those of Hood River, so says the Hood River Glacier of November 14. The reason for this is apparent because Mosier Valley is only six miles east of Hood River and has the same advantages of soil and climate which, in connection with the fact that there is a great quantity of Hood



COMBINED HARVESTER AT WORK IN WHEAT FIELD, MORROW COUNTY, OR. —Photo by Sigbee, Heppner, Or.

aid of such extraordinary fertility that when reclaimed it will be adapted to the most intensive and profitable character of crop raising. To the present time, timber and Klamath through the old channel of this slough, thereby diverting the flow of the stream from Tule Lake, which would be dried up by evaporation eventually, and the greater part of the lakebed reclaimed.

Whether or not the new opening through which the lake is draining will render unnecessary this portion of the projected reclamation remains to be disclosed by lapse of time.

River Valley fruit grown farther from the shipping point than Mosier, accounts for the similarity of the product. The only difference, therefore, is in the plan of shipping.

So well has the fact become known that Mosier apples are of exactly the same quality as those produced at Hood River they are no longer required to compete with each other as to quality, but rank together in competition with all others, and there is nothing that can be said about one of these places regarding the apple that will not apply to the other.

The growers also exercise the same care as the Hood River orchardist (perhaps following and profiting by his experience) in pruning, spraying, cultivating and grading, methods are also identical in thinning, sorting and packing. The

of hundreds of miles, and though other prosperous cities in her territory are sure to grow in population and trade, Portland will always lead. With the only water grade into the Oregon Empire, and with the rich Willamette Valley spreading southward from its very doors, Portland's position is invulnerable. This city's fresh water harbor and central location gives it incomparable strategic advantages, and when the channel to the sea is deepened, it can meet all competitors for the "Mastery of the Pacific."

Table titled 'VALUE OF A FEW OREGON PRODUCTS FOR 1907.' Lists products like Lumber, Wheat, Dairying, Fruit, Hops, and Gold with their respective values.

Mosier Fruitgrowers' Association allow no man to pack his own apples, thus eliminating the possible desire to put in inferior fruit. This is in accord with the Hood River method except the Mosier association pays packers by the day instead of by the box thus obviating the necessity of haste on the part of the packer.

There are in the Mosier Valley 50,000 acres of land of which at least half could be made to produce fancy fruit, not only

CITY LEADS IN WHOLESALE TRADE

Natural Advantages Make Portland the Distributive Center for the Entire Pacific Northwest—Jobbing Business of at Least \$200,000,000 Annually

PORTLAND, it is said, has the largest tributary territory of all American cities. At its gates lie the entire state of Oregon and large sections of Washington, and Idaho. More remote, yet destined to play a role of ever increasing importance in its commercial growth, and Northern California, Montana, Alaska, Hawaii, and that great market of limitless possibilities, the Orient. A glance at the map makes it obvious that Portland will become one of the great jobbing centers of the United States and of the world. Years ago were laid the foundations of the wholesale business, as the surrounding country has developed this trade has extended; to what volume it ultimately may grow can only now be conjectured.

Nature made Portland the distributive center of the great Pacific Northwest. Its site is the one logical location for a metropolis within a radius

to other states, and shipments to Alaska and Hawaii are an appreciable factor. The reports mentioned show that the city is more strongly entrenched itself each year in the distant markets, and the growth of this trade is only limited by the extension and improvement of transportation facilities.

The head of one of the largest wholesale firms in the city makes this resume of the needs of the trade: "Transportation facilities to districts in which wholesale houses operate at a disadvantage because of our distance from such districts, as, for instance, Puget Sound country, could be improved if Portland jobbers would all work the trade thoroughly, increasing the volume of business sufficiently to justify, and then insist on, and procure, from the railroad companies through cut services through cars loaded full each day at Portland and to such remote districts without stopping, thus giving quicker delivery. Portland jobbers should have national or more improved transportation facilities as follows:

"A more direct line into the Yakima country, either by extending our district, either by going up the Cowlitz River and across, or going up the White Salmon, skirting the base of Mount Adams and down some stream on the other side. By extension of the Yakima and Vancouver and Klackitkat railroad, or the Columbia River & Northern. We lie as close to the Yakima country as the Sound and there is no reason why we should not get up there more easily than we do.

Improved and more direct transportation facilities into the Big Bend country. This will probably follow the completion of the North Hank railroad, as without question, the Northern Pacific, the Great Northern will sooner or later, and we think very soon, find it to its interest to build from some point on the main line on the Northern Pacific, north of Pasco, directly north into the Big Bend country, pulling wheat out of that country down hill to the Columbia, and down the Columbia to Portland at the same time, putting us in a position, by reason of a more direct grade and better route, to compete for the jobbing trade.

Such a line is more essential at this

time than a line into Central Oregon that would increase the route, for the reason that the trade of the Klamath and Lake regions, because of the Harriman interests pushing lines northward, is more directly tributary to San Francisco and California jobbing centers, unless access is given from this side.

There is no end of room for elaboration on this matter of improved transportation facilities, including the deepening of our bar; establishment of trans-Pacific line of steamers; Alaskan line, completion of the Calloway direct steamers with Tehantepec and Hawaii. The establishing of a line from the Pacific Coast of Tehantepec, along the west coast of South America would admit of our catering to that trade with many of our products by simply one transfer at the Isthmus."

Undoubtedly in the position of the Alaskan trade would be gained by Portland if direct service were instituted, according to the opinion of many jobbers, the completion of the Calloway large part of the Alaska trade," says one, "if the merchants will go at it in a systematic manner, by covering the territory with a line of direct service who need not expect to get all the business the first trip. Jobbing and manufacturing business is built up by hard, persistent work."

At present the Alaska business is an important factor in many lines and there is no question but that it can be increased. Without exception, jobbers urge the necessity of a line into Central Oregon. This rich territory will become one of Portland's greatest markets if it is opened up, and a line from the north into the Klamath country is imperative if Portland is to hold her own with San Francisco. Portland is now competing with San Francisco for the Southern Oregon and Northern California trade and merchants feel confident that this city will eventually win out. Although Portland has many old wholesale houses, a very great proportion of the business has originated within the last few years. In many lines the business originating within the past ten years amounts to an increase from 100 to 300 per cent, according to the information furnished by the business men themselves. In some lines it has exceeded this and in several departments the entire trade has developed during the period.

Such a line is more essential at this

PRUNES FOR THE ENTIRE WORLD

Big, Juicy Italian Variety Reaches Perfection in Oregon—The Dried Fruit Staple in All Markets

By H. C. Aswell. THE dried prune output of the United States is confined exclusively to the Pacific Coast. California's production of this fruit is limited to the French, or Petite, variety, which is a small, red, sweet prune, and is dried in the sun.

The Willamette Valley, in Oregon, and Clark County, Washington, furnish the bulk of the Italian prunes, which are larger than the Petite, black and of a tart flavor, and are dried by artificial heat.

A considerable quantity of Italians are raised in Idaho and a few in Eastern Oregon and Eastern Washington, but are mostly shipped green.

It is estimated that Clark County produced this season 5,000,000 or 6,000,000 pounds, and the output of Oregon is placed at 25,000,000 pounds, of which Marion County is credited with 7,000,000 pounds, Douglas County 5,000,000 pounds, Yamhill County 4,000,000 pounds, Clackamas County 2,000,000 pounds, Lane County 1,800,000 pounds, Polk County 1,500,000 pounds, Linn County 1,200,000 pounds, and Washington County 700,000 pounds.

Thus it will be seen that the most of the world's supply of this fruit, in the dried form, comes from the comparatively small district extending from Roseburg, Or., to Vancouver, Wash. It is the volume of business great, but it is rapidly growing, and no year has shown greater progress than the one just ended.

The estimates given show that dry-goods, hardware and groceries lead, each with an annual sales amounting to \$1,000,000. These figures, it is believed, are very conservative, and if

insured it a regular place in the market quotations. It is known to the trade as the Oregon prune, while the Petite is classed as the California prune.

The prunes are of the high price prevailing at this season, is a cheap article of diet, as compared with other fruits, whether dried or fresh.

Leading medical and scientific authorities have demonstrated its dietary value; and now that its liberal consumption has been found to be a sure cure for baldness, we may expect a marked increase in its use.

The production of this fruit has not been overdone. Few additional prune orchards have been planted in recent years, owing, probably, to the considerable outlay of capital required for evaporators and machinery, and to the fact that the expense of harvesting and curing is considerably larger than in the production of other fruits.

The bulk of our product is consumed in the United States, north of Mason and Dixon's line. Chicago, Boston, Philadelphia, New York and San Francisco are the principal distributing centers, the latter city being largely in the lead, and being the center of the export trade, which is rapidly increasing. Most of the output is packed in 25 and 50-pound boxes by the packing-houses of Portland, Vancouver, Salem and Albany.

The packers have paid, this season, an average price of over 5 cents a pound f. o. b. local station, and not over 20 or 30 cents remain in growers' hands.

An encouraging feature of the market this year, aside from the satisfactory price to growers, was the fact that although the crop was lighter, the shipments East up to November 1 were double those of last year.

A mature and thrifty orchard, under proper management, will net its owner from \$100 to \$150 an acre.

ENGLISH WALNUTS THRIVE IN OREGON

Industry is Still in Its Infancy, but Give Promise of Becoming Important and Profitable.

AMONG Oregon's industries that are as yet in their infancy, but which promise much for the future, is the culture of English walnuts. Only during the past few years has walnut growing commanded wide attention in this state. So encouraging have the results been up to this time, however, that numerous groves have been set out and the public is beginning to realize that what probably become one of the state's important and remunerative products.

So young is this industry that there are comparatively few mature plantings in the state. From such trees that have grown to bearing, those who are making a study of their cultivation believe that the walnut in Oregon will be a complete success. In some cases matured trees have failed to produce the crops expected, but it is believed that this has been due to the planting of inferior stock, or poor cultivation and the selection of soil not suited to the walnut.

The walnut groves of Thomas Prince are the finest in the region in the state. Mr. Prince planted 350 trees in 1897, and 2000 trees the following year. From these he harvested last year between four and five tons of nuts. He has had great success with his groves and has been importing large quantities of seed nuts for his plantings. Other planters have had equally encouraging results, and the groves will be carefully watched from year to year as the ultimate fate of the industry depends on the bearing capacity of the fully-matured trees.

Walnuts grown in Oregon are of unusual size and of excellent quality. At first the California walnuts were taken for seedling purposes, but developments indicate that is a mistake, and they are now imported the more vigor a French varieties. Among the varieties that promise most here are Mayette, Moyal, Franquette, Parisienne, Chaberte and Parry.

Profits from walnuts are large after the trees come into full bearing. The market is constantly becoming better, and the consumption of nuts in the United States is showing a rapid increase.



THRESHING CREW IN EASTERN OREGON WHEAT FIELD. —Photo by Sigbee, Heppner, Or.

Hay apples. Of course, it is not expected that the district will always be entirely free from insect enemies, so fruit-raising is engaged in more extensively, nor can orcharding be followed successfully without attention to preventative measures.

But apple-growers along the Coast will never be subjected to the expense of spraying and fighting that is necessary in other sections. There has never been a killing frost and the country never saw snow enough to even amuse the inhabitants. There are no jack-rabbits in the Coos Bay country and trees are never nibbled by those pests. There is never a failure of the apple crop. The horticulturist needs only to plant his trees in the ground scientifically, cultivate and prune properly, and in a space of five years they will yield him good returns.

Trees grow rapidly in this soil and climate and begin bearing at three years old. The yield of a Gravenstein tree ranges from 10 to 15 boxes. Allowing 15 boxes to the acre, and the trees to be an acre, yields a crop of 900 boxes. At 60 cents a box, the former Coos Bay price, brings in income of

apples but all other fruits commonly grown in this section. Cherries in particular grow to the highest degree of perfection. Of this amount of available land for fruit culture only about 500 acres are now set to trees although at present a large acreage is being cleared, preparatory to tree planting.

There is at least one-third of a billion feet of pine and fir timber in this section which is only awaiting the sawmill to be converted into lumber and fruit boxes, a large amount of which will find a ready market at home. Many cars of building material and fruit boxes are shipped in each year instead of being manufactured here.

The price of land in Mosier Valley is not so high as in the ground sections, moderate means from acquiring sufficient to engage in fruit culture, the attractive industry which in the proper locality will always bring the greatest returns without fear of overproduction. And now a word to those who desire to engage in this profitable business, have care when you locate the sawmill, place just as good and choose that section of land where there is no doubt of its being the best—Mosier.

exact information were at hand, it is not unlikely that they would be higher. Other estimates that have been received give the annual sales of various lines as follows: Implements, \$3,000,000; shoes, \$3,000,000; drugs, \$2,000,000; automobiles, \$2,000,000; millinery, \$1,000,000.

Besides this, there is a long list of commodities, including liquors, building material, furniture and many other lines for which no figures are available. All the dealers report that 1907 was by far the best for the jobbing trade in the history of the city. On the whole, it is shown that there was an average over 1905 of 20 to 30 per cent, and in several lines a still larger gain was made. It is probable that the average advance would have been at least 30 per cent if it had not been for the general financial stringency toward the close of the year and the legal holidays that considerably handicapped trade.

Portland's main markets naturally are in Oregon, Washington and Idaho, but large quantities of goods are sent

growth of the Italian prune is an important factor in predicting a prosperous future for the prune industry of the Willamette Valley.

The Italian is so unlike the Petite in flavor and appearance that it stands in a class by itself. It has been explicated to establish a place in the markets as a distinct fruit. Prior to the last decade, its identity was lost, in the market quotations, under the general term of "prunes" and dealers looked upon it with disfavor and unwarranted and unprosperous innovation, the only standard for prunes being the Petite.

Consumers who were tired of the insipid little combination of pit and skin presented in the Petites usually served at cheap boarding-houses, were loath to believe that there was any difference in prunes.

In late years, however, the popularity of the Italian prune has grown immensely. The public has become educated to the fact that there is a difference in prunes, and the widespread demand for this variety has