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EVERGLADES,

HOME OF THE SUGAR CANE.

INTERESTING SHORT HISTORY OF FLORIDA'S
FAMOUS DOMAIN NOW BEING RECLAIMED
BY TRUSTEES INTERNAL IMPROVE-
MENT FUND.

To supply the demand for sugar in the United States it requires two million eight hundred thousand tons per annum. The total amount produced in the United States is four hundred thousand tons. There is imported into the United States, upon which we pay duty, two million four hundred thousand tons, valued at one hundred and twenty-two million dollars, at 2 1-2 cents per pound. We have sugar lands enough in the Everglades to produce this quantity twice over.

A brief sketch of this remarkable country is now of great importance and interest, as the Trustees of the Internal Improvement Fund of the State of Florida are proceeding to drain them. In this sketch, you will find excerpts from reports made by Generals W. S. Harney and T. S. Jessup to Florida Senators in the U. S. Senate; also a resolution adopted by the Legislature of the State of Florida, which was forwarded to our members in Congress, and to the President of the United States, James K. Polk; also furnishing you a copy of the letter of transmittal. In addition, you will find reports of the United States Topographical Engineers, as to the topography of the country; also report of several United States engineers, as well as the names of several well known civil engineers, as to the elevation of the Everglades above sea level, all fixing the elevation of the Everglades and Lake Okeechobee at about 21 feet above mean low water level of the sea. The engineers are William M. Black, U. S. Corps of Engineers, Gen. Q. A. Gilmore, Col. W. H. Caldwell, U. S. Engineers, Col. J. W. Sackett, U. S. Engineers, Col. Chas. Hopkins, Major Wirts, Mr. V. P. Kellar, Mr. J. W. Newman, Mr. J. O. Fries and others. There are, also, herein printed, comments as to the richness of the soil by the following known chemists of the

world: Prof. W. H. Wiley, U. S. Department Chemist; August Volecker & Sons, Agricultural Chemists of London, England; Prof. D. Tacke, Director of the Peet Experiment Station, Bremen, Germany, and Mr. Claus Spreckles, authority on sugar and where it can be produced.

As to the healthfulness of the climate, and the yield per acre of cane on some of the reclaimed lands in the Kissimmee Valley, which are like those in the Everglades, are also printed, herewith, in addition to the above. Mr. Van Duzor's paper, herein printed, gives full information on this subject.

OF SPECIAL VALUE ARE THE LETTERS, HEREIN PRINTED, FROM CAPTAIN D. G. PURSE, OF SAVANNAH, GA., THE WELL-KNOWN CANE AND SUGAR EXPERT, AND DR. H. W. WILEY, CHIEF OF THE BUREAU OF CHEMISTRY OF THE UNITED STATES DEPARTMENT OF AGRICULTURE. SETTING OUT THE HIGH ESTIMATES WHICH THESE RECOGNIZED AUTHORITIES HAVE OF THE COMMERCIAL VALUE OF FLORIDA CANE AND ITS PRODUCTS.

In fact, the importance of the drainage of the Everglades has been recognized by many of the most progressive citizens as far back as 60 years ago, and to emphasize that fact, there is, herewith, printed a letter, published in the Florida Sentinel April 7th, 1857, which makes very interesting reading. There is on exhibition here at the Fair, the original paper containing the letter and the original resolution, as introduced in the Legislature of 1845, by Mr. Haughton. There is also on exhibition at this Fair, a map of Florida, known as the Jeff Davis map, which is referred to in the article on the Everglades, which follows. Mr. Davis was at the time Secretary of War of the United States. There is also herein printed a copy of the joint resolution, passed by the last Legislature, which will be voted on at the next general election, to be held in 1906. If it receives a majority of the votes cast on the subject, it will then become a part of the Constitution of the State of Florida, and its adoption is very necessary to the success of the project for the draining of the Everglades and to make the execution of that project sure and expeditious. The work can be quickly done, if the constitutional amendment mentioned is adopted.

There is also on exhibition at this Fair a blue print of the drawing of one of the two dredges, now in course of construction by the Trustees for digging canals for the

drainage of the Everglades. The dredges will bear the names Okeechobee and Everglades.

Some Everglade History.

The first authentic description of the Everglades of Florida, with maps, profiles and levels, was doubtless "Memoir to Accompany a Military Map," compiled by Lieut. J. C. Miles, Topographical Engineer, under the general direction of Capt. A. A. Humphreys, U. S. Topographical Engineer, by order of Hon. Jefferson Davis, Secretary of War, published in 1856, and commonly known as the "Davis Map." The following quotations are taken therefrom:

"The Everglades of Florida cover an area of about 4,000 square miles, embracing more than half of the portion of the State south of Lake Okeechobee. The sub-soil of this vast region is a coralline limestone. * * * Upon this surface lies an immense accumulation of sand, alluvial deposits and decayed vegetable matter, forming a mass of sand and mud from two feet to ten feet or more in depth, that overspreads all but a few points of the first strata.

"Upon the mud rests a sheet of water, the depth varying with the conformation of the bottom, but seldom at dry seasons, greater than three feet. The whole is filled with rank growth of course grass, eight to ten feet high, having a serrated edge like a saw, from which it obtains its name of "Saw Grass." In many portions of the Everglades the saw grass is so thick as to be impenetrable, but it is intersected by numerous and tortuous channels that form a kind of labyrinth, where outlets present themselves in every direction, however terminating at long or short distances in impenetrable barriers of grass. The surface of water is quickly effected by rain, the alternate rising and falling during the wet seasons being rapid. The difference of level between highest and lowest stages of water is from two to three feet. The general surface of the Everglades is thus subject to great changes. Small keys are here and there met with which are dry at all seasons; upon them the soil is very rich. There are many such. Undoubtedly they are often made the site of Indian gardens."

While doubtless the Everglade basin has been to a large extent filled up by the enormous vegetable growth, the drainage by the various streams, whose heads or

rapids are gradually working farther into the body of the glades, has had much to do with this apparent filling up. The evidence is that the drainage has had more effect on the apparent altitude of the surface than has the filling up.

Large areas covering many square miles which but a few years ago were marshes covered with saw grass and rushes, are now open meadows, dry all seasons, excepting the rainy months, affording pasture for many thousand heads of cattle. The fall or rapids at the heads of all streams running from the glades have evidently receded towards the center of the glades and Lake Okchobee several miles since the report quoted was made.

Excepting a few reports by surveyors and explorers little new information as to the Everglades was procured until 1881, when the State of Florida contracted with the late Hamilton Disston to drain a large area of lands bordering Lake Okechoobee, and including part of the glades. This company, known generally as "The Okechobee Drainage Company," or the "Disston Drainage Company," had numerous surveys and levels made by its engineers. In 1880-2 a line of levels was made by Gen. Gilmore, under direction of the United States Senate, to discover a practical route for a ship canal across the Peninsula of Florida. These and other surveys by Col. Chas. Hopkins, Major Wirts, V. P. Keller, J. W. Newman and others, established the altitude of Lake Okechobee, "the head of the glades," at 21 to 23 feet above tide level, the difference in levels being accounted for by the different seasons at which the surveys were made. A reconnoissance under Col. Hopkins was made during 1883, from Lake Okechobee to Shark River; another expedition under Jas. E. Ingraham across the glades in 1892, occupying 22 days in crossing. The reports of these and others confirm the early reports by the officers of the United States Army and Navy, quoted as to character of soil, depth of water, and extreme fertility of the region, the report of Col. Jas. M. Kreamer, chief engineer of the Okechobee Drainage Company, made in 1886, accompanied by detailed maps and profiles, states: "As before noted, the surface of this soil is at times exposed, and it is only during or subsequent to a heavy rainy season that it is possible to penetrate with a light skiff, and then advantage must be taken of the natural drains of this vast area. If there was an absence of the dense saw grass,

no difficulty would be experienced in traversing this country in any direction. A four-foot reduction of the surface of the waters of this region would be sufficient for the purpose of cultivation, etc.

"Levels and measurements taken at Lake Worth establish the surface of the fresh water of the Everglades to be $10\frac{1}{2}$ feet above the tide waters of the Atlantic, and that a canal 1,100 feet long would afford relief for a vast area westward. Examinations at Miami and other points disclose the presence of this rocky ridge, whose crest was elevated above the normal level of the waters of the interior. It would be perfectly feasible to cut this rim at frequent intervals and permit the impounded water to flow into the Gulf or Atlantic. This would result in exposing great tracts of soil, now practically valueless. From these points drainage canals could be projected into the interior."

The annexed extracts from a letter written by Gen. Thos. S. Jessup, to the Hon. J. D. Westcott, U. S. Senator, dated February 12, 1848, shows that intelligent observation had been made by the United States soldiers engaged in the Seminole war. He says:

"From my own observation, when commanding the army operating in that country ten years ago, as well as from reports made by and information derived from intelligent officers, who operated near and explored the Everglades and the large lake, Okechobee, north of them, I have no doubt the glades are about 30 feet above the level of the sea. * * * The practicability of draining both, I take for granted. * * * The effect of the measure would be to reclaim many hundreds of thousands of acres without including the bed of the Everglades, now subject to inundation for several months every year. * * * Were the surface of the lake and the glades lowered, these fine lands would be reclaimed, and would soon be converted into valuable sugar plantations, as rich as any in the world. The hammocks of this country are exceedingly rich. These reclaimed lands would be converted into olive, lime and orange plantations, and would be cultivated by a numerous white population." * * *

Buckingham Smith, in a report to the U. S. Senate, dated June 1, 1848, on the feasibility of draining the Everglades, made use of the valuable information conveyed in a letter written by Gen. Wm. S. Harney of the U. S. Navy, dated Jan. 23, 1848. Note the following extracts:

"During the late Seminole War I was repeatedly in the Everglades and on the rim margin at different points, and crossed it from Miami to Shark river. * * * Of the practicability of draining them I have no question. That such work would reclaim millions of acres of highly valuable lands, I have no doubts. My plan for doing the work would be to dig a large and deep canal from Lake Okechobee into the Caloosahatchee river, on the west side, and a light canal from the lake to the Locahatchie, on the east side, and smaller canals from the glades into the head of the Ratonas, Little River Arch Creek, Miami, Shark River, and other outlets on both sides of the peninsula. I am satisfied that these canals and drains once opened, the glades would become dry. No person could say with positive certainty what the soil of the Everglades, when drained, would or would not produce. But it is my opinion it would be the best sugar land in the South, and also excellent for rice and corn. It could, in that latitude, be made valuable for raising tropical fruits, and it is the only region of the present United States in which they can be raised. * * * I do not know of a project that I regard as more calculated to benefit the country than this. * * * It affords the Union the best kind of cultivated land that is wanted to render us, to a great extent, independent of the West Indies." * * *

Prof. H. W. Wiley, chief chemist of the U. S. Agricultural Department, in his report, on these lands, published in the report of the Secretary of Agriculture for 1891, says:

"The origin of the muck soil is of course vegetable matter. There are no data for estimating the length of time required for the formation of these muck deposits. It is known that it must have been of great duration.

"In regard to the depths of the soil, it varies from the merest covering at the edges of the sand to from 15 to 16 feet in its deepest portions. The greater part of the muck lands, as before indicated, will vary from 3 to 6 feet deep, while along the Okechobee the average is much greater, the soil varies in color from almost jet black to black brown. * * * The Okechobee muck, however, is underlaid with a thick stratum of shell marl, containing pebbles very rich in phosphorus, and this rests upon a coralene or limestone formation."

Healthfulness of the Everglades.

By Prof. W. L. Van Duzor of Kissimmee.

The healthfulness of a region is of the utmost importance to any enterprise, and especially is this true when the operatives must become permanent residents. It can be positively stated that the reclaimed lands of the Kissimmee Valley are free from malaria. The employees of the Drainage Company were white men exclusively. These men were recruited from all parts of the country. Many of them entered into the service of the company before they became acclimated. During a period of over eleven years the company never employed a physician or lost an employee from death, never did any of the men leave the service of the company from the fact they could not stand the climate. Malaria and chills are absolutely unknown.

ANALYSIS.

The following analysis of muck will be found interesting to those familiar with the subject of sugar culture:

Moisture	16.84
Organic matter and combined water.....	75.65
Silica and insoluble silicates.....	0.91
Oxide of iron.....	1.47
Lime.....	3.17
Magnesia.....	0.18
Potash.....	0.13
Soda.....	0.38
Phosphoric acid.....	0.18
Sulphuric acid.....	0.51
Chlorine.....	0.43
Nitrogen (in organic matter).....	2.17

The chemical analysis has been substantiated by practical experience. Muck lands have been found to be suitable to a great variety of crops, especially sugar cane.

YIELD TESTED.

In March, 1902, I personally tested the yield of cane on this farm, by measuring the land, cutting and topping the cane as it would go to the mill and by actually weighing it found the yield to be over sixty-three tons to the acre. The samples of cane taken at the same time and tested by the Agricultural Department at Washington showed 12 to 13 per cent sucrose, which Professor H. W. Wiley stated would yield two hundred pounds of sugar to the ton of cane, or twelve thousand six hundred

pounds to the acre. This marvelous yield, after a continuous cropping for twenty years without one pound of fertilizer of any description. This farm is also growing fifty bushels of choice corn to the acre and one of the thriftiest young orange groves in the State is growing on a portion of this farm, bearing heavy crops of choice fruit.

OPINION OF CHEMISTS.

Prof. H. W. Wiley, chief chemist of the United States Department of Agriculture, states that "these lands are new to agriculture, and superior to any other soil in their capabilities for heavy crops."

Messrs. Aug. Voelcker & Sons, agricultural chemists of London, refer to the high percentage of vegetable and nitrogenous matter and character of the new lands.

Prof. D. Tackle, director of the Peat Experiment Station, Bremen, submits a careful analysis of the soil. Dr. Tackle says: "In respect to contents of potash, phosphoric acid and lime, the samples of soil from Florida are quite similar to those from Northwestern Germany, overgrown with heather. It is distinguished, however, with a much higher content of nitrogen and by a much more perfect decomposition. Very likely the nitrogen is contained in a form more available to plant growth than in Northwestern Germany peat lands. Undoubtedly the soil as represented by the samples will become very productive."

Mr. Claus Spreckles, probably the greatest authority on sugar production in the world, pays a high compliment to the richness and value of muck lands for the production of sugar:

"Philadelphia, Pa., March 22, 1890.—To Mr. Hamilton Disston: Dear Sir—In answer to yours of the 20th instant, in which you ask my opinion regarding Florida as a sugar-producing State, I take pleasure in saying that, during my recent trip to inspect your sugar operations, my surprise was great at finding such a country for the growth of sugar cane. The soil is as rich as any that I have ever seen, and, with proper cultivation, the yield should be equal to that of any other country on the face of the globe.

"I congratulate you upon the bright prospect for the future of the sugar business in the State of Florida.

"Yours truly,

"CLAUS SPRECKLES."

Florida Legislature's Resolution Submitted to President Polk Sixty Years Ago.

(Copy.)

Executive Office,
Capitol, Tallahassee, Dec. 11, 1845.

Sir—Agreeably to a resolution adopted by the General Assembly of this State, at its present session, I have the honor herewith to transmit to you a certified copy of a preamble and resolutions relative to the Everglades of Florida, to which your attention is earnestly solicited.

I have the honor to be, etc.,

W. D. MOSELEY, Gov. of Fla.

His Excellency,

James K. Polk, President U. States.

James D. Westcott, Senator U. States.

David Levy, " " "

Member in Congress and

James Shields, Com'r. Gen. Land. Office.

Whereas, There is a vast and extensive region, commonly termed the Everglades, in the Southern section of this State, embracing no inconsiderable portion of its entire peninsula, which has been hitherto regarded as wholly valueless in consequence of being covered by water at stated periods of the year, and the supposed impracticability of draining it: And whereas, recent information, derived from the most respectable sources, has induced the belief, which is daily strengthening, that these opinions are without foundation, and, on the contrary, that at a comparatively small expense, the aforesaid region can be entirely reclaimed, thus opening to the habitation of man an immense and hitherto unexplored domain, perhaps not surpassed in fertility and every natural advantage by any other on the globe: And whereas, it is no less the interest of the General Government than of Florida, with its vast donation of unlocated land, to adopt some early and efficient measures to test the accuracy of these representations.

Be it therefore resolved by the Senate and House of Representatives of the State of Florida in General Assembly convened, That our Senators in Congress be instructed, and our Representatives requested, to bring this important subject to the attention of Congress at the earliest day, and earnestly press upon its consideration the propriety and policy of forthwith appointing competent Engineers to examine and survey the aforesaid region.

Resolved, That, immediately upon their passage and approval, his Excellency the Governor be requested to transmit to the persons above named, to the Commissioner of the General Land Office, and to the President of the United States, certified copies of the foregoing preamble and resolution, and to communicate with the latter officer, and furnish him with all the information in his possession in reference to a subject of deep interest to the General Government as well as to our own.

(Adopted by Senate, December 2, 1845. Adopted by House of Representatives, December 4, 1845. Approved by the Governor, December 10, 1845.)

What Was Thought of the Everglades Fifty Years Ago.

From THE FLORIDA SENTINEL, published at Tallahassee, of APRIL 7, 1857, reproduced from The National Intelligencer, of Washington, D. C.:

Facts that I will presently relate indicate that a new and extensive vent has been formed for the waters of the Everglades at some period since the 15th of last November. These facts point to some place between Cape Sable and Cape Romano, near the southwestern extremity of the peninsula of Florida, as the location of this new vent, and from them it seems probable that the new outlet or outlets is or are connected with some deep hole in the interior of the "glades," by a cavernous channel through the rotten tertiary lime rock which underlays the whole peninsula and shallow shores; and I think the water will be found bubbling up somewhere in Gallivan's bay, outside of the cluster of Mangrove islands, sometimes called the Labyrinth.

As many of your readers may not be acquainted with the situation of the Everglades, permit me to say that at their southern extremity, when the water in them is high, it has elevation above mean tide of near ten feet. The northern extremity is probably a number of feet higher. Their whole extent, when full of water, is near one hundred and fifty miles long, by an average breadth of ninety miles. This includes Lake Okachobee, which, with the Kissimmee river, is in the same basin of drainage. The Indian name of "water-grass," indicates the character of the glades, and in their stage their average depth of water is less than three feet, of which more than two feet

were subject to being evaporated and drained off by her old outlets. A tolerably well-defined rim of limestone encloses the water in the basin of the glades, and short rapids usually attend the outlets that have been formed through this "rim;" but small cavernous outlets are known to exist by fresh water bubbling up in many places in the sea near the shore. The water in the Everglades is generally the highest at the beginning of winter, after the summer and autumn rains, and lowest at the commencement of summer; but they frequently remain quite full for one or two years together, when there is rain in excess. Such was the case in 1855 and 1856; and on the 15th of last November, perhaps later, they were unusually full, and had been so for more than two years.

The facts that indicate new vent to the waters of the glades are as follows: On the last days of December we had rumors that large bodies of fresh water had been encountered in the bay to the north of Key West, and it soon became evident that there was some truth in them from the number of fish and reptiles which alone inhabit shallow salt water, coming on shore dead and dying. On the 5th of January this fresh water was driven into Key West harbor by a strong northwest wind, where the writer of this tried it with suitable instruments, and otherwise set about an inquiry as to the cause. I found the water, then in the harbor, $2\frac{1}{2}$ degrees, Beame hydrometer, sea water generally indicating by it $4\frac{1}{2}$ to 5 degrees. From the 5th to the 19th of January, this fresh water was driven into the harbor at three several times, when the water indicated from $2\frac{1}{2}$ degrees to 3 degrees; at the intervals between its visits the water in the harbor was at $4\frac{1}{2}$ degrees to 5 degrees. On the 28th of February it was again driven into the harbor by a northwest wind; but in the mean time I had gathered other facts that connected this phenomenon with the Everglades. I learned on the first of January the water of the glades at the Miami river, near Cape Florida, was much lower than it usually is after a dry winter and spring; and, although water then had nearly ceased running out of the known outlets, yet in the next twenty days the water fell eight inches at that place. About the middle of February a small division of our army in pursuit of the remnant of Seminoles, passed over a part of the glades, near Cape Sable, without being aware of

it, so dry had that part become; and it is related that about the same time and place detachments of the army were compelled, in search of fresh water, to go three and four miles on to them before finding it; yet it is known that there was at the same period much water on them at their northeastern extremity. This shows that the new outlet must be at their southwestern side. The further proof of this is that about the first of February a vessel from hence to Cedar Keys crossed a streak of discolored water four miles wide, some fifteen miles to the north of the Northwest Pass to this harbor. It was as well defined as the water at the mouth of the Mississippi, and had a direction from southwest to northeast, in which directions this "streak" extended as far as the eye could reach. On her return, two weeks later, the same vessel crossed the same streak some fifteen miles to the eastward of where it did before, finding it of the same width, with the same direction, and in the same general line. Many other vessels have found much discolored brackish water in the bay between Cape Sable and Romano since the first of last January, and altogether it would seem that this new outlet for a month or two must have discharged as much water as is ordinarily discharged by the Mississippi, to have produced the effect that it has in the bay, and in draining the extended surface of the glades in so short a time.

It is useless to speculate on the ultimate effects to be produced by this new outlet, but it is not improbable that it may reclaim large bodies of the most fertile land, which, under a late act of Congress, must inure to the benefit of the State of Florida. That there is a new outlet is I think made certain by the facts I have stated; but of course I may be mistaken as to its exact location and as to its being cavernous. I could, however, were it useful, state many more facts and reasons to fortify my position as to the place of the outlet and its kind; but Mr. Dorr, of the Coast Survey, is now in search of it by permission of Professor Bache, who, on being informed of the phenomenon, gave direction for a limited search. fresh water within the week to which his search is limited, and this will supersede all necessity of speculation as to the place and form of it.

W. C. D.

Key West, (Fla.) March 15, 1857.

Captain Purse on Florida Sugar

Captain D. G. Purse, of Savannah, Ga., who has earned a national reputation as one of the most successful, in-

telligent and energetic developers of the material resources of the South, and who is an acknowledged authority upon the subjects of cane cultivation and sugar and syrup making, has very recently written to Governor Broward the following convincing letter relative to the cane industry in Florida, his letter having special reference to the cane grown in the regions in and contiguous to the Everglades:

Atlanta, Nov. 25, 1905.

GOV. N. B. BROWARD,

Tallahassee, Florida.

Dear Sir—I write you at the instance of our mutual friend, President W. R. Fuller, of the Tampa Board of Trade, and in a day or two will forward you a package of literature bearing upon cane cultivation and syrup making in the South Atlantic and Gulf States. The best that I can say in regard to the production of commercial sugar from cane in Florida is to be found in the copy of the analysis of that produced in Manatee County by Dr. H. W. Wiley, Chief Bureau of Chemistry, United States Department of Agriculture, WHICH SHOWS THE CANE IN QUESTION TO BE THE RICHEST IN THE WORLD IN SUGAR CONTENTS, AFFORDING A BASIS FOR EXPLOITATION EXCEEDING AND SURPASSING ANYTHING IN THE UNITED STATES, CUBA OR THE HAWAIIAN ISLANDS. So important and valuable do I consider a thorough study of the cane industry for Florida, and so valuable do I consider the influence of its development there upon the areas best adapted to it in Georgia et al, that it would afford me pleasure at any time to meet you at Tallahassee, or Jacksonville, or at Tampa, and discuss this matter more at length, that you may take it up in your next annual message to the Legislature of Florida and place its exploitation upon the strongest basis that favorable legislation can put it.

Awaiting your further pleasure, Governor,

Yours very truly,

D. G. PURSE, Savannah, Ga.

Dr. Wiley's High Estimate of Florida Sugar.

Dr. H. W. Wiley, the distinguished Chief of the Bureau of Chemistry of the United States Department of Agriculture, has had exhaustive analyses made of samples of cane grown in Southern Florida, and has set out the re-

sults of the analyses, as well as the high estimate which he places upon the commercial value of this cane, in the following letter to Messrs. W. H. Abel & Sons, of Terra Ceia, Fla.:

United States Department of Agriculture,
Bureau of Chemistry,
Washington, D. C., May 26, 1903.

Messrs. W. H. Abel & Sons,
Terra Ceia, Florida.

Gentlemen—I have received the four samples of cane which you sent by mail, probably representing the same lot of cane, but in four packages.

The samples have been analyzed and the juice was found to have the following composition:

	Density.	Sucrose.	Purity.	Glucose.
2245	21.0	19.0 p. c.	90.5 p. c.	_____
2246	20.8	18.7 p. c.	90.8 p. c.	_____
2247	20.4	18.0 p. c.	88.2 p. c.	_____
2248	21.7	19.8 p. c.	91.2 p. c.	_____

THESE ARE THE MOST REMARKABLE SAMPLES THAT WE HAVE EVER EXAMINED. THEY CONTAIN NO GLUCOSE OR REDUCING SUGAR WHATSOEVER WHEN TESTED BY THE ORDINARY METHOD. After prolonging boiling in the glucose test a very faint red can be seen by transmitted light, but not enough coloration to enter even as a trace. These samples are so peculiar in this respect that I shall be glad to have a detailed history of how they were grown, how long they were growing, the character of the soil, and everything connected with them, giving the date of harvest and all other agricultural data at hand. For the above reasons THESE SAMPLES MERIT A PARTICULAR STUDY AND DESCRIPTION.

Respectfully,

(Signed)

H. W. WILEY, Chief.

Constitutional Amendment Passed by Legislature of 1905.

(No. 4.)

JOINT RESOLUTION Proposing an Amendment to Article XVI of the Constitution of the State of Florida, Relating to the Drainage, Reclamation and Improvement of the Swamp and Overflowed Lands, the Creation of a Board of Drainage Commissioners, Prescribing Its Powers and Duties, Authorizing the Establishment of

Drainage Districts, a Drainage System, the Building of Canals, Levees, Dikes and Reservoirs for Purposes of Drainage, Irrigation and Commerce, the Assessment of Lands to be Drained, Reclaimed, Improved and Benefitted by Means Thereof, the Collection of Necessary Funds by Assessment of Benefits and Taxation and Providing for the Management and Maintenance Thereof, and for the Exercise of the Right of Eminent Domain, and for the Sale and Uses of Said Lands for the Purposes of Drainage, Reclamation and Improvement of Said Swamp and Overflowed Lands Within the State of Florida.

Be it Resolved by the Legislature of the State of Florida:

That the following amendment to Article XVI of the Constitution of the State of Florida be and it is hereby agreed to and shall be submitted to the electors of the State at the general election, to be held on the first Tuesday after the first Monday in November A. D. 1906, for ratification or rejection.

Section 32. The Governor, the Comptroller, the State Treasurer, the Attorney General and the Commissioner of Agriculture of the State of Florida, and their successors in office, are hereby constituted and designated as a board of drainage commissioners, and are hereby authorized and empowered to establish a system of canals, drains, levees, dikes and reservoirs of such dimension and depths, as in the judgment of said board of drainage commissioners is deemed advisable, to drain and reclaim the swamp and overflowed lands within the State of Florida, or such parts or portions thereof as is deemed best by said board of drainage commissioners from time to time, and to provide for the irrigation of the lands reclaimed, and to maintain such canals, drains, levees, dikes and reservoirs in such manner as will be most advantageous to the territory so drained, the State of Florida, its inhabitants and the commerce thereof.

Section 33. That the board of drainage commissioners are hereby authorized and empowered to establish drainage districts and fix the boundaries thereof in the State of Florida. That the board of drainage commissioners be and it is authorized and empowered to prepare a list or lists of all the alluvial or swamp and overflowed taxable lands within such drainage district or districts, and levy thereon an acreage tax not exceeding ten cents per acre per annum to be fixed annually by said board of

drainage commissioners, and the various tax assessors of the various counties embraced in part or in whole within such drainage district or districts shall receive such list or lists and enter the same upon the tax rolls of the county or counties in which such lands may lie and the amount so levied by the board of drainage commissioners in such manner and form as may be prescribed by the board of drainage commissioners from time to time, which amounts shall be collected by the various tax collectors of the counties wherein such levies have been made as other taxes are collected in accordance with law, and pay over said amounts collected to the board of drainage commissioners. Said commissioners shall have a lien superior to all other liens upon the taxable lands in any such drainage districts, to be enforced by tax levy, for the cost of any work done under the provisions hereof, or done, prior to the adoption of this amendment, under the provisions of an act of the Legislature passed in 1905.

Section 34. That the board of drainage commissioners be and it is authorized to exercise the right of eminent domain in the condemnation of land for the location of its canals, drains, levees, dikes and reservoirs for the purposes aforesaid, and may enter upon, take and use such land as it may, pending condemnation proceedings, deem necessary for such purposes, and in ascertaining the compensation to be paid for such land or right of way, benefits to be derived from such drainage shall be considered by the jury.

Section 35. The Legislature may provide for the assessment of benefits derived by lands by reason of such drainage, and the collection thereof, the proceeds therefrom shall be paid to the board of drainage commissioners to be used by them for such drainage purposes.

Approved May 27, 1905.

The following gentlemen constitute what is known as the Trustees of the Internal Improvement Fund of the State of Florida, and who have charge of the drainage of the Everglades:

HON. N. B. BROWARD, Governor and Chairman.

HON. A. C. CROOM, Comptroller.

HON. W. V. KNOTT, Treasurer.

HON. W. H. ELLIS, Attorney-General.

HON. B. E. McLIN, Commissioner of Agriculture.