UNCLE SAM'S EXPERTS ON FARMING IN COOS AND CURRY

SOIL SURVEY OF THE MARSHFIELD AREA ACCORDING TO THE OFFICIAL GOVERNMENT REPORT OF C. W. MANN AND JAS E. FERGUSON.

(Continued from last Saturday)

MYRTLE CLAY

The Myrtle clay is typically a dark-gray or reddish-brown clay, with an average depth of 10 to 18 inches, resting on a subsoil of light-brown to bright-yellow clay, usually of rather close structure. The subsoil often contains a considerable quantity of small angular fragments of rock, principally shale, of a yellowish-brown or bluish color. The subsoil at a depth of 3 to 6 feet or more, usually rests on beds of partially disintegrated shale or sandstone. The soil is somewhat variable in texture and often contains a small quantity of gravel of rounded or angular form. In certain localities the surface is strewn with large rounded bowlders, and on steep hillsides the outcropping of giant bowlders or what appear to be detached portions of the rocky substratum is a characteristic feature of the surface.

The Myrtle clay is almost wholly confined to the part of the survey lying to the south of the Coquille river. There are two main bodies of the type. One of these occurs south of Myrtle Point, while the larger area is found in the uplands bordering the Coastal Plain, in the southwestern part of the survey. The soil is confined to the hills and minor valleys through weathering from the underlying rocks of the Myrtle formation of Cretaceous age. The rocks consist of a hard gray sandstone and a small proportion of light-colored interbedded shales and conglomerates. The formation has been crushed and is highly fissured. The greater part of the type is forested. Between Eckley and Mrytle Point some open tracts occur which are known locally as "prairies." The raising of stock on these open prairies by the first settlers was probably the earliest agricultural industry in this section of the country. By far the greater part of the type which is suited to clearing is best adapted to grazing, while the rougher portions will undoubtedly remain in forest. Along the Upper Coquille River and on the Sixes River and Floras Creek some small areas of the type are in cultivation. In sheltered locations oats, wheat and barley yield fair crops. They are, however, usually cut for hay. The greater part of the type is included in private timber estates. Cleared areas suitable for pasture or cultivation are held at from $10 to $40 an acre.

AIKEN CLAY

The Aiken clay, to a depth of 6 to 15 inches, is a dark-brown or dark brick-red clay of moderately heavy texture. The upper 2 or 3 inches of soil contains appreciably more fine sand than the underlying material. This is due to the removal of the finer clay particles from the surface by rain wash. To a depth of 6 inches the soil is often of a dark color, owing to the presence of a large quantity of organic matter. The subsoil is typically a clay of bright Indian-red and brick-red color and extends to a depth of 3 feet or more. At varying depths the material rests on loose, disintegrated beds of basalt or sandstone. The surface of the type is usually strewn with small rounded bowlders or rock fragments of igneous character. The term "adobe" has been applied to this soil, owing to the sticky, tenacious condition which it assumes in wet weather.

The Aiken clay occupies only a comparatively small area in the Coos Bay region. The largest and most typical area is found about 2 miles southeast of Coquille. Smaller bodies occur near the head of Kentuck and Willanch Sloughs, at the mouth of Daniels Creek, and in one or two other places. Generally the smaller bodies are variable in texture and in places a lighter soil material resembling the Riverton clay loam has been superimposed upon portions of the type, but owing to the frequency in the changes of texture and the comparatively small extent of such occurrences it was found impracticable to separate them from the remainder of the type on a map of the scale used.

The topograhy ranges from steep hill slopes to undulating or moderately sloping terraces near the base of the hills fronting the larger valleys. Very little of the type is cleared.

The material forming it has resulted from the weathering and decomposition of the basaltic or igneous rocks which are exposed in a few places in the region. Some larger areas of this formation are included in the type mapped as rough mountainous types (undifferentiated). The presence of a large proportion of iron salts in the products formed by the weathering of the basalt has imparted a deep red coloring in the subsoil.

None of this soil type is under cultivation at present, the only portions that are cleared occurring in the body southeast of Coquille along the east slope of the valley and a small area on Daniels Creek. The more level parts of the type, when cleared, should prove to be well adapted to the production of grain and forage crops. The rough areas should undoubtedly be allowed to remain timbered.

ROUGH MOUNTAINOUS TYPES—(UNDIFFERENTIATED)

Some extensive areas occur within the limits of the survey, which, because of their rough topography are not suited to agricultural development. The general term Rough mountainous types (undifferentiated) has been applied to these areas. They are made up of materials forming the different upland soil types.

The Rough mountainous types (undifferentiated) occur as extensive areas in the eastern and southern parts of the survey. Outlying bodies include Blue Mountains and the adjacent hills, the Seven Devils, and other scarcely less rugged uplands. Over the greater part of the area the elevation ranges from 500 to over 2,000 feet. The topography of this region is exceedingly rough and broken. It is dissected by many narrow valleys, and the hill slopes are often steep and of irregular contour. The entire area is covered with a heavy forest growth, some extensive tracts of original forests being situated in this part of the survey. The best utilization of the mountainous areas appears to be for forestry.

ARAGO CLAY LOAM

The Arago clay loam varies from a heavy silty clay loam to a light friable clay loam, sometimes containing an appreciable amount of fine sand. It has an average depth of about 15 inches and with the exception of small areas is usually free from gravel. The prevailing color is a light brown. It responds readily to cultural treatment and when in a favorable condition as regards moisture is friable and easily cultivated. The surface soil is underlain by a silty clay loam or clay loam of brown to light-brown color, which frequently rests upon sandstone or shale rock or upon old gravel beds. These beds are occasionally exposed at the surface.

This type occurs in a few inextensive bodies. They represent colluvial valley slopes or occur as remnants of former terraces in the upper Coquille River Valley and in the valley of Coos River or adjacent to Coos Bay. The terrace areas are locally known as second bottom or bench land, and are prominent features of the valley topography. They are old and at least some of them have been submerged in the waters of the sea or estuaries and altered by marine or estuarine deposits, most of which have been removed by subsequent stream erosion. The soil material has been subjected since emergence to more or less modification through addition of alluvial material and by colluvial wash from adjacent slopes.

The areas of Arago clay loam were originally heavily timbered. The greater part of the timber has been removed. Large areas partially cleared are found in the vicinity of Arago and Myrtle Point. Because of the immense size of some of the trees clearing is a slow and difficult process, and the larger stumps are left standing for many years or are burned off. After the land is cleared it is usually very productive.

With the exception of the small tracts found at Arago, Myrtle Point, and near Fairview scarcely any of this soil is under cultivation. When partly cleared it is usually devoted to pasture. It is, however, one of the most promising soils of the area surveyed for the production of fruit. Its topographic position would appear to render the areas of the Arago clay loam less subject to late spring frosts than are the bottom lands. Small fruits, such as raspberries, loganberries, and blackberries, produce crops of fine quality, though the yields are somewhat less than have been secured on the lighter river-bottom soils. The largest returns have been obtained from the cultivation of small tracts of strawberries. At Myrtle Point a grower has practiced irrigation with this crop with very good results, the vines continuing to bear throughout the summer and until late in the fall. Red clover and timothy have been grown to a small extent for hay. The quality of these crops is exceptionally fine, and as a rule two crops can be cut during the spring and early summer. Oats, wheat, kale, and potatoes and other vegetables do well when given proper cultivation. As the soil can be planted early in the spring, it should be well adapted to the production of early vegetables and field crops requiring a long growing season. As with the case of the residual soils of the uplands, the successful growing of most crops depends on the thoroughness of the cultural methods and the attention given to maintaining the productiveness of the soil by crop rotation and the use of stable or green manure.

The cultivated areas of the Arago clay loam are valued at $50 to $70 an acre, according to location and the value of the improvements.

(To be continued next Saturday)

THE PORT OF PORT ORFORD

(Continued from page 1.)

more than fifty per cent of the legal voters in proposed port district had signed the petitions, though the law only requires eight per cent to call the election, it is assured that the question will carry by a large majority when the vote is taken. The proposed port district will include all of northern part of Curry county, Euchre Creek being the southern boundary of the district, and the Coos-Curry boundary line, the northern and eastern boundary. The Port Orford Commercial club had been in correspondence with Senators Bourne and Chamberlain endeavoring to get the federal government to do some work on the Port Orford harbor, but found that no favorable recommendation could be secured from the Department of Engineers unless part of the money for improvement was raised locally, so it was decided to take advantage of Oregon's port law and meet the requirements of the federal government. Port Orford harbor is not unknown in Washington though it has been long neglected because so far from railroads, but with the completion of the Panama canal, when it will be necessary to load large boats that carry heavy tonnage for which deep water is required, Port Orford will come into her own, and the organization of the port district here is the preliminary step in getting ready for the big things which are to be when the Pacific coast feels the impetus of commerce through the Panama canal. In 1871, Congress authorized a commission of engineers of the War Department to study the question of constructing a harbor of refuge between the Golden Gate and the Columbia river. After an extensive examination of the entire coast line, this commission selected Port Orford as the only desirable site available on account of its deep water, unequaled anchorage and the protection afforded by the high surrounding country, and since then the Department has made four additional surveys to determine the cost of the construction of an extensive harbor. The first report in 1873, by Maj. H. M. Hobert, Corps of Engineers, made a project and estimate for a harbor of refuge here which contemplated the construction of a breakwater 1,500 yards in length and to cost about $9,000,000. The second plan and estimate for a harbor of refuge at Port Orford was made in 1877 by the board of engineers for the Pacific coast, consisting of Lieutenant-Colonels Alexanders, Williamson and Stewart, and Major Mendell, which contemplated a breakwater 6,780 feet in length and to cost $10,500,000. The third survey, plan and estimate for a harbor of refuge at Port Orford was made by Major J. M. Wilson, Corps of Engineers, in 1878, which contemplated a breakwater 5,000 feet in length and to cost $9,405,000. The fourth plan and estimate was made in 1880 by a board of engineers constituted of the following officers of the Corps of Engineers, namely: Lieutenant-Colonels Stewart, Williamson and Mendell and Major Gillespie, which contemplated a breakwater 3,960 feet in length and to cost $8,950,000. The fifth plan and estimate was made in 1890 by Colonel G. H. Mendell, Maj. Thos. H. Handbury and Capt. Thomas W. Symons, Corps of Engineers, which was a duplicate of the fourth plan and estimate except that the cost was reduced to $7,820,000. The river and harbor act of August 18, 1894, provided for a survey of—"Port Orford, with a view to improving the same for shipping purposes nad as a harbor of refuge, commencing at Grave Yard Point and by jetty, sea wall, or other proper construction extending southerly or southeasterly into the ocean three hundred or more feet, if necessary, and suitable for vessels of middle draft; and, secondly, if necessary, by another jetty, sea wall, or other constructive work extending from the next high point or headland southwesterly four hundred or more feet, so as to accommodate vessels of maximum draft."

The report contained an estimate of $203,366 for constructing a wharf from Grave Yard Point; also an estimate for constructing the wharf from Nelly's Point, "the next high point or headland southwesterly." Pursuant to this report the river and harbor act of June 3rd, 1896, contained the following item: "Improving Port Orford harbor, at Grave Yard Point, Oregon, according to plan recommended by Capt. Thomas W. Symons of the Corps of Engineers, as per House Document numbered Three Hundred and Thirteen, Fifty-Third Congress, Third Session, January thirtieth, eighteen hundred and ninety-five, to cost not to exceed two hundred and three thousand three hundred and thirty-six, and the unexpended balance of the appropriation heretofore made March third, eighteen hundred and seventy-nine, for the establishment of a harbor of refuge on the Pacific coast is hereby transferred to be expended on this improvement, if in the opinion of the Secretary of War the interests of commerce demand such expenditure."

The same act also provided for a survey of Port Orford harbor, Oregon, with estimate of the improvement and its importance to shipping and commerce. The item in the act of June 3rd, 1896, making appropriation for the improvement of Port Orford harbor by rendering available the unexpended balance of the appropriation of March 3, 1879, for the establishment of a harbor of refuge on the Pacific coast contains the provision "if in the oponion of the Secretary of War the interests of commerce demand such expenditure." As the Secretary of War has not decided that the interests of commerce of the locality demand such expenditure, no work of improvement has been done. It is to get this work started and the money already appropriated for Port Orford harbor spent here that the citizens are organizing the Port Orford district, and with the organization of the district assured at the coming election, it is the intention to take the matter up immediately with the Department of Engineers and the Oregon delegation in congress as soon as the regular session of Congress assembles in December.

Government soundings in Port Orford bay show the depth of water to be from thirty to seventy-five feet. Within ten feet from shore at Tichenor's Cove, there is fifty feet of water. The present wharf, a very short one near Grave Yard Point, extends into thirty feet of water at low tide. There is also a large lake of fresh water one and one-half miles long and a half mile wide in places, with water ranging from twenty to forty feet in depth, only a half-mile from the bay adjoining the town of Port Orford on the north. This is known as Lake Orford. To dig a canal from the bay to this lake giving also a fresh water harbor here, would be easy construction work, as there would be no rock to go through, and when the canal was completed there would be depth to the fresh water. While the Wooleyport, Cal., proposed fresh water the harbor is 2 miles from the ocean, and the lake only one-third the depth of the Port Orford lake. Those who know Port Orford harbor and old seamen who have spent their life on the Pacific coast have faith that this place will now soon be on the map as one of the leading harbors on the coast.

The Port Orford school board has let the contract for the new $5,000 school building to C. H. Pearse, and he will begin work on it immediately. He has given the order for lumber to the local saw mill.