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OPPORTUNITIES FOR THE PRODUCTION OF CIGAR-LEAF TOBACCO IN EAST TEXAS AND ALABAMA.

A few years ago the attention of the Bureau of Soils was called to a new tobacco industry in east Texas, where it was reported considerable progress had been made in growing a domestic filler leaf from Cuban seed. It was found that quite an extensive acreage was being planted around Willis, Montgomery County, and that several warehouses and cigar factories were in operation there.

An examination of the tobacco, made by the Bureau expert, showed that some of the leaf produced was of excellent quality, surpassing in aroma any domestic leaf examined up to that time, but that the crop as a whole, for reasons not determined, was not such as to warrant the prediction of any phenomenal development of the industry along the lines then being followed.

The matter was again given some study in 1899, when the Bureau was engaged in making a collection of domestic tobaccos for exhibition at the Paris Exposition. Included in this exhibit were a number of samples of the Texas tobaccos, and the marked superiority of some of the leaf was noticed, although, owing to the manner in which the collection had been made, it was impracticable to determine whether this quality was the result of the particular soil upon which the leaf had been grown, of the kind of seed used, of any special system of fertilization, or of care and skill in handling and curing.

In 1901 the Bureau made a survey of the soils around Willis, at the same time investigating the condition of the tobacco industry, and especially the relations of the quality of the leaf to the soil producing it. The tobacco interests were then found in a languishing condition. From a maximum acreage of 1,000 acres planted in 1898, the plantings had declined to 506 acres in 1899, and thence to less than 100 acres in 1901; and the growers, although needing some crop, like tobacco, in which to specialize, had become very much discouraged. In the following year the investigation was carried further by a tobacco expert, who began experiments in growing tobacco which were not conclusive. The causes assigned by the Bureau's agent for the decline in the production of this crop were mainly two—the lack of knowledge among the growers as to the methods of handling the crop, and the peculiar market conditions always to be met with in a trade so highly specialized

as the tobacco trade. However, an important result of the soil survey and experiments around Willis was the discovery that the type of soil had a marked influence on the quality of leaf produced, and that the leaf grown on the type given the name Orangeburg sandy loam (a reddish or grayish sandy loam with a red clay subsoil) possessed a much finer aroma than the leaf grown on any other soil in the area.

Other surveys made during 1902, 1903, and 1904 have established the fact that the Orangeburg sandy loam is a soil of wide distribution in east Texas, as well as in the other Gulf and South Atlantic States. It is associated with other Orangeburg soils, of which the Orangeburg clay is also believed to be a good tobacco soil. In Anderson County alone 102,800 acres of the Orangeburg sandy loam and 35,904 acres of the Orangeburg clay were mapped. In Nacogdoches County, in an area of 100 square miles mapped around the town of Nacogdoches, 16,320 acres consisted of the Orangeburg sandy loam, and 16,704 acres of the Orangeburg clay. In Houston County large bodies of this sandy loam are found. In Alabama the Perry County survey showed 82,000 acres of Orangeburg sandy loam, while surveys in South Carolina, Georgia, Florida, Mississippi, and Louisiana have included areas of this type.

There is thus an ample area of soil suitable for the growing of cigar-leaf tobacco in Texas and other Southern States, and in Texas particularly, and the thought occurred that whatever deficiencies in the leaf formerly produced were due to an indiscriminating use of soils might at once be eliminated in the light of knowledge of soil adaptation gained during the Willis and subsequent surveys. Following out this idea, the Bureau in 1903 conducted a series of tobacco experiments on the Orangeburg soils around Nacogdoches, Lufkin, and Woodville, Tex. Three acres of tobacco were grown near the first-mentioned town, 3 acres at Lufkin, and $3\frac{1}{2}$ acres at Woodville; the entire crop, after fermentation and packing, amounting to 3,868 pounds. During 1904 further experiments were conducted at Nacogdoches, Crockett, and Giddings, in all about 10 acres of tobacco being grown. Owing to unfavorable conditions at some of the stations the tobacco on only $8\frac{3}{4}$ acres was harvested, from which 5,461 pounds, or 624 pounds per acre, were secured.

The 1903 crop is now being sold and distributed among the principal cigar manufacturers of the country, who express satisfaction with the leaf. It is the general feeling of the trade that this tobacco will fill an important place in the market, if produced in sufficient quantities and at reasonable prices. The tobacco being an entirely new product, and having at the present time no fixed status in the market, it is to be expected that its introduction will be more or less slow and tedious, and the growers of this Texas leaf must not at first look for the highest prices. On the other hand, judging from the character of the leaf grown and cured under the supervision of the Bureau, the prices should increase

considerably as the trade becomes acquainted with the tobacco, and channels for its distribution become established.

The value of this tobacco, as far as the Bureau has informed itself to the present time, varies considerably, the prices for the finished product ranging from 25 to 40 cents a pound, according to the grade and quality of the leaf, but the grower can not expect to obtain at the outset more than 15 or 20 cents for the unfermented leaf. From computations based on the past work of the Bureau, it is estimated that the cost of growing the tobacco, under normal conditions, should not exceed 10 cents a pound. The average yield is estimated to be 600 pounds or more per acre.

During the past two years the Bureau has also conducted experiments in Perry County, Ala., and in Darlington and Orangeburg counties, S. C., upon the same types of soil as in Texas.

The tobacco grown in Alabama, while not considered quite so good as the Texas product, meets with much approval from the trade, but the leaf so far produced in South Carolina is pronounced less satisfactory, and while the Bureau will continue its experiments in that State on a small scale, in the hope that methods for the improvement of the leaf produced there may be discovered, it does not for the present recommend that the farmers enter into its production.

In Texas and Alabama, on the other hand, the indications are so favorable that the Department of Agriculture, through the Bureau of Soils, will encourage the farmers to undertake the growing of the crop to a limited extent. As a preliminary step an effort is to be made to have a limited number of farmers undertake the production of a relatively small area of tobacco, with the advice and supervision of the Bureau experts. It is not thought advisable to grow more than 150 acres in Texas, to be distributed on the Orangeburg soils in Nacogdoches, Anderson, and Houston counties; nor more than 50 acres in Alabama, to be limited to the same soils in Perry County, Ala.; and the area planted by one person should not exceed 10 acres or be less than 2 acres.

As indicated above, it is the plan of the Bureau to give, during the present season, expert advice and general supervision to those growers in Nacogdoches, Anderson, and Houston counties, Tex., and in Perry County, Ala., who apply for such advice and supervision. Those who desire to cooperate with the Bureau must be men of means adequate to take care of a crop of filler tobacco, for the Bureau will assume no financial responsibility and will render no financial assistance. They must have soils of the Orangeburg types within their farms and barns suitable for curing the tobacco. In the event that such barn facilities are wanting, they should erect buildings for the purpose. A barn at least 60 feet long and 30 feet wide would be required to accommodate the tobacco from a 5-acre field. Such a building would cost about \$400.

For a crop from 10 acres, a building 100 feet long by 40 feet wide, with a distance of 20 feet between sill and plate, would suffice, and in the localities referred to such a structure should not cost over \$600.

Copies of the soil survey reports showing the location of the Orangeburg sandy loam and Orangeburg clay—which the Department believes to be the best soils for this southern tobacco—so far as these surveys have been extended around Nacogdoches and Palestine, Tex., and in Perry County, Ala., can be obtained upon application to the Bureau. The report on the survey of Anderson County, Tex., has not yet been published, and the survey of Houston County is still in progress.

Inquiries regarding the cooperation of the Department in the growing of tobacco in any of these areas, including the two areas for which the reports are yet unpublished, may be made of the Chief of the Bureau of Soils, or of Mr. G. T. McNess, the chief tobacco expert of the Department in Washington, or Mr. W. M. Hinson, expert in charge of the work in Texas, whose present headquarters are at Nacogdoches, Tex.

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Approved:

JAMES WILSON,
Secretary of Agriculture.

WASHINGTON, D. C., *December 29, 1904.*

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