

PENNSYLVANIA SUGAR LAND CO.

Third Floor Caplan Building  
HARRISBURG, Pa.

PREPARATION OFFICE  
LEAMINGTON HOTEL  
MIAMI, FLORIDA

October 19th, 1923.

Captain J. F. Jaudon,  
Miami,  
Florida.

Dear Sir:

I am enclosing herewith copy of communication received from D. E. W. Brandes, Pathologist, United States Department of Agriculture, Bureau of Plant Industry, Washington, D. C., which I am very happy to send to you at once.

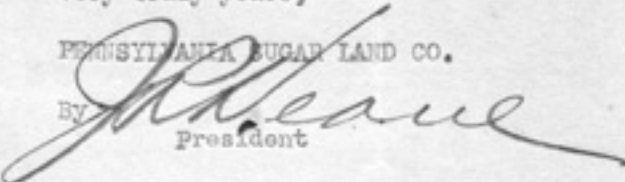
Will you kindly give me such information as you have been able to acquire in your agricultural work in the Everglades, which will enlighten my company and the Department of Agriculture, if they seem not to be informed on the Cape Sable district?

I have referred this same letter to Mr. A. R. Livingston, making a similar request and would appreciate very much if you would touch particularly upon the engineering statements and interrogations contained therein.

An early reply would be appreciated.

Very truly yours,

PENNSYLVANIA SUGAR LAND CO.

By   
President

JRD/G

C O P Y 10/19/23

PENNSYLVANIA SUGAR LAND CO.

Third Floor Caplan Building

HARRISBURG, Pa.

October 13th, 1923.

PREPARATION OFFICE  
LEAMINGTON HOTEL  
MIAMI, FLORIDA

United States Department of Agriculture  
Bureau of Plant Industry  
Washington

Sugar-Plant Investigations

Mr. J. R. Deane,  
Hotel Leamington,  
Miami, Florida.

Dear Mr. Deane:

In accordance with your request during our conversation on October 10th, and also contained in your letter of the same date, I will undertake to point out some of the features of the Everglades which might be unsuited for successful cultivation of truck crops and sugar cane.

In the first place, it cannot be assumed that all of the soil in the Everglades is capable of producing satisfactory yields of vegetables and sugar cane. The Everglades soil differs considerably in its physical and chemical properties. In the so-called "Custard Apple" land, near Lake Okeechobee, the amount of minerals essential for plant growth is large, and there the production of winter vegetables and sugar cane is high when the land is well drained and weather conditions are favorable.

Since I have not been in the Cape Sable district, I am not prepared to state whether the soil is of this type, but I should be inclined to believe that it is not. It is more likely to be of the so-called "Saw Grass" type, which is not as suitable for agricultural purposes as the "Custard Apple" type. "Saw Grass" land might possibly be made productive by special preparation and treatment, but this has not been satisfactorily proved, and with present methods, "Saw Grass" land has not been demonstrated to be very promising.

At the outskirts of the Everglades, the muck or peat soil is apt to be present in a comparatively thin layer. This also is a disadvantage compared with the soil near the center of the Everglades for several reasons. In the first place, with cultivation, the muck or peat soil becomes compacted and shrinks very noticeably during the first few years. This means, of course, that in the thin spots there would eventually be practically no top soil left. Furthermore, on account of the ever present fire hazard on such inflammable soil, the destruction of the soil would be more complete here than where the stratum of top soil is thicker. Where the soil is thin, there is the danger of turning up the underlying marl by plowing, and it has been my observation that where this occurs there is practically no growth of cultivated plants.

For these reasons, you should carefully cruise the prospective area and have maps made showing the thickness of the layer of top soil. At the same time, it would be of the utmost importance, in connection with the drainage possibilities of the area, to determine the surface features of the layer of rock underlying the tract.

Previous experiences in drainage projects in the Everglades have demonstrated that the judgment of engineers is not unerring. For example, there has been a firm conviction of drainage engineers that the regions of high elevation surrounding Lake Okeechobee would not become inundated after the construction of canals leading from the lake to the sea. Upon this prediction by engineers, the forecast was made by other people that this land would be available at all times for the production of winter vegetables and other crops, and land values were adjusted in accordance with this definite assurance. Last winter and this, however, the farmers on these lands have been unable to get their crops in sufficient early to benefit by favorable market prices. At the present time, all of this land is under six to twenty-four inches of water.

Directly connected with the features of the soil and subsoil is the problem of road materials. The possibility of obtaining suitable material for road building should be investigated at the same time. As you are probably aware, muck roads are of absolutely no value for heavy traffic, and it is therefore necessary that suitable rock be available wherever roads are projected. While it is undoubtedly safe to assume that some kind of rock underlies the muck, it is not of uniform hardness and its value for road building varies considerably.

In connection with your projected dyke across the north end of the tract, it would be well to investigate the question of seepage, which is probably traceable to cracks and fissures in the muck below the surface. I would advise an experiment such as the replacing of the earth in the ditch and digging of a second parallel ditch so that all of the earth for some distance below the surface of the ground to the top of the dyke would have been recently worked and compacted.

After these points have been satisfactorily determined, it remains to prove whether the soil and climate are suitable for the production of winter vegetables and other crops, and the only safe way that I know of is to ask the plant; in other words, to experiment with the plants and find out whether the essential nutrients are present, and if not, how best to supply them. This same method should be used in determining the best and safest time of planting of the annual crops and the proper time for planting and harvesting of the perennial crops. The fact that, as stated in your prospectus, sugar cane has been known to ratoon for twenty years in the Cape Sable district, is actually no assurance that sugar cane grown there would be practicable on a plantation scale for sugar production when the crop is cut and removed from the land at regular intervals.

There is no space in this letter to take up all of the innumerable details which should receive consideration in connection with a sugar cane industry in the Cape Sable district. I should say that Mr. McLean and Mr. Gouaux will be able to apprise you of some of the difficulties which might be encountered in growing a crop with such special requirements in a new region. Contrary to a statement which appears in your prospectus, my belief is that sugar cane culture on this land on a big scale is strictly experimental.

Trusting that this information will be of some service to you in determining whether or not your tract of land will be suitable, but with the realization that it is far from complete, I am

Very truly yours,  
(Signed) E.W.Brandes  
Pathologist.

EWB/MLA  
(G)