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THE
Florida Colonist,
OR,
SETTLER'S GUIDE.

ANSWERS TO THE QUESTION

“WHERE IN FLORIDA SHALL WE LOCATE?”

SECOND EDITION,
ENLARGED AND IMPROVED.

PREPARED BY J. S. ADAMS.

Commissioner of Lands and Immigration.

December, 1871.

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PREPARED BY J. S. ADAMS, COMMISSIONER OF IMMIGRATION.

PREFATORY.

More definite information in regard to the special characteristics and adaptations of different sections of Florida has been much sought by the crowds of strangers who have visited the State within a few years.

Well knowing that information derived directly from the actual residents of each particular county would be most desired, as well as intrinsically the most valuable, earnest efforts have been made to secure careful reports from individual residents in every part of the State. But only partial success has been attained as yet, many counties not having responded at all.

Still, in response to the urgent demand, it has been deemed best to publish at once what is available, in a form convenient for distribution, as soon as possible, with the intention of adding such other and further information as may be received from time to time. Several articles heretofore published in the newspapers by the Commissioner, or under his supervision, are given here as thus published.

This tract must meet with a very wide circulation, and so largely diffuse a particular knowledge of each particular section that is reported. It is, therefore, hoped that all in all parts of the State, who will assist in bringing the merits of their own section to the knowledge of those seeking homes in the State, will forward, for use in the future, careful and complete descriptions of their locality to the Commissioner as soon as may be.

The main points in regard to which information is sought are as follows, of each county :

Location—Surface—Soil—Climate—Health—Natural Fertilizers—Water Supply—Timber—Cost of Clearing—Price of Lands—Wages of Labor and Supply—Staple Crops—Possible Crops—Fruits—Advantages of Church and School—Special adaptation to particular crops or different occupations and kinds of business—Means of access and distance from well-known points on Seaboard and Railroads—The disposition of people towards new-comers.

Information is also desired of all natural curiosities, tending to lend special interest to different localities.

Information received will be added to and stitched up with this pamphlet, and thus, in the end, a very perfect hand-book of Florida will be secured.

Address communications to

J. S. ADAMS,
Commissioner of Immigration, Jacksonville, Fla.

IMMIGRATION.

BY J. S. ADAMS, COMMISSIONER OF IMMIGRATION.

PRELIMINARY ARTICLE.

Editor Union :—Whatever may be the valuable inducements which Florida holds forth to immigration, they must of course be mainly brought to general notice through the public press, and as the time approaches when an unacclimated immigration may arrive with the least danger to health, it is desirable that these manifold inducements be set forth as fully as possible.

In accordance, therefore, with our previous arrangement, I propose now soon to furnish a series of articles for the *Union*, in which, more or less in detail, the various characteristics of the State may be set forth.

The intention will be to describe the State generally, in the first instance, giving the facts in regard to the climate, soil, health, water, surface, timber, general capacity, and general productions, and then to give the peculiar characteristics of each different section of the State as far as attainable.

With reference to the general character of the whole State, I apprehend no great difficulty in the preparation of such articles as may be necessary or desirable. Indeed, the services of very competent men are already engaged for the treatment of these features of the topic, and now sufficient knowledge of these general traits is so prevalent that the accomplishment of this part of the work is comparatively easy. But it is chiefly in regard to the collection of accurate statistics of the different counties and special localities that difficulties will arise.

People from abroad have, on account of the facilities of access to Jacksonville and the villages of the St. Johns, made themselves quite familiar with the character of that portion of East Florida that is within reach of the eye of one passing on steamers up and down the St. Johns, and have taken this as a fair sample of the whole State, and formed their opinion accordingly, while the remainder of East Florida and the whole of Middle and West Florida have remained almost entirely unknown to strangers.

To correct this false idea, and to give some reliable knowledge of other and better portions of the State, is a leading feature of the design of these publications.

But, right here, if the work be well done, it will be through the intelligent co-operation of thoughtful minds in the different localities. For, in the first place, such alone are conversant with the facts that go to make up the general character of these different sections; and in the second place, such alone know and can give those special facts as to peculiarities of soil and surface, and, more particularly, such facts and statistics in reference to the actual cultivation of different crops under varying circumstances as intelligent men most need in order to enable them to form an intelligent opinion, by which they are willing to be governed in choosing a location for themselves.

An earnest endeavor shall be made, so far as the knowledge now in possession, or that may be attained, will permit, to make a showing of each different section of the State, which shall be manifestly fair and impartial.

Permit me, then, Mr. Editor, through your columns, to solicit the thoughtful co-operation of intelligent men of all classes in each of the different counties and sections of the State. Allow me thus to urge upon all who are willing to take some trouble for the sake of exhibiting in a fair light the peculiar character, each of his own county or section, the desirability of communicating with me as soon as may be, and furnishing me the facts and statistics, that they may be embodied in a description of that locality. Not only facts as to the surface, soil, climate, and productions, but also, the price of lands, the kinds of timber, the wages of labor, access to market, cost of clearing, health, water, and, specially, facts as to crops that may be cultivated and actually have been cultivated, with cost of cultivation and net proceeds, stating the amounts raised to the acre of the great staples, cotton, corn, sugar, tobacco, sweet and Irish potatoes, &c., together with the prevalent disposition towards new-comers.

Articles embodying such information are most earnestly solicited from all.

After these papers shall have been published here, it is proposed to procure their insertion in the papers elsewhere, so far as practicable, and then to condense and collate them and publish them in pamphlet form that they may be distributed to all applying for information in regard to the State.

While, Mr. Editor, it is not thus proposed that all the articles furnished shall be original

with me, still, it is proposed that every article thus furnished shall come to you, and through you to the public, with my official endorsement.

WHY SEEK A NEW HOME IN FLORIDA?

In the interest of the State Bureau of Immigration, it is proposed to give, in condensed form, an authentic and perfectly reliable statement of the actual inducements to settlers which are offered by the State of Florida.

In consideration of the superior advantages which, in many important particulars, the South possesses over the West; of the migratory character of a large portion of the population of the North and West; of the condition of several of the countries of Europe, unsettled at present, and with little promise of improvement in the future, a large movement of population southward may reasonably be expected within the next few years, and to answer in brief such questions as will naturally occur to the minds of men seeking a new home in the South, and inquiries about the peculiarities of this State, is the purpose of the following pages.

Attention is called in the first place to some of the general characteristics of the State, with the view of subsequently going more into detail and speaking of special localities.

ACCESSIBILITY.

There are few sections of the Union that, upon the whole, are easier of access than the State of Florida. Situated between the Gulf of Mexico and the Atlantic, it is accessible either by steamer or sail vessel from New Orleans on the West, or from Baltimore, Philadelphia, New York, and Boston on the East, or from any of the European ports. If the settler desires, he may thus embark with all his household goods and furniture on a sailing vessel, and without trouble or change, be landed within easy reach of his future home.

Connected likewise on the West, through Columbus, and on the East through Savannah by its own system of railroads, with the great system of Southern and Western and Eastern railroads, Florida is also thus by rail as easily and entirely accessible as any of the States of the West and Northwest.

Within the last twelve months, more than six hundred vessels have been loaded with lumber and timber in the Florida ports, and dispatched to the Eastern ports in this country, and to the various ports of Europe; and coming here mostly in ballast, and easily adapted to the bringing of passengers at light expense, they will promote immigration extensively when the inducements are fully known in other parts of this country and the world.

CLIMATE.

The climate of Florida is not excelled by that of any of the United States, and it may be doubted whether it can be equalled elsewhere in the world. Located on the very borders of the torrid zone, and, therefore, so far as latitude alone is concerned, entitled to rank among the hottest portions of the Western continent, still her situation between the Gulf of Mexico and the Atlantic is such, that owing to her peculiar form, she is swept alternately by the winds of the Eastern and Western seas, and relieved from those burning heats with which she would otherwise be scorched, and thus it happens that by the joint influences of latitude and peculiar location, she is relieved on the one hand from the rigors of the winter climate of the Northern and Middle States, and on the other, from the extreme heat by which not only the other Southern States, but in the summer time, the Northern States, are characterized.

While in winter the Northern and Middle States are covered with snow, and frost penetrates the earth to the depth of several feet, and the leafless trees wave their bare and skeleton fingers in the wintry wind, in Florida most of the trees and shrubs are in full foliage, and the winter gardens are filled with vegetables in their most thrifty growth.

In the Northern States the frosts of November and December most effectually put a stop to all agricultural operations, and the farmer is compelled to feed his stock for from four to six months, and is himself confined to the getting of fuel and lumber, thus in one portion of the year consuming a large portion of the result of his labor in the other.

But in Florida, this very winter season is better adapted to building, clearing land, and the performance of all necessary extra work on the farm, than even the summer.

In the North, all regular farming work is of necessity crowded into the space of less than half the year, while in Florida there is scarcely a single day in the whole year that may not be devoted to purely agricultural work.

In some of the Northern States the mean average range of the thermometer within the last two years, has been from 30 deg. below zero to 90 and 100 deg. above. In Florida, for many years, the range of the thermometer has been less than half as great.

The following table gives the mean of three daily observations, taken by Dr. A. S. Baldwin, at Jacksonville, in the Northern part of Florida, and exhibits the record of the highest and lowest range of the thermometer for five years, from 1857 to 1861, inclusive:

MONTHS.	1857		1858		1859		1860		1861		REMARKS.
	H	L	H	L	H	L	H	L	H	L	
January.....	72	16	76	38	76	30	76	40			Ice one to two inches thick, Jan 19 and 20th, 1857.
February.....	81	44	77	39	79	39	79	44	75	42	
March.....	85	41	83	34	84	45	83	40	83	43	
April.....	81	47	86	49	89	53	92	58	85	54	
May.....	91	61	91	66	92	64	92	58	94	64	
June.....	91	73	92	73	94	70	97	69	98	72	
July.....	89	68	96	74	95	70	98	74	92	70	
August.....	95	75	94	75	91	75	93	73	91	73	At 7 A. M., Nov. 25th, 1860, the Thermometer stood at 25 deg.
September.....	92	64	86	64	92	70	89	65	92	59	
October.....	81	42	85	62	84	50	87	53	86	57	
November.....	82	27	79	39	79	35	80	25	79	45	
December.....	80	39	78	40	79	36	72	32	74	38	

Earliest frost in the five years, October 27, 1859. Latest frost, April 28, 1858. Latest frost in 1859, February 14.

And to establish this matter of climate beyond doubt, the following summary of observations, taken from the "Army Meteorological Register," is introduced to show the equality of the climate of Florida, as compared with that of other parts of the United States:

	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yr.
St. Augustine, Fla.....	57.03	59.94	63.34	68.78	73.50	79.36	80.90	80.56	78.60	71.88	64.12	57.26	69.61
Tampa Bay, ".....	61.53	63.54	67.72	71.82	76.64	70.46	80.72	80.43	78.28	74.02	66.94	61.99	71.92
Key West, ".....	66.68	68.88	72.88	75.38	79.10	81.63	83.00	82.90	81.92	78.11	74.66	71.03	76.51
West Point, N. Y.....	28.28	28.80	37.63	48.70	59.82	68.41	73.75	71.83	64.31	53.04	42.23	31.98	50.73
Fort Snelling, Min.....	13.76	17.57	31.41	46.34	58.97	68.46	73.40	70.05	58.86	47.15	31.67	16.86	44.54

The above table shows the monthly and yearly mean of twenty years at St. Augustine; of twenty-five years at Tampa Bay; of fourteen years at Key West; of thirty-one years at West Point, and of thirty-five years at Fort Snelling. While at the latter point the mean annual variation in the range of the thermometer is 59.64 deg., at St. Augustine it is but 23.87 deg., and at Key West but 16.32 deg.

While the heat in Florida is not more intense during the summer months than at times in all the Northern States, in winter the thermometer, in Northern Florida even, rarely sinks to the freezing point.

These figures, from the most authentic sources, show conclusively that the claim made for the equality and desirability of the climate of Florida rests upon something more than an imaginary basis.

But it is difficult either by words or figures to convey an adequate idea of the gratefulness of the kindly and genial climate of Florida to one who has become heartily tired of the ceaseless alternation of the extremes of heat and cold experienced in the Northern States of the Union.

HEALTH.

In regard to health, Florida stands among the foremost States of the Union. For more than half a century St. Augustine has been a common and well-known resort for invalids from every section of the Union, and the salubrity of that particular locality has been very generally conceded as an indisputable fact; and yet many sections as well as in East as in Middle and Western Florida, are not at all inferior in this particular. The vicinity of Enterprise, on Lake Monroe; that of Gainesville and Ocala, in the interior; of Quincy, in the Northern part of Middle, and of Pensacola, in West Florida, for various different complaints, are fully equal if not superior to St. Augustine in healthfulness.

There has been an idea unaccountably prevalent in some portions of the country that Florida is an unhealthy State, and yet the common report of thousands of invalids, who have been benefitted by the influence of the climate; the official reports of the military authorities, and the statistics of the U. S. Census, have conclusively demonstrated the general healthfulness of the State.

The fact appears strikingly from the figures of the census in reference to the deaths from pulmonary complaints in the different States, and the results strike one more forcibly when it is considered that this State for many years had been a very common place of resort for invalids afflicted with all varieties of pulmonary diseases.

From the census of 1860, it is found that the deaths from consumption in the various States of the Union during the year ending May 31st, 1860, were as follows: In Massachusetts, 1 in 254; in Maine, 1 in 289; in Vermont, 1 in 404; in New York, 1 in 473; in Pennsylvania, 1 in 380; in Ohio, 1 in 679; in California, 1 in 727; in Virginia, 1 in 957; in Indiana, 1 in 792; in Illinois, 1 in 878; in Florida, 1 in 1,447. Here is positive evidence of infinitely more value than all the theories or hypotheses whatever.

And in the official report of Surgeon-General Lawson appears the following: "Indeed, the statistics in this Bureau demonstrate the fact that the diseases which result from malaria are of a much milder type in the peninsula of Florida than in any other State in the

Union. These records show that the ratio of deaths to the number of cases of remittent fever has been much less than among the troops serving in any other portion of the United States. In the middle division of the United States the proportion is one death to thirty-six cases of remittent fevers; in the Northern division, one to fifty-two; in the Southern division, one to fifty-four; in Texas, one to seventy-eight; in California, one to one hundred and twenty-two; in New Mexico, one to one hundred and forty-eight; while in Florida it is but one to two hundred and eighty-seven." And the Surgeon-General goes on to say:

"The general healthfulness of many parts of Florida, particularly on its coast, is proverbial. The average annual mortality of the whole peninsula, from returns in this office, is found to be 2 6-100 per cent., while in the other portions of the United States, (previous to the war with Mexico) it is 3 3-100 per cent.

"In short, it may be asserted without fear of refutation, that Florida possesses a much more agreeable and salubrious climate than any other State or Territory in the Union."

And in reference to the comparative character of the climate, Solon Robinson, in a letter published in the New York *Tribune*, says: "As to the salubrity of the climate, I fully believe its average equal to Indiana or Illinois, and certainly no worse for immigrants from any of the Northern States than Central New York was in its early settlement for those who went into its forests from New England. There are here, as there, miasmatic localities, and localities where mosquitoes are as pestiferous as they are in the Montezuma marshes—no worse, and certainly no worse than I have often found them at various points around New York."

Where lands are swampy, or along rivers where the banks are low, or have been recently cleared from a heavy growth of vegetation, there will be a liability to the same kinds of fever with which other sections of the country similarly situated are afflicted; but it is easily discernible from the statistics, and is well known within the experience of every resident physician, and of every citizen of the State, that all of the fevers assume a much milder type, and are much less dangerous, than in almost any other State. With common and proper care, the health of immigrants to Florida is as safe as in any other section of the country.

CHEAP LANDS.

Another strong inducement to immigration into this State is found in the comparative cheapness of a large portion of the lands within her borders. There are within the State some fifteen millions of acres of U. S. lands, all subject to homestead entry in quantities not exceeding 160 acres. There are also some ten millions of acres of State lands for sale at from \$1.25 to \$2.50 per acre.

And while it is true that the lands along the St. Johns, and in the vicinity of the larger cities and towns are rapidly becoming quite valuable, still there are hundreds of thousands of acres that may be bought for from \$2 to \$5 per acre. These are improved lands; but unimproved plantations in many parts of the State can be bought for no more than the clearing would cost now.

Again, all over the State are scattered what are called "old fields," or old cleared lands that have been formerly cultivated, and afterwards abandoned for newer lands. These old fields are often situated in the near vicinity of large supplies of natural manures, furnishing such abundant means of re-invigoration as to make the restoration of these lands to their original strength easier and more economical than the clearing of new lands, and such old fields, in many cases, can be bought for from \$2 to \$5.

Many of the more preferable lands of the State exist in large plantations or tracts, and it would be necessary to purchase large quantities of land in order to obtain them on the most reasonable terms. But this fact constitutes no valid objection, because by purchasing such large tracts, opportunities will be furnished for the establishment of colonies of settlers, each of whom, by a proper division of these lands, may obtain such quantity as he desires, and yet the comfort and convenience of all will be promoted by their common location in the vicinity of each other.

EASE OF TILLAGE.

The facility with which the greater portion of the tillable lands in Florida can be worked, furnishes another very strong inducement to those who, in coming here, propose to engage in agricultural pursuits.

Lands in Florida can be, and really are, worked with very much less force than is required in the North. Whether sandy, clayey, or loamy, they are much more friable, and more easily tilled.

The fact that nearly all the plowing done in the State is by the use of single teams, indicates the ease with which the soil can be worked. Indeed, with the same force, as much land can be prepared for crops in Florida in three days, as in the Northern and Eastern States can be thus worked in five days. Those who, in this State, know by experience the

heavy labor and the length of time required in the preparation of the clay soils of the North, with the frequent interruptions caused by waiting for the proper degree of humidity; and those accustomed to the jerking of a plow running through lands filled with stone, will appreciate fully the ease and rapidity with which all the preparatory labor of the farmer can be accomplished, and the possibility of such labor at any and all seasons of the year.

SURFACE.

The apparently monotonous and unvarying level surface of Eastern Florida, so far as the same is open to the inspection of casual passengers, is well calculated to give rise to erroneous notions of the general surface of the State. The very existence of the magnificent river, St. Johns, averaging some two miles in width for more than one hundred and fifty miles in length, and rolling its vast current through a section of country so nearly absolutely level that no elevation of even one hundred feet is within the view of one passing up and down the whole length of the river, is one of the most singular geographical facts relating to the whole country.

But the surface of the remainder of the State is not to be judged by what is seen in the extreme East. In Middle Florida, particularly in the counties of Leon, Gadsden, and Jackson, may be found quite an uneven country, sometimes gently undulating, and sometimes quite hilly, although the hills have no great elevation, and none rise into the importance of actual mountains. And the same is true of portions of West Florida. Through these regions the frequent springs, the running streams, and the beautifully varied surface are in strong and pleasant contrast to the monotonous levels of the East, and the "Flat-Woods" of the interior.

No one who has not seen the middle counties of Florida can be said to have an adequate idea of the State.

LIGHT WORK AND AMPLE LEISURE.

While many portions of the State are exactly adapted to the pursuit of what is called "regular farming," in the same way in which it is followed in the Northern States, still such is the mildness of the climate that the same "regular farm work" which, at the North, is necessarily obliged to be performed within the limits of six or seven months, in Florida may be allowed the whole year for its transaction.

Thus the farmer, instead of being crowded for time, and really, by the shortness of the season, constrained to overwork, or work constantly and hurriedly, may have the whole year for the performance of his necessary labors, and of course can proceed more leisurely, and have vastly more spare time to devote to other and congenial pursuits.

But while it is true that the regular farm work can, from the facility of working the soil, be much more easily performed, it is likewise true that the mildness of the climate allows the crops of vegetables and fruits, common to this and other States, to mature many weeks earlier than at the North, and allows the cultivation of many crops that cannot be cultivated elsewhere; hence, an opportunity is given for those disinclined to the heavy work of ordinary farming, to engage in the much lighter labor of fruit culture, or of raising vegetables for Northern markets, with a prospect of better returns than can be expected from ordinary farm crops.

Thus would be secured a much lighter and more agreeable kind of cultivation, and the prospect of as certain and lucrative returns as can be relied on from any other agricultural employment.

WIDE SCOPE OF VEGETATION.

The very great variety of crops, from which the farmer in Florida may make such selections as he chooses, constitutes another consideration of great importance. Wide as may seem the opportunity of selection in the Northern and Eastern States, it is narrow indeed, as compared with that of Florida. With very few exceptions, all that grows in the other States of the Union may well be grown in Florida, and to these may be added a very long list of productions, many of which can only be raised under careful protection, and some of which are unknown in the other States.

Except in Central America, where the frequent mountains, by differences of elevation, give that variety of temperature caused elsewhere by difference of latitude, there is probably no portion of the Northern part of the Western continent that gives so great and varied a list of actual and possible productions of value as the State of Florida.

All cereals of the North, except wheat, have been raised with great success, and although in some localities fair crops of wheat have been made, still this crop can hardly be said to have had a fair trial.

Without exception, all the vegetables that can be cultivated with success in the North are raised with greater success and facility here.

All the Northern fruits, except apples, and some of the smaller fruits, such as currants

and gooseberries, do well in Florida, and some of them, peaches particularly, thrive remarkably. Apples of very fair quality have been raised, and it is claimed that by proper care, they may be successfully grown; but it is probably true that they will not do as well as farther to the North.

Then to these are to be added, as among the crops which seem peculiarly adapted to the climate, and which grow with remarkable vigor, rice, upland and lowland, peanuts or pin-dars, sweet potatoes, yams, cotton, long and short, indigo, sugar cane, oranges, lemons, limes, citrons, guavas, figs, sisal hemp, arrow-root, and pomegranates, and in the central and southern portions of the State, pine apples, bananas, plantains, cassavas, cocoa-nut, paw-paws, various of the species, alligator pears, and probably coffee, while tea can be raised throughout the State.

Wonderful as such a list seems, comprising only the productions of a single State, it evidently must present great attractions to all who, by a more rigorous climate, have been constrained to confine themselves to a more limited sphere of cultivation.

SOIL.

Visitors to Florida have hitherto found so much inconvenience and expense attending a journey through Middle Florida to the western portion of the State, that very few strangers have made a personal inspection of any other than the extreme eastern portion of the State.

The magnificent river St. Johns, navigable for sea steamers one hundred miles to Palatka, and for river steamers more than one hundred miles further, to Enterprise, on Lake Monroe, and for a still smaller class of steamers up to Lake Harney, has made traveling so easy and comparatively so cheap that strangers have confined their travels almost exclusively to the extreme eastern part of the State. Of the far richer and more varied surface and soil of Middle and Western Florida, not more than one in five hundred of those who spend the winters in Florida have had adequate conception.

Hence the characteristically sandy soil of Eastern Florida has been supposed to be truly indicative of the soil of the whole State. Thus many mistaken notions in regard to the soil of the State have originated.

It is true that the extreme eastern and western parts of the State have, in the main, a sandy soil, generally covered with pine timber, but more or less underlaid with clay or marl, and interspersed, to a greater or less extent, with what are called "hammocks," or lands covered with a growth of hard wood.

But as one proceeds westward, along the northern boundary of the State, the character of the soil changes from sand to loam, and then to a strong clay soil, until in the counties of Leon, Gadsden, and Jackson, the larger part of the soil is composed of a strong and rather heavy clay. Then taking a stretch of land in the northern tier of counties, extending from Madison to Jackson, inclusive, and thence down to the Gulf and extending along the Gulf coast from Liberty to Hernando, and including Sumter, Marion, Alachua, Levy, and other counties, one can find almost every conceivable variety of soil, adapted to the growth of nearly every crop that may be selected. Here, really, in the counties above mentioned, with whose character strangers are almost entirely unacquainted, is the very cream and flower of the State.

An accurate and somewhat detailed account of the various soils in the State is of so much interest to incoming settlers, that a description drawn with some care and published in a former pamphlet is here inserted:

Pine lands (pitch and yellow pine) form the basis of Florida. These lands are usually divided into three classes, denoting first, second, and third rate pine lands.

That which is denominated "first rate pine land" in Florida has nothing analogous to it in any of the other States. Its surface is covered for several inches deep with a dark vegetable mould, beneath which, to the depth of several feet, is a chocolate-colored sandy loam, mixed, for the most part, with limestone pebbles, and resting upon a substratum of marl, clay, or limestone rock. The fertility and durability of this description of land may be estimated from the well-known fact that it has, on the Upper Suwannee, and in several other districts, yielded during fourteen years of successive cultivation, without the aid of manure, four hundred pounds of Sea Island cotton to the acre. These lands are still as productive as ever, so that the limit of their durability is yet unknown.

The "second rate pine" lands, which form the largest proportion of Florida, are all productive. These lands afford fine natural pasturage; they are heavily timbered with the best species of pitch and yellow pine; they are, for the most part, high, rolling, healthy, and well watered. They are generally based upon marl, clay, or limestone. They will produce for several years without the aid of manure, and when cow-penned they will yield two thousand pounds of the best quality of sugar to the acre, or about three hundred pounds of Sea Island cotton. They will, besides, when properly cultivated, produce the finest Cuba tobacco, oranges, lemons, limes, and various other tropical productions, which must in many instances render them more valuable than the best bottom lands in the more Northern States.

Even the lands of the "third rate," or most inferior class, are by no means worthless under the climate of Florida. This class of lands may be divided into two orders; the one comprising high rolling sandy districts, which are sparsely covered with a stunted growth of "black jack" and pine; the other embracing low, flat, swampy regions, which are frequently studded with "bay galls," and are occasionally inundated, but which are covered with luxuriant vegetation, and, very generally, with valuable timber. The former of these, it is now ascertained, owing to their calcareous soil, are well adapted to the growth of the sisal hemp, which is a valuable tropical production. This plant, (the Agave Sisiliana,) and the Agave Mexicana hemp, also known as the maguay, the pulke plant, the century plant, &c., have both been introduced into Florida, and they both grow in great perfection on the poorest lands of the country. As these plants derive their chief support from the atmosphere, they will, like the common air plant, preserve their vitality for many months when left out of the ground.

It is scarcely necessary to add, that the second order of the third rate pine lands, as here described, is far from worthless. These lands afford a most excellent range for cattle, besides being valuable for their timber and the naval stores which they will produce.

There is one general feature in the topography of Florida, which no other country in the United States possesses, and which affords a great security to the health of its inhabitants. It is this, that the pine lands which form the basis of the country, and which are almost universally healthy, are nearly every where studded at intervals of a few miles with hammock lands of the richest quality. These hammocks are not, as is generally supposed, low wet lands; they never require ditching or draining; they vary in extent from twenty acres to forty thousand acres, and will probably average about 500 acres each. Hence the inhabitants have it every where in their power to select residences in the pine lands, at such convenient distances from the hammocks as will enable them to cultivate the latter, without endangering their health, if it should so happen that any of the hammocks proved to be less healthy than the pine woods.

Experience in Florida has satisfactorily shown that residences only half a mile distant from cultivated hammocks are entirely exempt from malarial diseases, and that the negroes who cultivate those hammocks, and retire at night to pine land residences, maintain perfect health. Indeed, it is found that residences in the hammocks themselves are generally perfectly healthy after they have been a few years cleared. Newly cleared lands are sometimes attended with the development of more or less malaria. In Florida, the diseases which result from these clearings are, as I stated in my former letter, generally of the mildest type, (simple intermittent fever;) while in nearly all the Southern States they are most frequently of a severe grade of billious fever.

The topographical feature here noted, namely, a general interspersing of rich hammocks, surrounded by high, dry, rolling, healthy pine woods, is an advantage which no other State in the Union enjoys; and Florida forms in this respect a striking contrast with Louisiana, Mississippi, and Texas, whose sugar and cotton lands are generally surrounded by vast alluvial regions, subject to frequent inundations, so that it is impossible to obtain, within many miles of them, a healthy residence.

It would seem paradoxical that the malarial diseases of East Florida (abounding as it does in rich hammock lands, and exposed to a tropical sun,) should generally be of a much milder form than those which prevail in more northern latitudes. That such, however, is the fact, there can be no doubt; for this fact is proved by an aggregate of evidence, (extending over more than twenty years,) which it is impossible to resist. It is suggested in explanation of this fact, that the luxuriant vegetation which in the Southern and Middle States, passes through all the stages of decomposition, is in East Florida generally dried up before it reaches the putrefactive stages of decomposition, and that, consequently, the quantity of malaria generated is much less than in climates more favorable to decomposition. This view is strengthened by the fact that the soil of Florida is almost everywhere of so porous and absorbent a character, that moisture is seldom long retained on its surface; that its atmosphere is in constant motion, and that there is more clear sunshine than in the more northern States. It is further suggested that the uniform prevalence of sea breezes, and the constant motion of the atmosphere in the peninsula, tend so much to diffuse and attenuate whatsoever poison is generated that it will generally produce but the mildest forms of malarial disease, such as intermittent fever.

The lands which in Florida, are *per excellence*, denominated "rich lands," are first, the "swamp lands;" second, the "low hammock lands;" third, the "high hammocks;" and fourth, the "first-rate pine, oak, and hickory lands."

The swamp lands are unquestionably, the most durably rich lands in the country. They are the most recently formed lands, and are still annually receiving additions to their surface. They are intrinsically the most valuable lands in Florida, being as fertile as the hammocks, and more durable. They are evidently alluvial, and of recent formation. They occupy natural depressions of basins which have been gradually filled up by deposits of vegetable debris, &c., washed in from the adjacent and higher lands. Ditching is in-

dispensable to all of them in their preparation for successful cultivation. Properly prepared, however, their inexhaustible fertility sustains a succession of the most exhausting crops with astonishing vigor. The greatest yield of sugar ever realized in Florida was produced on this description of land, viz: four hogsheds per acre. That this quantity was produced on Dummitt's plantation, near New Smyrna, is a fact well known to those conversant with sugar planting in East Florida. Sugar cane is here instanced as a measure of the fertility of the soil, because it is one of the most exhausting crops known, and is generally grown without rest or rotation. It is not, however, a fair criterion by which to judge of the relative fertility of lands situated in different climates, for we find on the richest lands in Louisiana the crop of sugar per acre is not more than one hogshedd, or about half that of East Florida.

This great disparity in the product of those countries is accounted for, not by any inferiority in the lands of Louisiana or Texas, but by the fact that the early incursions of frost in both these States render it necessary to cut the cane in October, which is long before it has reached maturity, while in East Florida it is permitted to stand, without fear of frost, till December, or till such time as it is fully matured. It is well known that its "tassels" in East Florida, and it never does so in either Louisiana or Texas. When cane "tassels" it is evidence of its having reached full maturity. In consequence of the heavy outlay of capital required in the preparation of this description of land for cultivation, and from the facility of obtaining hammock land, which requires no ditching or draining, swamp land has been but little sought after by persons engaged in planting in Florida, and there is now at least a million of acres of the best description of this land vacant in the country, which can be secured at less than two dollars per acre. Vast bodies of it lie convenient to navigation and railways, and doubtless will soon be sought after with avidity, as soon as the sugar planters of Louisiana and Texas become apprized of its character and of the many advantages which sugar planting in Florida presents over any other State in the Union.

Low hammocks, which from the fact of their partaking of the nature of hammocks and swamps, and sometimes termed *swammock*, are not inferior to swamp lands in fertility, but perhaps, are not quite as durable. They are nearly always level, or nearly so, and have a soil of greater tenacity than that of the high hammocks. Some ditching is necessary in many of them. The soil in them is always deep. These lands are also extremely well adapted to the growth of the cane, as has been well attested by the many plantations which were formerly in operation here on this description of land. There is not nearly so large a proportion of low hammock as there is of swamp lands.

High hammocks are the lands in the greatest repute in Florida. These differ from low hammocks in occupying higher ground, and in generally presenting an undulating surface. They are formed of a fine vegetable mould, mixed with a sandy loam, in many places two feet deep, and resting in most cases on a substratum of clay, marl, or limestone. It will be readily understood by any one at all acquainted with agriculture, that such a soil, in such a climate as Florida, must be extremely productive. This soil scarcely ever suffers from too much wet; nor does drought affect it in the same degree as other lands. High hammock lands produce, with but little labor or cultivation, all the crops of the country in an eminent degree. Such lands have no tendency to break up in heavy masses, nor are they infested with pernicious weeds or grasses. Their extraordinary fertility and productiveness may be estimated by the fact that, in several well known instances in Marion county, three hogsheds of sugar have been made per acre on this description of land, after it had been in cultivation six years in successive crops of corn, without the aid of manure.

To sum up its advantages, it requires no other preparation than clearing and plowing to fit it at once for the greatest possible production of any kind of crop adapted to the climate. In unfavorable seasons it is much more certain to produce a good crop than other kind of land, from the fact that it is less affected by exclusively dry or wet weather. It can be cultivated with much less labor than any other lands, being remarkably mellow, and its vicinity is generally high and healthy. These reasons are sufficient to entitle it to the estimation in which it is held over all other lands.

The first-rate pine, oak, and hickory lands are found in pretty extensive bodies in many parts of the State, particularly in Marion, Alachua, and Hernando counties. From the fact that those lands can be cleared at much less expense than the swamp and hammock lands, they have, heretofore, been preferred by the small planters, and have proved remarkably productive.

There are, besides the lands already noticed, extensive tracts of savanna lands which approximate in character, texture of the soil, and period and mode of formation, to the swamp lands, differing only in being destitute of timber. Some of these lands are, however, extremely poor.

Probably the largest bodies of rich hammock land in East Florida are to be found in Levy, Alachua, Marion, Hernando, and Sumter counties. There are in Levy county alone,

not less than one hundred thousand acres of the very best description of sugar lands; and there is but a small proportion in any of the five counties here cited, that will not produce remunerative crops of Sea Island and short staple cotton, without the aid of manure.

The lands on the St. Johns river, taken as a whole, are not as fertile as in some other sections of the State. There are, however, thousands of acres of rich hammock land within a mile of the river, which are as yet an unbroken forest, and the pine lands are much better than the average of the whole State. Besides, there is an abundance of muck on the banks of the river and its tributaries, which furnishes a most excellent fertilizer. Lime, marl, and shells are also easily obtained, and have been used with very beneficial results.

In Middle Florida, the counties of Leon, Gadsden, Jefferson, and Madison have large quantities of high, rolling hammock land; also, the county of Jackson, in West Florida. They are more undulating than those in East Florida, and are underlaid with a stiff red clay. They are by far the best lands in the State for short staple cotton, to which they have been almost exclusively appropriated. There is in Volusia county, a range of low hammock, a little back from the coast, from a half to two miles wide, and extending from the head of the Halifax to the head of the Indian river, some fifty miles, as well adapted to sugar cane as any land in the State. The Gulf Hammock, in Levy county, comprises perhaps the largest body of rich land in Florida. It was bought up years ago at from five to ten dollars per acre by private parties, by whom it is mostly held at the present time. The Florida Railroad runs through it, and it will, no doubt, become, at an early day, one of the garden spots of the State. The clearing of the hammocks, however, is expensive, and, as in every new country, we may expect to see the lands more lightly timbered first brought into cultivation.

VIEW OF AN INTELLIGENT FRENCHMAN

AS TO THE CAPACITY OF FLORIDA, PUBLISHED IN 1822.

Official statements in the interest of Immigration are sometimes liable to a suspicion of undue bias and partiality that often detracts from their efficiency, even when they are entirely within the limits of demonstrability.

I am glad, then, to ask the insertion of the following Petition to Congress of the "Coffee Land Association," which was presented and made public some fifty years ago.

The Association, under the lead of Peter Stephen Chazotte, who was a French coffee planter of large experience and skill, and of great intelligence, ask for a grant of land for the encouragement of coffee planting and the raising of various other valuable and rare products.

And in the petition, anxious to show the strong probabilities of success, an extended course of reasoning, based mainly upon known climatic and other considerations, and tending to show, at least, reasonable grounds for expecting favorable results.

The fact that the petition was presented fifty years ago, and by men seeking a grant from the government, relieves the reasoning and facts cited from all imputation of partizan or undue bias.

And again, the fact that thousands of French emigrants are even now earnestly looking for a new and freer home in this Western World, gives peculiar and earnest force to these utterances and reasonings of a former generation, from a citizen of their own "La Belle France."

J. S. A.

No. 1.

Facts and observations on the culture of Vines, Olives, Capers, Almonds, &c., in the Southern States, and of Coffee, Cocoa, and Cochineal in East Florida, by Peter Stephen Chazotte, who has for upwards of ten years been engaged in the culture of vines, &c., in Southern France, and for seven years a grower of Coffee, Cocoa, &c., in the West Indies.

To the President, Senate, and House of Representatives of the United States,

Are respectfully offered, for their consideration, the following facts and observations on the policy of immediately introducing the highly interesting cultures of Vines, Olives, Capers, and Almonds, in the new territory of the United States, and on the plantations, of Coffee, Cochineal, Cocoa, or Chocolate Nut, in East Florida:

It has a hundred times been stated that agriculture is the basis of the national wealth of

empires. May I not be allowed to add, that it is the true source of individual happiness; that it secures independence, and cherishes every virtue; the enjoyments of which are constant, without being contaminated by those vices which are frequently the attendants of manufactures.

That agriculture is alone capable of raising a nation to the highest degree of happiness and independence, the history of mankind will prove; from the earliest stages man has been taught to call the earth "his mother and beneficent nurse."

For the further development of my ideas on this interesting subject, I shall take a cursory view of the climates of Southern Europe and Asia Minor, and look if I cannot find in our country climates perfectly congenial to the growth of whatever plants are successfully cultivated in Southern Europe. In doing this, however, it is not my intention to include wheat, barley, oats, nor any grains and vegetables which our country is known to grow to as great a perfection as in any other part of the world. I shall limit my inquiries to those rich staples which our soil will luxuriantly grow, and which we have until now neglected to cultivate.

Having resolved not to be deterred from prosecuting this plan of improvements by any of those idle ideas which either prejudice, ignorance, or foreign policy has been endeavoring to imbue our minds with, we shall clearly perceive all the advantages which our insular coast, our extensive inland country, the variety of our climates, and our rich soil, give us over the nations of Europe. It is true that we cannot at present drain the marshes of Virginia, nor turn the dismal swamps of North Carolina into Roman consular retreats and pleasure gardens. We need not occupy ourselves with works which require a more condensed population than ours is. That shall be done when the land, distributed amongst millions of inhabitants, shall, by its increased value, promise a fair interest for the capital employed in its improvement; then, and not before, shall rich fields and stately mansions astonish the mariner sailing along our extensive coast. Leaving to future generations to effect what is not our interest now to do, we are at liberty to select our ground, to cultivate the plains, or plant on the hills; we may choose the climate, the river, the particular soil; diversify our cultures; in fine, we may raise all the European fruits, and the most valuable tropical staples. From the cliffs of the Patuxent to the bluff which crowns the plains that form the banks of Mobile bay, the vines may be cultivated, and the hills and valleys of Virginia may, ere long, resound with the echoed songs of the vintagers.

Wishing to proceed with regularity and order, I shall trace out comparatively parallel climates both in Europe and the United States; and then, taking a separate view of each, I shall prove that, to all our already known productions may be added all those which we have not yet undertaken to cultivate. In forming this scale, I shall pay less regard to parallel latitudes than to the parallels of the now existing climates. Parallel latitudes could not bring a fair comparison of climates. As, for example, latitude fifty-one, in France, would give in America the northernmost section of Newfoundland, north of the Gulf of St. Lawrence, and running westwardly on the southern edge of Hudson's bay; and it is well known that, under the 51st degree of north latitude, in France, the climate is temperate, and the four seasons regularly marked; whilst under the same latitude, in America, the climate is intensely cold, and only two seasons, which are known to be striving to conquer each other. The cause of this may be a fit subject for a treatise.

Having thus far explained my motive for abandoning parallel latitudes in order to form parallel climates, I shall establish them thus:

First Climate in Europe.—Taking France from the 51st to the 45th degree of north latitude, forming two parallel lines running eastwardly, and including the northern sections of France, from Bordeaux, Switzerland, Lombardy, Bavaria, Austria, Transylvania, &c.

First Climate in the United States.—The parallel climate is found between the latitude 41st and 35th, two lines running westwardly from the Atlantic, and including the southernmost sections of New Jersey, Pennsylvania, Ohio, and Indiana; the whole of the States of Delaware, Maryland, Virginia, North Carolina, Kentucky, and Tennessee.

Second Climate in Europe.—From latitudes 45th to 40th, including the southernmost sections of France, south of Bordeaux, one half of Spain, as far south as Oporto in Portugal; the isles of Corsica and Sardinia; Italy as far south as the bay of Tarrento; and including Dalmatia, Servia, Albania, Macædonia, Romania, and the northernmost part of Asia Minor bordering on the Black Sea.

Second Climate in America.—Its parallel is found from latitudes 35 to 32½, including the whole of South Carolina, and the northern halves of Georgia, Alabama, Mississippi and Louisiana.

Third Climate in Europe and Asia Minor.—From latitudes 40 to 35, including Portugal south of Oporto; the southern section of Spain, Oran, Algiers, and Tunis, on the northern coast of Africa; the southernmost part of Italy; the island of Sicily, Greece, Morea; all the isles in the Archipelago, and those of Candia, Rhodes, Cyprus, &c., &c.; Asia Minor, Syria, Mesopotamia, and Armenia.

Third Climate in the United States.—Its parallel is found between latitudes 32½ to 29, in.

cluding southernmost parts of Georgia as far south as St. Augustine, Alabama, Mississippi, Louisiana, Pensacola, and the northernmost parts of East Florida.

Fourth Climate in North America.—For which there is no parallel climate in Europe or Asia Minor.

From latitude 29th to 25th, bordering almost on the tropic, and including the remainder of East Florida, containing about 33 millions acres of land.

Let us now review those climates separately with respect to their productions.

First Climate in Europe.—There is not a single fruit, nor any grains or vegetables which the climate produces, even grapes, that are not likewise produced in the *first climate of the United States*; for vines are successfully cultivated at *Vercay*, in Indiana, which lies under the highest latitude of this climate. If, then, vines grow and bear plentifully good and perfect ripe grapes at *Vercay*, what success would attend their cultivation on the upper land of Virginia, North Carolina, and Tennessee, where the climate is milder, the seasons more regular, the soil rich, and where tobacco grows in abundance, and even cotton succeeds—a staple which cannot be raised in Europe in this parallel climate? An undeniable proof that this climate in the United States is as favorable to the growth of grapes as that of France. We need but plant and our labors will be recompensed with abundant riches.

Second Climate in Europe.—This climate, besides what grows in the first, produces olives, capers, almonds, oranges, limes, pomegranates, and figs.

Second Climate in the United States.—This already produces oranges, limes, pomegranates, figs, &c., and if olives, capers, and almonds are not seen there, it is because none have yet been planted. It is a well known fact that indigo used to be cultivated there, and has of late years been neglected, because of cotton being found more productive; besides tobacco and rice, which are great staples for exportation. Now, would it not exhibit a want of judgment to believe that neither olives, capers, almonds, nor vines, can succeed in so favorable a climate? Facts demonstrate that, notwithstanding Bonaparte's command to raise cotton in the southern provinces of France, every attempt was met with a discouraging failure; the summer was found to be too short, and all his endeavors to dispense with our cotton proved useless. Surely, then, that man must be prejudiced or blind who, after such strong evidences, will still doubt of our success.

Third Climate in Europe and Asia Minor.—This third climate produces only what is stated in the second, with the addition of some cotton, fit only to manufacture coarse goods.

Third Climate in the United States.—In this climate is raised the finest cotton in the world; and besides those staples that already grow, and may grow in the second, we may raise sugar, which is a production of the torrid zone. In vain did Bonaparte's empire extend in the southernmost part of Europe; unable to find it in an inch of ground where the sugar canes could grow, he was reduced to extract a scanty supply of bad sugar from beets. It is then manifest, that our 1st, 2d, and 3d stated climates are, separately and collectively, superior to those of Europe; and if they do not produce wines, olives, capers, and almonds, they are not to be charged with being unfavorable to their growth; we alone are to be blamed for it.

Fourth Climate South of the United States.—This fourth climate has no parallel in Europe; it lies between latitudes 29th and 25th; and being four degrees farther to the south than any other section of the United States, it promises fair, from the nature of the soil and climate, to produce coffee, cochineal, and cocoa; as for sugar, it may everywhere be raised abundantly.

Coffee, cocoa, and sugar, are staples of the tropics, and we are satisfied that, as the latter is raised in Louisiana, the climate in East Florida must be much more favorable. Doubts may arise on the success attending the culture of the two first named staples in the minds of such as are altogether unacquainted with it; but let those who are conversant with the subject decide, and I am confident of being strengthened in my opinion by an affirmative.

I shall here take a retrospective view of the progress of the plantations of coffee in the West India Islands, and prove that, where it was not expected to grow, experiments attended with success have removed all doubts.

In the year 1796, not a single coffee plant was cultivated in the island of Cuba. In the year 1769, that plant began to be introduced in the island of Jamaica; for in the year 1798, there was but a very scanty quantity raised in that island. That plant was chiefly cultivated in the colonies belonging to France; and, were it not for the French revolution, it is probably that that rich staple would at this day be, as it formerly was, the principal cause of the ascendancy of France over England in supplying the whole of Europe with that colonial produce. Unfortunately, I do not say for France, but for planters of that once happy and favored island, St. Domingo, they were doomed to utter destruction by the evil genius of a single man. That man was named Calonne, prime minister to Louis the 16th. By that policy, which in European cabinets is called "*un coup de politique*," Calonne expected to arrest the revolution in its first brilliant progress, by diverting the minds of the French people, and directing it towards the safety of St. Domingo, where the

interests of France seemed, until then, to have been concentrated. He resolved, and ordered a dreadful revolt to be instigated there, and a man of color, at that time in Paris, whose name was Oge, was sent and furnished with every facility the Government could afford, to stir up a revolt amongst the mulattoes. Cape Francois was burnt, streams of human blood flowed, civil war was kindled all over the island. The French people were too busily engaged about redressing their grievances to be deterred from pursuing the object in view by *un coup de politique*. The inhabitants of that devoted colony were commiserated but not relieved; and so deep and long-endured were the sores of that oppressed people, that until their cure was effected, they could not busy themselves about healing the sufferings of their far remote countrymen. Artifice, cunning, and deceit on the one hand; enthusiasm on the other; misguided and stifled the best judgment of the nation; all was liberty, equality, philanthropy; and, with a view to oppose the revolted mulattoes, the blacks were declared free.

In the phrenzy of a mistaken philanthropy, the assembly of the nation were forming codes of laws for the government of what they blindly called regenerated colonies, and sending their commissioners. When Monsieur, then out of France, brother to Louis XVI., and at present Louis XVII., wishing to save those sections that had not yet felt the regenerating laws of France, desired the British ministry to take possession of the French colonies, the planters of the western and southern parts of St. Domingo, imitating those of Martinique and Guadaloupe, received the British. A part of that rich colony was thereby saved for a time; and both Toussaint and Rigaud, two colored chieftains fighting for power on the supposed side of France, were on the eve of being conquered, when the island was suddenly evacuated by the English.

The policy of this unexpected evacuation is easily accounted for. The English General, Boyer, on his entering Port-au-Prince, had written to the ministry that more colonial produce had been found stored in that single city than the whole of the British islands could produce in two years; and had urged the policy of securing the whole colony as a rich mine of wealth which the nation would enjoy, at least, for as long as the war with France should continue.

But the success of the French armies in Europe alarmed the British ministry; they well knew that a general peace must at some time or other take place, and on such an event, St. Domingo must of course be restored to France. They could not reconcile with their hostile feelings the idea of being instrumental to the preservation of a colony which, on its being restored, would at once replace her rival on that superior eminence in the colonial trade which she once enjoyed, and which it was their policy forever to destroy. Therefore, they resolved to evacuate that island as the surest means of effecting their purposes: General Maitland was sent thither; he made separate secret treaties with the two chieftains; some sham battles were fought; and the British troops apparently beaten and repulsed in every encounter, without losing a drop of blood, surrendered the colony to the party-colored legions of Toussaint and Rigaud. But they took considerable care to carry off with them a number of planters, with their slaves, to cultivate coffee in their colonies, and principally in Jamaica, where they had as yet been very unsuccessful.

This plantation was by this means cultivated there on a large scale; several planters were carried to Trinidad and other small British islands; and England now receives from Jamaica alone upwards of fifty millions of pounds of coffee per year. Such planters as did not like to live under the British sceptre and colonial regulations went over to Cuba, and some to Porto Rico.

Thus is coffee now cultivated in all the West Indies. Yet the whole of those islands together, and the present State of Hayti united with them, hardly yield one-half of the quantity which St. Domingo alone formerly produced. This explains the cause of the present high price of that staple. The quantity now raised is 50 per cent less than in the year 1784; and the number of consumers have increased in the ratio of five to one.

We have seen that coffee is at this day successfully cultivated where it was thought it could not grow; it now remains to be seen if East Florida is not likewise favorable to its growth.

This plant needs not too hot a climate; dry land produces the best quality; as, for example, the Mocha coffee in Arabia Felix, where rain is scarce and the soil sandy, is esteemed very superior. The small size of the grain, and its rounded form, indicates that the land on which it grows is exhausted, and that the plant bears only a scanty quantity. In a virgin and rich land this plant bears large crops; the grain is bigger, and flatted on one side, so that two grains united have an oval form, which lies in the centre, as the stone of a cherry; a fruit which it perfectly resembles in size, shape, and color.

* Bonaparte had then conquered the whole of Italy, and was about sailing for Egypt: Moreau had silenced the northern powers; and Holland had, by the precipitated flight of the Duke of York, become a sister republic of France. At this time Continental Europe had sued for peace.

On the iron-bound coasts of Hispanola, Jamaica, Cuba, &c., this plant, as in Arabia Felix, bears, even in virgin land, but middling crops; on the high land, and on eastern, western, and northern expositions, it bears plentifully, because the atmosphere is there colder, the dew in the night constant, and sometimes a light white frost occurs.

In East Florida the land is neither too dry nor too wet, nor is the climate too hot or too cold. This narrow neck of land being washed by the sea on the south, east and west, possesses all the advantages which an island enjoys; the sea breezes modifying the scorching vertical rays of the sun, and wafting away the approaching northern frosts.

Two opposite opinions have been expressed and frequently repeated with respect to that country. Some assert it to be a dry sandy land, and others, a flat, muddy, unformed rising ground. These assertions are altogether unfounded, as may be demonstrated by merely recurring to its topography. We see a neck of land 400 miles long, and about 130 miles broad, from the opposite beaches of which the land rises gently and gradually towards the centre, where are lakes connected with each other from south to north, to a distance of about 150 miles, without receiving any supply of water from any large foreign river; and about 40 small rivers, whose sources are at from 30 to 40 miles distant from both shores, and whose waters are emptying themselves into the opposite seas. Now it is impossible for those great sinews of nature to exist in a flat muddy ground, which could at most produce reeds, and not the stately trees which luxuriantly grow and cover its surface. On the other hand, if it be called a dry sandy desert, the very existence of those lakes and numerous rivers belies those assertions, for rivers and lakes are never found to spring and exist in an entirely sandy country; and such is the narrowness of this long neck of land, that it must have a deep mould and prolific bosom to produce, as it is known to do, stately forests of the most luxuriant mixture, which are constantly in bloom even in January and February; and the most beautiful flowers, whose florid appearance made the discoverers of it a ward to that country the significant and appropriate name of Florida.

In all places where the climate is not visited by black frost, the land, either dry or wet, will produce coffee. Cayenne, lying under the 4th degree of latitude north of the equator, where the heat is intense, no mountains but at 500 miles off, a flat, level and drowned country, and where, as in European Holland, the surrounding seas are striving to overwhelm the rising earth—even in this swampy country, drained by ditches as reservoirs for the water, the coffee plant grows luxuriantly, even to the size of a plum tree.*

At Rio de Janeiro, the present seat of the King of Portugal's American empire, lying under the 23d degree of latitude south of the equator, and as far as the province of Parana or Assumpcion, which reaches the 30th degree of south latitude, the coffee is found to grow. Why, then, should we not cultivate it between the 25th and 27th degrees of north latitude? that is to say, in East Florida. Will it be said that under the 27th degree of latitude to the southward of the equator, it is hotter than under its opposite degree north of it? This will be contradicted by those navigators and persons who have visited that country. Canton, in China, lies under the 22½ degree of north latitude, and is the southernmost section of that large empire. The States north of East Florida already produce as fine cotton as is raised in that empire. Why should we not also attempt to cultivate the tea plant? I do not understand this culture. Information on this interesting subject is expected from those American citizens who, on a visit to China, shall not suffer their minds to be wrapt in a piece of nankin, or sunk into a catty of tea, but, soaring above their daily mercantile occupations, will seek for rest and diversion in the acquisition of information, and the collection of plants, for the benefit of their native country. I shall close this digression by adducing some new evidences. In a proclamation of George the III. issued from the court of St. James, on the 7th day of October, 1763, and by the authority of a treaty of peace concluded at Paris on the 10th day of February in the same year, his Britannic Majesty, in the second section of his proclamation, expressed himself thus:

"Secondly. The Government of East Florida, bounded to the westward by the Gulf of Mexico and the Apalachicola river; to the northward by a line drawn from that part of said river where the Chattahoochee and Flint rivers meet, to the source of the St. Marys river, and, by the course of said river, to the Atlantic ocean; and to the eastward and southward by the Atlantic ocean and the Gulf of Florida, including all islands within six leagues from the seacoast."

This government being given to Colonel Grant, it was then expected that "rice, indigo, silk, wine, oil, and other valuable commodities would be produced in great abundance."

* In the West Indies this plant would grow to the height of ten feet. Experience has shown the advantages of limiting its height at four feet, by which means the branches, from the earth up, expand, and the plant acquires a stronger body, which, in consequence of its low height, is sheltered from the ravages of a hurricane, or the two heavy load of its fruits,

The English, at that time, knew little or nothing about coffee,* hence they did not mention it in their enumeration. Some time after, an English gentleman of fortune went to establish himself in East Florida. His labors were crowned with success both in the culture of coffee and sugar canes; and his establishments were already considerable, when the American revolution, in its effects, made Florida pass into the hands of Spain. The British Government finding Mr. Smith, or some such name, (for although this is an historical fact, yet, not having the book in which it is stated before me, my memory has not, perhaps, retained the true name,) had so far succeeded, would not allow him to remain there. They carried him off with his slaves, and destroyed everything he had planted; for which loss and damages the British Government awarded to him a considerable sum. Besides these, travelers, who have visited that country, assert to have seen coffee plants in several places, not cultivated for profit and revenue, but as a curiosity, the intrinsic value of which seems to be unknown to those who have planted them.

Mr. Carver† says, "So mild is the winter that the most delicate vegetables and plants of the Carribee islands experience there not the least injury from that season; the orange tree, the plantains, the guava, the pine-apple, &c., grow luxuriously." Fogs are unknown there, and no country can, therefore, be more salubrious." Mr. Wm. Stork, in his description of East Florida, gives the following account of it: "The production of the northern and southern latitudes grow and blossom by the side of each other, and there is scarcely another climate in the world that can vie with this in displaying such an agreeable and luxuriant mixture of trees, plants, shrubs, and flowers. The red and white pine and the evergreen oak marry their boughs with the chestnut and mahogany trees; the walnut with the cherry; the maple with the campeach, and the braziletto with the sassafras tree, which, together, cover here a variegated and rich soil." "The wax myrtle tree grows everywhere here." "Oranges are larger, more aromatic and succulent than in Portugal. Plums naturally grow finer and of a quality superior to those gathered in the orchards in Spain. The wild vines serpentine on the ground, or climb up to the tops of trees. Indigo and cochineal‡ were advantageously cultivated there, and in the year 1777, produced a revenue of 200,000 dollars."§ In fine, I shall add, that this country will produce all the tropical fruits and staples by the side of those belonging to a northern climate.

Having, I presume, adduced sufficient evidence in support of the position I have taken, and demonstrated that coffee, cocoa, and sugar canes will grow everywhere in East Florida, as well as vines, olives, capers, almonds, &c., and that vines may likewise be successfully cultivated as far north as the Patuxent, in Maryland, I shall now take a separate view of each of these rich productions, and, from accurate knowledge, give a statement of the proceeds of a man's yearly labor. In this statement, I shall allow but one-half of the work which experience shows a man easily does; ¶ and their moderate calculations being at no time liable to deceive our expectations, we may, with more certainty, form a proper estimate of the advantages or disadvantages of those cultures, and whether we are not to be benefitted, both as individuals and as a nation, by immediately undertaking the grand work, or leave all the riches accruing from it to those who already enjoy them.

It cannot be expected that I shall enter into the particulars and minutia of the culture

* At this period coffee had not yet been cultivated in the island of Jamaica, as is proved by a representation made about the year 1770 to the court of St. James by the planters and merchants residing in that island, and comprehended in seven chief grievances, the seventh of which I subjoin here:

"That cocoa, or chocolate nut, which was heretofore one of the principal commodities of this island, is now lost by the heavy duties that are laid upon it; and probably our sugar, rum, ginger, &c., must have the same fate if not timely remedied. And, as we have just now begun to plant coffee, we hope for a bounty to encourage that plantation on our sending it to England; at least that there might be no duties laid upon it."

† Universal Traveller, page 604.

‡ I do not understand the raising of it, which is immensely productive, but I know that the neighborhood of Pensacola is the place where it will produce much.

§ In the year 1804, I was east upon the southernmost point of East Florida, and although it was in the month of February, I beheld that country covered with green trees and flowers, the image of an everlasting spring.

¶ Coffee—2 acres to each man. There is no tilling or hoeing; the only labor is to prevent grass from growing between the plants, and the picking up of the fruits, which is the most laborious; otherwise, a man could easily take care of five acres of land.

Cocoa—4 acres to each man. There is no culture whatever; the labor is in cutting off the nuts and drying the fruit.

Vine—5 acres to each man. Which are to be ploughed three times a year. In cutting off the fruits, or vintage time, additional hands are necessary.

Olives, capers, almonds, need no culture; hands are necessary only to get crops in, and extract the oils.

and preparations of those commodities. My intention, at present, is not to teach, but to enlighten the mind on a subject foreign to the present agricultural pursuits of our citizens. A work, describing every particular, would, at this stage, excite curiosity, without promising any real advantages. Such a work I shall cheerfully undertake when I see that spirit of enterprise which characterizes the American people roused and elevated to that degree of national pride and grandeur as shall warrant its publication.

First statement, on Coffee.—One acre of land planted by ranges, and the plants at 5 feet distant from each other, gives 1,764 plants. A man can take care of two acres, which gives 3,528 plants. Each plant may, by an average, yield 2 lbs. or more; but I reduce it to one pound: therefore, a man will give, yearly, 3,528 lbs. of coffee, which, at 25 cents, produces \$882 dollars.

It is to be observed, that no crop is to be expected on the first and second year; on the third year the plant yields a good crop, on the fourth an abundant one, which it will continue to yield every year until the ground is exhausted and the plant dies. For the two first years of the planting, all kinds of vegetables and corn may be planted between the ranges—they will yield two crops in one year; cotton is not to be planted between the ranges.

Second statement, on Cocoa.—Four acres of land planted in rows, and the trees at ten feet distant from each other, give 1,764 trees. A man is capable of taking care of them and of gathering the nuts. At seven years of age, each tree will yield two lbs., and the quantity will increase with its age; therefore, a man will gather 3,528 lbs. of cocoa, which, at 15 cts. per lb., will produce \$529.20.

This cultivation, differing from all others, requires some illustration. It was formerly thought that its culture required much labor and a virgin soil; but experience has shown that it grows on land half exhausted by the coffee plant, and in less than twelve years time, acquires such power as to destroy the coffee underneath. Hence, it is now planted between the ranges of coffee, when this last is about seven years of age; so that when the land would otherwise become a mere waste, requiring a hundred years for forests to rise on it again ere it could recover its first fruitfulness, the same land being again covered by a new forest of productive trees, the fruits of which growing and maturing all the year round, each day brings in its crop. I could not select a more proper place to state, that it seems that Providence, in its wise dispensations, intended the cocoa tree should be the means of quickly renewing the soil exhausted by other productions. It is a fact known to myself alone, at this moment, because he who made the successful experiment, Mr. Berlie, and those who were eye witnesses to it, were, by the bloody effects of St. Domingo's regenerating system, doomed to an untimely grave, and I am the only survivor. The fact is this: Mr. Berlie, a planter on the high land of Donna Maria, had planted, after the coffee had exhausted his land, the whole of his estates with cocoa trees. This answered well; but as coffee became more productive, he thought of making an experiment—which was to cut down twenty acres of cocoa trees, setting them on fire in the same manner as is done in clearing new land, and planting them again with coffee; it was found that coffee grew more beautifully than it had done before. The cocoa trees, when cut down, were twenty-five years old.

The extraordinary effects of the cocoa tree in regenerating the ground upon which it grows may easily be accounted for. This tree seldom attains higher than fifteen feet; it is branchy, its leaves very large, and the body, or stock, of a middling size; the leaves continually falling off the tree, whilst new ones grow, cover the earth with a thick bed of leaves, which allow not even a blade of grass to grow with them. Hence the ground requires no culture, and the trees but a light pruning, when any ravages have been caused by some storm. This constant thick bed of leaves returns to the earth five times more nutriment than the diminutive size of the tree requires from it, and in less than thirty years it brings the soil back to its original fertile state.

Third statement, on Vines.—Having given the proceeds of a man's yearly labor in the plantation of coffee and cocoa, I shall now quit Florida, and enter the territory of the United States.

An acre of land planted with vines, allowing forty-one ranges at five feet distant, and to each range 104 vines at two feet apart, gives 4,264 vines to an acre. Five acres for a man's labor, give 21,320 vines; and allowing the grapes of ten vines to yield one gallon of wine, it will produce 2,132 gallons, which, being rated at the low price of thirty cents per gallon, will produce \$639.60 for a man's yearly labor.

This plantation is the most beautiful and luxuriant in nature: for nothing can equal the fascinating sight of a well cultivated vineyard. And as olives, capers, and almond trees require no particular culture, they may be planted in ranges, at thirty feet distant, in the vineyard, where the mildness of the climate allows the plantation. In Georgia and Alabama these four productions may be raised on the same soil. In a more northern climate the vines must be cultivated separately. So much may be said on this very interesting subject, that it would require more time than I have resolved to bestow on it at present.

I shall only add, that it offers an inexhaustible source of private and national wealth, because these plantations may be made to last for ages.

Fourth statement, on vines, olives, capers, and almonds, planted on the same ground.—Five acres in vines produce, as before stated, for a man's yearly labor,..... \$639 30
175 olive trees, at thirty feet distant, will yield, after seven years of age, about
one gallon of oil each, which, valued at the low price of \$1.50 per gallon, is... 262 50
45 almond trees, } produce, valued at
25 capers do. } \$1.50..... 105 00

70 Yearly proceeds of a man's labor.....\$1,006 80

Review of the above.—I shall now suppose that, in the course of thirty years, we may employ 50,000 persons in the culture of vines singly; they will cultivate two hundred and fifty thousand acres of land, which will yield an annual revenue of.....\$31,965,000
Fifty thousand persons in the culture of vines, olives, almonds, and capers, on
250,000 acres of land, will yield an annual revenue of..... 50,340,000

Total.....\$82,305,000
Cocoa.—Fifty thousand persons engaged in the culture of cocoa, will cultivate 200,000 acres of land, which will yield an annual revenue of \$26,420,000.

Coffee.—One hundred thousand persons engaged in the culture of coffee, will cultivate two hundred thousand acres of land, which will yield an annual revenue of \$88,200,000.

RECAPITULATION OF THE PRECEDING ESTIMATES.

100,000 persons cultivating 500,000 acres in vines, olives, &c., produce..... \$82,305,000
50,000 persons cultivating 200,000 acres of cocoa..... 26,420,000
100,000 persons cultivating 200,000 acres of coffee..... 88,200,000

250,000 persons cultivating 900,000 acres produce.....\$196,925,000
The home consumption of this country may be estimated to be annually about, viz:
Wines, olives, &c.....\$17,305,000
Cocoa, &c..... 6,420,000
Coffee..... 13,200,000

Home consumption.....\$36,925,000
Leaving an immense surplus for exportation to foreign countries, of—
Wines, olives, &c.....\$65,000,000
Cocoa..... 20,000,000
Coffee..... 75,000,000

Exportation.....\$160,000,000

It will then become a matter of policy for the Federal Government to change the existing fiscal laws and regulations with respect to those staples of exports. The citizens paying no longer any duties on those articles which now form the principal revenue of the National Government, duties on their exportations must of course be recurred to. The estimate of which might, perhaps, give the following:

Fiscal Duties.—Which I value at an average of fifteen per cwt. It neither becomes me, nor does it enter into my plan, to trace scales of proportions on matters which must be left to the wisdom of Congress; and in forming that average, I merely have in view to ascertain the probable results of my recapitulation and statement of surpluses; and I find the annual receipts in the several custom houses would amount to \$24,000,000.

There is no reason whatever that can prevent us from employing, in those several cultures at least five hundred thousand persons on eighteen hundred thousand acres of land, which would yield an annual income of \$393,850,000.

And supposing that, on account of our immense produce, we lowered the prices in all the markets in the world even one-third of the low prices at which I have valued them, yet the labors of five hundred thousand workmen would give annually the sum of \$262,566,667.

Considerations of such vast importance are not to be overlooked. We have but to begin the work, and before thirty years are elapsed, more than five hundred thousand European emigrants will be seen crossing the Atlantic ocean to unite their labors and industry with ours; and everything concurring to increase our wealth, power, and commerce, and the Almighty making even the tyrants of Europe subservient to our grandeur, we shall then be the most powerful, as we are now the freest and happiest nation on the globe.

I need not, I think add anything to what I have already said on the importance of the acquisition of East Florida. The simple statements I have given, and it being the only land adjoining the territory of the United States where coffee and cocoa will grow, is sufficiently interesting to excite a laudable desire of seeing it pass into our possession; however, we must be contented with waiting patiently for the final decision of Congress.

To form an accurate estimate of the value set upon those rich productions, we need but peruse the modern history of the nations of Enrope. The whole of Germany, Denmark, Sweden, Prussia, Russia, Poland, and Turkey may be set in a flame by wars, as in the time of Charles the 12th, of Sweden, and yet navigators will nowhere meet with war on the seas; but the moment that France or Spain gets into disagreements with any of the nations of Continental Europe, not only is that section of the world kindled with flame and deluged in blood, but the seas around the globe witness scenes of horror and carnage. And why? Because the present object of warfare is no longer what it formerly was. The acquisition of one or more provinces in Europe cannot move England; but she sets the world on fire to sell her manufactured goods, monopolize commerce, and obtain possession of the French, Spanish and Dutch colonies. These she values more than kingdoms, although she feigns to fight only for the balance of power. Immediately after the peace of 1801, the French government sent armies to recover St. Domingo—the rebels must have submitted—the British ministry calculated the future consequences of such a submission, and Malta, a rocky isle, not worth a shilling in agriculture, suddenly became a pretence for the bloody and long war that ensued. France lost St. Domingo and the Isle of France, and Holland the Cape of Good Hope, Ceylon, &c.* Thus Enrope has fought thousands of battles, and slaughtered six millions of victims on the altar of avarice and commercial monopoly!

Spain, who, for many centuries, has been pursuing the most absurd policy, by discouraging agriculture to foster the working of her silver and gold mines; who has left uncultivated the most fertile land on the face of the earth, and made of her formerly active citizens the most indolent people in the world, is now endeavoring to repair the ruins caused by so blind a policy. Puerto Rico and Cuba are now thought capable of producing ten thousand times more riches than all the mines of Peru. The greatest efforts are at this moment making by that regenerated government to place those two islands in a high state of cultivation; emigrants are encouraged free of expense; thirty-three acres of land are given to each individual; they are fed during the six months immediately following their arrival, and furnished with every necessary tool and instrument of agriculture; they are, besides, free from all kinds of taxes for the space of ten years; and, to such as wish to purchase land, the government sell 330 acres for \$450, on credit of five years without paying any interest; after which an interest of six per cent. is required until perfect liquidation of the whole debt. This enlightened and liberal policy would, in less than ten years, triple the actual revenue of those islands, were it possible to establish a mutual confidence between the Spaniards and strangers;† a confidence which has so many times proved deceptive on the side of the Spaniards, and ruinous for the industrious stranger among them.

A government, founded as ours is on the most liberal principles of political economy, whose very existence is a seal that secures the happiness and liberty of the least of its members; whose policy is to increase the wealth of the nation, and whose chief magistrate is, as it were, placed on a high tower to direct the uncertain steps of the enterprising patriots, and the inexperienced labors of the citizens, must, more than any other government, feel interested in promoting the culture of whatever staples are found capable of increasing the prosperity and commerce of the country. I fondly cherish the hope that the government will eagerly encourage the culture of the productions I have already enumerated. Congress need, I presume, in those things for which they have not had any opportunity of acquiring practical knowledge, but to be made acquainted with the importance of those plantations, by those whose long experience enables them to communicate these useful facts. As one of the very few in the United States qualified to discharge this important duty, and being acted upon by those mighty considerations which work so powerfully

* The British Government, notwithstanding the immense profits accruing to the nation from the rich commodities and staples produced by its colonies, look upon them as mere marts for the sale of manufactured goods, or stations for its numerous ships of war. The virtuous pursuit of agriculture (out of the limits of England) is cramped in all its efforts for the purpose of giving employment to the corrupted rabble of its manufacturing cities; to enrich ship-builders and ship owners; to protect privileged companies of monopolists; to oppress the industrious artisans; to drain the purse of the affluent, and multiply the number of paupers. Hence, the interests of the colonists have seldom been attended to. Their colonial system is so bad that it seems to have been framed by an avaricious company of ship owners, whose chief object was to force the growers of sugar and coffee to load their ships and pay them a heavy freight. A grower of coffee is oppressed by the existing colonial system, and the crown again oppresses the consumer; for no man in England can roast his coffee as he pleases; he must buy it from a monopolist.

† This new colony of Fernandina de Xagua is not likely to succeed, although upwards of two thousand emigrants have already repaired there. I know the person who acts there as a chief for the Spanish Government, and know, also, that his exactions will ultimately ruin that establishment.

on the head of a true citizen, I respectfully submit, for the consideration of the President, the Senate, and the House of Representatives of the United States, the outlines of a project for effectually encouraging the plantations of vines, olives, capers, almonds, coffee, cocoa, &c., &c.

The first preliminary steps to be taken in order to carry the proposed plan into execution, must be the securing of East Florida, the southern part of which may be planted in coffee and cocoa, and is, in fact, worth twenty times more than the swampy land claimed by the United States, west of New Orleans.

This being obtained, several considerations of a primary nature offer themselves to the mind; for, although every citizen is free to choose his culture, yet it is not in the power of every one wishing to cultivate those rich plants to procure them at the moment they are wanted. Hence, when citizens are left without a helping hand, discouragement ensues, and what may be effected in three years by the fostering hand of government, may require a century when left to the discretion and impotence of inexperienced individuals. They must be guided; they must be taught; they must have a place where they will apply for plants, and also acquire that information which no book can give; they must be dissuaded from cultivating the aboriginal grapes, which, though they might prove of an excellent quality, are not worth the trouble of a trial; because, however productive they might be found in the end, yet, it would require more than forty years' culture before they could attain that delicacy of softness and perfection which ages of culture and care alone can give. The government, by means of its numerous consuls, may procure the first qualities of plants and seeds. From France and Italy, the best qualities of vines, olives, figs, capers, and almonds. From Madeira and Portugal, their spirituous and astringent vines. From Samos, Chio, Candia, and Cypress, their sweet, delicate, and restorative cordial vines. There is a great analogy between men and plants. Man must be subdued by the slow progress of knowledge to the rule of civilization ere he attains that superiority of intellectual and spiritual ideas which bespeaks him to be a being inferior to God alone; plants obtain their perfection only in proportion as man improves his mental powers, and labors to raise them to the height of his intellectual faculties. Five ages have passed away, and yet the man who inhabited the soil which we at this day tread on, is still a fugitive in the deserts; all our efforts to overtake him and make him a civilized man, have proved fruitless; he prefers death to civilization; he flies off, avoids our meeting, and, before long, it will be said, "here were once innumerable nations of warriors that have vanished away"—a disappearance that will confound the sagacity of future philosophers, because they will know man only in his civilized state, and shall nowhere find that being in the simple state of nature.

I beg to be excused for these fugitive ideas; they have forced themselves on my pen. I resume my subject. From Cuba, in less than twenty-four hours, we may receive as many coffee seeds as we want. From the western part of St. Domingo, say Donna Maria, or from the Spanish Main, in the province of Venezuela, say Caraccas and Maracaibo, we may obtain the nuts that will afford the necessary seeds.

These preliminary remarks bring me to the conclusion, which I shall improve, by humbly offering to Congress a plan for effectually encouraging the plantation of the forementioned valuable staples.

1st. That it is requisite for Congress to allot one thousand acres of land, to be selected by a proper judge, for the purpose of establishing a grand national nursery of those rich plants.

2d. That it is of the utmost national urgency, that, under the superintendence of the President of the United States, this establishment should be instantly commenced, and that the President should select such person or persons as shall have given undoubted proofs of their qualifications, to conduct and superintend the establishment.

3d. That, to the end of immediately enabling this establishment to furnish the citizens with the necessary plants, fifty thousand dollars ought to be appropriated for the perfect and quick execution of the object in view.

4th. That the President of the United States be authorized to appoint a proper person to go as agent to Europe, to select those plants and species of vines that are known to be most productive both for quality and quantity; or otherwise, to empower the consuls in those several countries to procure and forward the plants and seeds requested, and to make a necessary distinction of species in the several plants in order that none but the very best should be introduced into America.

5th. That as coffee will, three years after it is planted, cocoa five years, vines four years, olives, capers, and almonds, seven years, produce sufficient seeds and vines to supply every demand, these should, on the first reception of the several plants and seeds, be cultivated in the establishment on a large scale, with a view, first, to multiply the plants and seeds, and to increase the nursery, which may also be commenced immediately. 2d. To form a school for the culture and management of those plants, where every citizen should have the privilege of repairing to acquire those informations and practical knowledge that no book extant can give.

6th. That, with a view to discountenance idle demands, and thereby prevent the wanton waste of these plants, a thing which would frequently happen if they were given gratis, the chief director, acting as superintendent of the establishment, should be authorized to sell them to individuals at the following rates:

Coffee plants, 2 cents apiece; cocoa plants, 3 cents apiece; vine plants, 3 cents apiece; vines, 1 cent apiece; olive plants, 100 cents apiece; capers and almonds, 75 cents apiece; which would yield a revenue which, in six years, would repay the government the fifty thousand dollars expended in the establishment, and leave a benefit of upwards of one hundred thousand dollars.

On the seventh year the demand for coffee and cocoa plants will begin to decrease, because they will be procured from every individual who shall have already planted them. For ten years more the vine plants and vines will be in great demand, when they will decrease; and the olive, caper, and almond plants will, for twenty-five years longer, continue in great demand, when the establishment, as a nursery, will cease to be productive in this high degree.

Thus, having afforded the means of planting the best species of vines in the world, we may, ere ten years have elapsed, produce wines equal in quality to any in the world—a quality which will vary according to the climate and soil where they may happen to be cultivated. It is a general, and yet very wrong impression, to think that vines will grow only on such and such soil. Vines grow even on the worst land, and steepest hills and mountains, in cold and hot climates. Hence proceeds the great difference in qualities. On clay and very poor land, such that no other productions can grow, is made those common wines which, being unfit for exportation, are distilled into brandy; for it requires seven casks, or 420 gallons of wine, to get a pipe of brandy of 90 gallons.

What I have stated in the preceding sheets will exhibit, in a strong point of view, the importance of establishing a national nursery in order to promote, foster, and effectually afford the means of successfully cultivating, on a large scale, these highly rich productions, which, in less than twenty-five years, will double the actual revenue of the country, create new and inexhaustible resources, invigorate commerce, and render it at times flourishing, by the exportation to foreign countries of our vast surpluses.

Considerations of such magnitude as these will, I have no doubt, operate powerfully on the minds of our legislators, whose honorable mission is to mature plans, form schemes, and ensure, by wise laws, the happiness, prosperity, and glory of our country. And if it be not considered a departure from that reverence which a private citizen owes to the chief magistrate and representatives of a whole people, to dare impart to them ideas on subjects till now foreign to the sphere of their legislative labors, I hope that I shall not be thought too presuming to approach them with diffidence and respect, and entreat them to grant a moment's attention to the contents of these sheets. Should they prove worthy of those to whom they are respectfully submitted, I shall esteem myself honored for having thus far been instrumental to the increase of the wealth of the nation, and contributed a share in her welfare and prosperity.

PETER STEPHEN CHAZOTTE.

NORTHERN, CENTRAL, AND SOUTHERN FLORIDA.

In addition to the general information in regard to Florida, now easily attainable from various recent publications, every immigrant who has determined to establish a home in the State, or select a locality adapted to the prosecution of his own particular business, or to the furtherance of his own special enterprises, will desire a more particular and detailed account of the capacities and characteristics peculiar to the different counties or sections, as preliminary and necessary to a judicious location.

An effort was made to provide fully for this anticipated and natural demand by securing from intelligent citizens of each county well-considered and reliable descriptions of their own localities. But the attempt was only partially successful; for while this request for statistical and other information was most courteously and ably responded to in some instances, as will appear from the following pages, still, from many counties no response whatever has as yet been made.

Hence, while hoping to receive such responses for use in a future edition, it has been necessary to group together various counties, nearly alike in characteristics, and apply to a complete group, so far as practicable, the descriptions of counties from which local descriptions have been received, so far as they are typical of the entire group.

Florida is usually described as composed of East Florida, or that portion of the State between the Atlantic and the Suwannee River, comprising the whole of the peninsula; Middle Florida, extending from the Suwannee to the Apalachicola; and West Florida, comprising the territory west of the last named river. This division, suggested probably by the existence of the distinctly-marked natural boundaries furnished by the rivers named, may be well enough for the purposes of a general description; but a different division suggests itself, as better adapted to the purpose of an agricultural description of different sections, whose characteristic productions would be determined in the main by their special climatic conditions.

Accordingly, in attempting to give that sort of practical information that would be serviceable to actual settlers, and best enable them to make satisfactory locations, a different mode of territorial division will be adopted, and, for the purpose of properly grouping the counties with special reference to those climatic conditions which control and determine their vegetable productions, the State will be included in the three divisions of Northern, Central, and Southern Florida.

Northern Florida will be considered as constituted from all the lands lying north of the parallel of 30 deg. N. latitude; the territory included between the parallel of 28 and 30 deg. N. latitude will be styled Central Florida; and all south of 28 deg. will be considered as composing South Florida.

Thus apportioned, a general account of each division will be given, accompanied by such local descriptions of the different counties as I have been able to procure, and reference will be made to individuals in the several counties, from whom further and more particular information can be obtained.

NORTHERN FLORIDA.

Northern Florida extends from the Atlantic Ocean, on the east, to Perdido river, on the west, a distance of three hundred and seventy-five miles, and has an average breadth of some forty-five miles, and is composed of the counties of Escambia, Santa Rosa, Walton, Washington, Holmes, Jackson, Calhoun, Gadsden, Liberty, Leon, Wakulla, Jefferson, Madison, Taylor, Hamilton, Suwannee, Columbia, Baker, Bradford, Nassau, Duval, Clay, and the northern part of St. Johns county.

The climate of this section, as a whole, may be said to be mild, verging upon warm. All extremes of temperature are essentially modified by the prevalence of daily winds from the Ocean or Gulf of Mexico. The eastern portion, probably from the influence of the Gulf Stream, has a milder and more agreeable climate than that west of the Suwannee and in winter suffers less from the cold northerly and northwesterly winds that occasionally prevail. But through the whole section, so equable is the climate, that although ice may be formed two or three times in the course of a year, the thermometer very seldom falls below 35 deg. in the winter, or rises above 90 in the summer. There are occasional frosts, but during four-fifths of the winter season, the prevalent temperature is that of the mildest Indian Summer at the North and West.

The surface of Northern Florida varies from the somewhat tame and monotonous levels of Eastern and Western Florida to the undulating and uneven lands of the middle portion, and gives a much wider field for selection than is commonly supposed, although extreme elevations are entirely wanting. Many strangers, who only make a personal inspection of the St. Johns region, and go away complaining of the tameness of the scenery, the lack of variety in the landscape, and the sluggish movement of the streams, would find in the valley of the St. Marys a deep and somewhat rapid stream, inclosed between picturesque bluffs and high banks in the midst of a rich and fertile territory. The same is also true of the Suwannee, the Chipola, and other rivers.

From Hamilton county on the east, and Holmes on the west, the intermediate section is undulating, and in some parts quite broken; many portions of Jackson, Gadsden, and Leon counties, in particular, bearing upon their surface a strong resemblance to the less hilly portions of Pennsylvania, New York, and New England; and thus is afforded in Northern Florida a variety of surface, consisting of sandy plains and "flatwoods," or an alternation of hill and vale, from which the divers tastes of different individuals can be easily gratified.

The soils of Northern Florida are as varied as is the surface. To the east is found a light and sandy soil, with a subsoil varying in depth, of clay or marl. In the west the poorer soils are sandy, while the better are loamy in character. In the middle, or section commonly called "Middle Florida," strong clay soils are often to be met, as is especially the case in Jackson, Gadsden, and Leon counties.

It is undeniable that here, as in the State generally, there is a good deal of light and poor soil; but it is equally true that as rich and productive lands exist in Northern Florida, and, when considered with reference to the value of the staple crops, as productive and valuable lands, as can be met anywhere. The first year's crop of cotton and corn has in

more than one instance, repaid the purchase price of a plantation, and that an old one, and cultivated without manure.

From the broken and uneven surface of the middle counties on the north, and from the comparative coolness of the climate, this division of the State is better adapted than either of the others to what is understood by ordinary "farming," as contradistinguished from "planting," so called. Hence there is a greater diversity of the crops usually raised in the Northern and Middle States than can ordinarily be found in the other divisions. Here, instead of depending mainly upon the avails of a single crop, as is usual with cotton, rice, and sugar planters, there is more of what is understood by the term of farming, and each cultivator aims at raising his own supplies as far as practicable; and cotton, corn, cane, wheat, rye, oats, hay, potatoes, and tobacco, are often, and indeed commonly, made by each individual farmer.

The staple crops may be said to be corn, cotton, tobacco, rice, cane, Irish and sweet potatoes, and oats.

The principal fruits are peaches, figs, grapes, oranges, though many others are raised. The apple and pear do not generally flourish, except along the St. Marys River, (which is one of the best fruit regions in the whole South,) and in the strong clay soils of Jackson, Gadsden, and Leon counties. The peach and fig thrive everywhere, and mature several weeks earlier than in the States lying north. The orange is grown throughout this division, the crop increasing in security as you go south; but very fine oranges are raised in the northern counties, although, when young, they should have some protection. No better oranges are raised in Florida than those produced in Liberty, Calhoun, Wakulla, and Washington counties, and the world can show no better oranges than the best raised in this State.

This whole division is remarkably well watered. In addition to the numerous rivers, the Perdido, Black Water, Escambia, Econfina, Apalachicola, Chipola, Ocklockonee, Aucilla, Suwannee, St. Johns, St. Marys, and Nassau, and the multitude of smaller streams, nearly the whole region is abundantly supplied with springs, while good water is easily obtained in wells of little expense.

The timber of the region is abundant. The supplies of pine and cypress are apparently inexhaustible; while hickory, oak, ash, cedar, magnolia, and red bay are found everywhere.

Game and fish are found everywhere in good supply. On the coasts, oysters and turtle abound. They are both abundant and good on the east coast; but the oysters of St. Andrew's Bay, on the West, are not surpassed for size and flavor, and are exceedingly abundant.

So much will suffice for a general description of Northern Florida, as a whole, and for more particular information, reference is made to the local descriptions of Jackson, Wakulla, Gadsden, Leon, Clay, Suwannee, Madison, and Columbia counties, which are subjoined.

WAKULLA COUNTY.

CRAWFORDVILLE, Fla., July 16, 1869.

Hon. J. S. Adams.—Sir: I did not see nor hear of your circular of the 16th of November, 1868, until I received your pamphlet during the extraordinary session of the Legislature, and believing that Wakulla county offers extraordinary inducements to immigrants, and wishing to see it immediately settled with citizens, good and true, I will venture to write the following communication for your consideration:

Wakulla county is bounded eastward by Taylor county; northward by Leon county; westward by the Ocklockonee river; and southward by Ocklockonee Bay and the Gulf of Mexico. From the eastern boundary to the western, it is near forty miles, and from the northern boundary to the southern, it is from fifteen to thirty miles. Wakulla county has a voting population of about five hundred, two hundred and seventy-five of whom are white, and two hundred and twenty-five are colored and black. The African tide is ebbing, and the indications are that the county will be Anglo-Saxonized.

Crawfordville, the county site of Wakulla county, is at or near the centre of the county, and of the population. It is an eligible location, very. The water is pure and cool, and health good. It has a flourishing school and church, indispensable auxiliaries to greatness and goodness. The Crawfordville Lodge is a reticent conservator of Peace and Union.

Crawfordville is twenty miles from Tallahassee, twelve miles from St. Marks, ten miles from the nearest depot on the railroad, and eight miles from the nearest landing on the Gulf. St. Marks has well-established weekly steamship communication with all the gulf ports in the State, and with Havana, Cuba; and it is connected by rail with Jacksonville, Fernandina, and Savannah, on the Atlantic.

The eastern division of the county lies low, and comes under the caption of "flat woods;" but the greater portion of it is high and dry enough for cultivation without ditching, and with proper preparation and cultivation, the whole of it is productive, and having a doubly durable foundation of lime-rock and clay, it will endure for ages. The central division is

also level, but more elevated and beautifully intermixed with alternate sections of pine, oak, and hickory and hammock. The greater portion of the population is in this division of the county. The western division is slightly descending, and decidedly undulating, with alternations of piney woods and bays, and the bays generally have greater altitude than the piney woods, and are, therefore, susceptible of easy and thorough drainage. In 1860, at my instance, Dr. Daniel Lee visited two of the most noted of those bays—one for the excess of sand in the soil, and the other for the seemingly total destitution of sand therein—selected samples of bay earth, and subjected them to a rigid chemical analysis, and reported to me the following results:

"In one hundred parts of the sandy bay soil I found of

Organic, combustible substances,.....	9.86
Mineral matter,.....	90.14

"The last named contained,

Silica and silicates as sand,.....	86.35
Alumina, (the basis of clay),.....	2.26
Oxide of Iron,.....	.43
Chloride of Lime,.....	.95
Sulphate of Lime,.....	.05
Sulphate of Magnesia,.....	.03
Chlorides of Potassium and Soda, Phosphate of Lime, and loss,.....	.07

"This soil has an excess of sand, and is deficient in alumina or clay, and the compounds of iron, which render clay either red or blue. But as the vegetable matter is both deep and abundant, it will produce well. There is no lack of lime in any of the bays. There is very little difference in the surface and subsoil of the rich bay. Much of the vegetable matter is thoroughly rotted, and exceedingly fine humus. When thoroughly dried, it has great power of imbibing moisture from the atmosphere, (is very hygroscopic.) Dried at the temperature of 212 degrees, 1,000 grains carefully burnt gave 132 grains of incombustible ashes and earthy matter; 100 grains of this contained:

Silicates and Silica, (very fine),.....	95.15
Alumina, (basis of clay),.....	2.42
Oxides of Iron,.....	.63
Carbonate of Lime,.....	1.38
Sulphate of Lime,.....	.06
Chloride of Calcium and Soda,.....	.05
Potassium and Phosphate of Lime,.....	.04
And loss,.....	.07

"As in a bank of rotten corn stalks or wheat straw, there is an excess of vegetable matter in this bay soil; and possibly may take some time to reduce it to a fruitful condition. It is an immensely rich bay."

Dr. Lee is a native of the State of New York, was for many years editor of the *Southern Cultivator*, and was, at the time of making this analysis, Professor of the Agricultural Department of the State University of Georgia. I have discussed this question by reason of its great importance. There are tens of thousands of acres of immensely rich bay lands in Wakulla county that are susceptible of easy drainage, the soil of which is from ten to twenty feet deep. Wakulla county is rich in timber suitable for lumber, naval stores and domestic purposes generally. The yellow pine, large and long, abounds in every section of the county; sweet bay, cypress, and black gum in the bays; sweet gum, live oak, white oak, hickory, ash, mulberry, cherry, magnolia, and Florida mahogany in the hammocks.

There is no lack of rivers and creeks with sufficient fall and calibre to drive machinery. There are seven grist mills and one saw mill in the county, six of which are water mills, and three of them are within two miles of Crawfordville. Lumber is worth fifteen dollars per thousand feet, and corn meal one dollar per bushel at the mill. Every section of the county is bountifully supplied with either branches, small lakes, or ponds for stock. For drinking, the citizens generally use well water, a few spring, and fewer still, cistern. The drinking water, in some sections, is affected by rotten limestone; in other sections it is only slightly impregnated with lime, but mainly, it is entirely free from lime, cool and sweet. The wells are from twelve to twenty-five feet deep. Two hands can dig and curb a well in two days.

Grazing is good throughout the county, especially in the eastern and western divisions, and on the gulf coast. Stock of all kinds does well, and cattle and hogs especially are remarkable for their precocity. It is not unusual for heifers of two years to have calves. Bear and deer are abundant in the remote and solitary recesses, and turkeys, foxes, coons, cats, &c., are in every man's plantation. The woods abound with wild honey. Domesticated bees are profitable. Bee stands are worth one dollar each; honey sixty cents per gallon.

It costs a good deal to clear hammock land, and but little to clear pine; but I am not advised as to the actual cost of either. There is cleared land enough in this county for

the present. Wakulla county is covered almost entirely by what is known as the "Forbes Purchase," so there is very little government land in the county, and that little is of very little account. The superabundance of timber contiguous to any suitable place to build, and the cheapness of labor, would enable one to build a comfortable log house for one hundred dollars. A cart-load of lightwood will reduce a cart-load of oyster shells to lime, and the lime and sand well mixed, wet with water, moulded into proper shape, and dried in the sunshine, make good brick. A few clay brick, kiln-dried, are necessary for the hearth and back—perhaps seventy-five to the chimney. The lime and sand brick will endure unto the end in the body and funnel of a chimney.

I have yet to see the man who will acknowledge that he lives in a sickly place; but intermittent and remittent fevers are not strangers in some localities, even in Wakulla county. But the county, all in all, is certainly healthy, and the acclimated citizens enjoy almost uninterrupted health. Mosquitoes are numerous only on the gulf coast, and along the line of the rivers. I have not had occasion to put up my mosquito bars for years. Gnats and fleas annoy a little in the spring, but disappear on the approach of summer. Not many snakes.

Aside from the equinoctial winds incident to all tropical climates, this county is less liable to storms than any with which I am acquainted.

Mr. A. P. Tully, a gentleman of the highest integrity, reports that he produced last year, from one acre and three-eighths, accurately measured, thirteen hundred and twenty pounds of dry sugar, and five hundred and twenty-five gallons of syrup; of sweet potatoes, four hundred and fifty bushels per acre; of corn from old land, without manure, an average of the entire crop, only a fraction short of twenty bushels per acre. Mr. Tully's plantation is within one mile of Crawfordville. Major M. Braswell produced on his plantation, four miles from Crawfordville, some years since, from one hundred measured acres of natural land, (not a bit of manure was used,) one hundred bales of short staple cotton, averaging five hundred and twenty-five pounds per bale; of corn, forty-five bushels per acre, with only one plowing and two hoeings. This I know to be true. But these results are above the average.

For the want of enterprise, or from a consoling confidence in the capacity of the native soil, the planters of Wakulla have not manured their lands, notwithstanding mines of muck and marl, accessible and inexhaustible, abound in every section of the county. The planters usually guess at the acres in cultivation, and the pounds, bushels, or gallons produced per acre, and, therefore, I cannot say with definiteness and certainty how much the native lands will produce per acre, but the following will approximate it: Of short staple cotton, from two to five hundred pounds of lint per acre; of long staple, from one to three hundred pounds; of corn, from ten to forty bushels; of sweet potatoes, from three to five hundred bushels; of pindars, from forty to eighty bushels; of syrup, from three hundred to four hundred and fifty gallons; of rice, from thirty to fifty bushels, (rough); rye, oats, and Irish potatoes pay well; cow peas, chufas, &c., first-rate; melons, (water and musk,) pumpkins, and all garden vegetables are produced in such profusion, and to such perfection, and with so little attention, that it is impossible to appreciate them. Figs, plums, pomegranates, and peaches are produced to perfection; apples, only so-so; orange trees require protection from the cold only a few years. There are some small sweet orange groves in the county that bear astonishingly.

Labor is abundant, and can be obtained at from fifty to seventy-five cents per day, or from ten to twelve dollars per month, with rations. Good farm horses and mules are worth from one hundred to two hundred dollars each; stock cattle from five to six dollars per head; stock hogs, two dollars; sheep, two dollars, and goats, one dollar and twenty-five cents.

Large tracts of land in eligible sections, much of them very rich, with improvements thereon, can be purchased at from two to five dollars per acre. In some localities, more or less desirable, lands, with improvements, can be purchased almost at purchaser's own price.

Prior to 1860, turpentine was a lucrative avocation in this county, and there are pine trees already boxed, by sections, in localities convenient to shipping. One hand can chip and dip four thousand boxes, which will yield about two hundred barrels of crude turpentine, worth in *ante bellum* times two dollars per barrel. Tobacco, too, was a remunerative crop; speckled tobacco, soft and silky, good as any ever produced in Gadsden county or in Cuba, was produced in this county, where there are now many thousands on thousands of acres of wild hammock suited to its production. The concultivation of tobacco does not conflict with the cultivation of other crops, but it is almost impossible to strip the fodder from a full crop of corn without neglecting the tobacco. Five hundred pounds of speckled tobacco is a good average per acre.

I believe there is not a vineyard in the county; but a single scuppernong vine in the neighborhood is reported to have produced twenty-five or thirty bushels of grapes last year. Wild grapes are at home in Wakulla. Broad acres of wild hammock and "scrub"

lands are clad with vigorous vines, brimming with clusters of grapes, large and luscious, and the superabundance and great variety of wild grapes of a superior quality, and the wonderful production of scuppernong vines, are indications amounting almost unto a demonstration, that the climate and soil of Wakulla are admirably adapted to the production of grapes generally.

Your pamphlet, Mr. Adams, is worth more to Florida than your salary, and Floridians and immigrants to Florida will not be slow in acknowledging their obligations to you for the invaluable developments therein. The demand for your pamphlet is very great right here in Wakulla county. I could wish that the State was "sowed down" with it. It will do great good anyhow. Men of gravity and wisdom, and verdant men, who never planted a fig nor grape cutting, having heard of the astonishing productions of wine, raisins, figs, &c., as promulgated in your pamphlet, are now calling for cuttings.

Along the line of railroad from Tallahassee to St. Marks, tons on tons of lime could be burned at a relatively nominal expense.

Fisheries are established all along the gulf coast, and from more than one of them I have seen one hundred barrels (two hundred and fifty mullet to the barrel) of mullet captured at a haul, with a seine not exceeding two hundred yards in length, and manned by less than a dozen men. Mullet are worth ten dollars per barrel on the beach. Think of it! One thousand dollars at a haul. Mullet "run" in fishermen's phrase, in schools near the shore from the first of October to the first of December, and ten or twelve hands, with seine and boat, can capture five hundred to one thousand barrels within the brief period of eight weeks. About one-half the mullet have yellow roe, which are in great demand at a higher price per barrel than the mullet. Headless mullet only are packed; and mullet heads, by boiling, yield an oil equal to lard for frying fish, and superior to any other grease for leather. The entire gulf coast is ridged with oysters.

The Newport Sulphur Springs are worthy of consideration. Before the war, scores of invalids resorted to these waters, many of whom were entirely restored to health long lost, and many more were greatly improved. These waters are preventive of debility, the forerunner of dropsy, and of physical disorganizations generally; and curative of dyspepsia, rheumatism, neuralgia, etc.

There are some interesting places for sale in the vicinity of these famous springs, and those who may desire to take a look at them are directed to Daniel Ladd, a pioneer to Florida, and one of the most enterprising and useful citizens in the county. Mr. Ladd resides at Newport. The Wakulla Spring has a puff (good one, too,) in your pamphlet, and yet another spring in Wakulla county is remarkable for its medicinal virtues—a chalybeate spring, ten miles from Crawfordville, near Major James W. Smith's residence, in clear sight of the gulf. The waters of this spring is said to be a panacea for chronic diarrhœa.

And now, Mr. Adams, in consideration of the inducements briefly itemized in this running communication, some of which are the intrinsic value of the native lands, of their relative cheapness, supplies of timber, muck, and marl, and mills, the cheapness of labor, accessibility of immediate and remote markets, proximity to the Capital, juxtaposition with the precious treasures of fish and oysters; and sea breezes, health, schools, churches, societies, civil and social, Wakulla county fills the emigrant's bill.

Last, not least, I am personally acquainted with every white man in the county, and there is not a more law-abiding and Union-loving people in any county of any State in the Union or out of it, than the white people of Wakulla. There are citizens who reside near Crawfordville, in the same immediate neighborhood, who fought bravely on both sides during the late war, others who refused unto the bitter end to fight on either side, others, still, who were persecuted and imprisoned for their supposed devotion to the Federal flag, all living in peace and harmony. I can see no reason why a Northern man should not feel at home in Wakulla county. All upright and honorable immigrants who may come to this county for the purpose of making it their homes, and of assisting in the development of its resources, will receive the most favorable consideration from the citizens generally. I have made it my business to inquire of the leading citizens in every section of the county as to how they would receive honorable immigrants from the Northern States, and all report that they are willing and waiting to extend to all such immigrants the right hand of fellowship.

Yours, &c.,

JNO. L. CRAWFORD.

GADSDEN COUNTY.

(CONDENSED FROM A REPORT TO THE STATE AGRICULTURAL SOCIETY.)

This county is a northern county, between the Georgia line on the north and Liberty county on the south, and between the Ocklockonee and Apalachicola rivers, its centre being in latitude 30.30 north. The surface of the whole county is somewhat undulating and broken, exhibiting frequent hills and vales, and running streams, and gives a variety of scenery larger than is found on the ocean or gulf coasts. The soil is of excellent quality, generally based upon a strong red clay which often crops out upon the surface. In the

best pine, and the oak and hickory lands, this clay subsoil very generally exists within one or two feet from the surface, and probably on this account such lands have an unusual permanence of fertility, and a longer continued responsiveness to fertilization than is common. The hammock lands, where the subsoil is more remote, are of a lighter character, and though perhaps more productive at first, are not as lasting. There is less waste and uncultivable land in this county than in almost any county in the State.

Clay, muck, and mud abound throughout the county, giving ample assurance of unfailing supplies of natural fertilizers, and the value of these resources is now only beginning to be appreciated.

The forest growth is of great variety, but the yellow and pitch pine, suitable for fencing and milling purposes, very largely prevail. The oak ridges furnish the finest supply of red and black oak, post oak, hickory and dogwood, and the hammocks abound in the white, Spanish and basket oak, beach, magnolia, bay, walnut and cherry, and almost every other description of forest-growth that can be named. The pine forests, besides furnishing an ample supply of fencing and building material, affords fine summer pasturage for the live stock, and the hammocks and branches are equally beneficial in that respect in the winter.

Owing to the undulating surface of the country, the lands in this county were never very attractive to that class of immigrants known as large "cotton planters," and hence the county was settled up by men of moderate means and of industrious habits. This circumstance has stamped upon the population more the character of "farmers" than of "planters." With this characteristic they have always produced their own supplies of provisions; and prior to the close of the late war, it was a matter of rare occurrence, that either meat or bread was imported from abroad. The same spirit of independence is still observable in the tone and bearing of the agricultural population of the county, and though cramped in their present means, and suffering under the great change which has so suddenly and unexpectedly occurred in the system of labor, it is a cheering augury, that they are rapidly conforming to their altered circumstances, and fast returning to their former thrift. In a word, the soil, climate, and habits of the population afford all the essential elements of a successful farming community.

From a pretty thorough knowledge of the average productiveness of the soil, the committee are of opinion that to the number of acres planted in cotton, no portion of the State can give a more satisfactory result. And it may be noted that of the amount produced, the Sea Island, or long staple, has always entered very largely into the aggregate. Such was the case before the war, and the indications of the growing crop show that there has been no change in that respect. The experience of our planters has fully demonstrated the fact, that the larger portion of our planting lands are admirably adapted to the production of this valuable species of cotton, and that from carefully selected seed, a fibre is produced, which for fineness, length and strength is not excelled by that produced in any other section of the State.

But the most distinguishing trait in the agriculture of Gadsden county prior to the war, was the great attention which was given to the cultivation of the Cuba tobacco. This culture was inaugurated by a worthy gentleman by the name of John Smith, who emigrated from Virginia and settled in the vicinity of Quincy about the year 1829. His extraordinary success soon induced others to go into the culture, and in the course of a few years, the Cuba tobacco became a staple product of the county, second only, if at all, to cotton. For a number of years immediately preceding the war, the production of this staple within the limits of the county averaged from three to four thousand boxes of four hundred pounds each annually, and readily commanded on the plantations, in cash, from twenty-five to fifty cents per pound. The purchases were generally made by agents of German houses, sent out from New York and Bremen.

The pindar or ground-nut has always been successfully cultivated in this county, but only as food for swine. The tediousness of gathering, and the fact that the gathering season comes on at a time when we are most closely pressed by the picking of cotton, has heretofore prevented it from being adopted as a market crop. There is no doubt, however, that if made a specialty, and resort be had to improved implements for gathering, it could be made one of the most remunerative crops that could be grown. The results in the State of North Carolina fully attest the correctness of this opinion, and in point of soil and climate we certainly have the advantage. But Gadsden county does not rely alone upon her "field crops" for restoration to her former prosperity. A new business has been recently inaugurated, that of "gardening," and if the experiments of the past season afford any indication of the future, she has in that enterprise a most flattering promise of success. One of the first shipments of garden peas that reached New York the past season was sent from the vicinity of Quincy, and the remuneration is well calculated to excite and stimulate the enterprise of our citizens the coming season. On the same parallel with the cities of Jacksonville and St. Augustine, with a soil far superior in productiveness, and with direct and speedy railroad communication, there is no reason why this county may not enter

into successful competition in this line of business. It is an established fact, that cabbage and all the root crops are raised in as high perfection in Florida as in any part of the United States, and a further advantage is that all these products, with the exception of the Irish potato, may be permitted to remain in the ground during the entire winter, without suffering any material injury from the cold. It is also an established fact, demonstrated by actual shipments made during the past season, that vegetables shipped by railroad from Quincy have been delivered in New York on the fourth day after being started.

The public have been educated to believe that the successful raising of the orange is confined exclusively to the banks of the river St. Johns, (the admitted pride of our State,) and to the country adjacent thereto; but it requires only a visit to the Apalachicola river, the western boundary of Gadsden county, to dispel the illusion. The largest and finest oranges that the committee has ever seen or tasted, were raised on the banks of that river. The sameness of latitude, and the great superiority of soil, gives to that locality advantages which cannot be ignored. Since the close of the war great attention is being paid to the planting of the sweet orange and to the improvement and extension of the groves heretofore inaugurated, and the committee are credibly informed, that within the last four months, five thousand dollars in cash have been refused for a grove of one acre in extent. It is within their knowledge that many individuals are now engaged in extending the culture of the sweet orange on the banks of that river, and it is a fact worthy of being noted, that the insect heretofore so destructive to the groves in other sections of the State, have never been known to infest the trees in that locality. This may be accounted for from the fact that the soil is of unsurpassed fertility, which keeps the trees in a healthy and growing condition and renders them invulnerable to the attacks of the much dreaded enemy. The river communication with Columbus, Georgia, affords an ample outlet for all the oranges that can be grown on the banks of the Apalachicola river.

Another source to which we look with confidence for a restoration to our former prosperity, is the cultivation of the Scuppernong grape. This is no untried experiment in this county. The neighborhood of Mt. Pleasant, situated about twelve miles west of Quincy, has been engaged in the cultivation of this grape for many years, and now produces a wine which is pronounced by good judges to be equal to the best of the California productions, and far superior to the great bulk of foreign importations, which are imposed upon us as the pure juice of the grape. Our people are now aroused upon the subject, and in the course of a few years Gadsden county will be as celebrated for the productions of wine as she has heretofore been for that of the Cuba tobacco.

Of the provision crops, the Indian corn, or maize, is the great staple, and is chiefly relied upon as food both for man and beast. In consequence of the great length of our summers, the climate is not as propitious for the production of a large yield as in more northern latitudes; there is no deficiency in the size of the ear, but for the reason above stated, greater distance has to be given to the stalks to guard against the firing of the leaves, and hence there is a diminution of the number of hills to the acre. Upon the lands usually appropriated to the production of this cereal, (unless it has become greatly exhausted,) from twelve to fifteen bushels to the acre is considered a good average crop, though upon first-rate bottom lands, from forty to sixty bushels are not unfrequently realized.

Next to the corn come the various varieties of the sweet potato. It is food for both man and beast, and is esteemed of great value on every well regulated plantation or farm, as affording great relief to the exactions upon the corn crib. It is of easy production, requiring less work than any other crop, and the yield is greater than that of any other crop planted. When properly attended to, and upon suitable soil, from two to three hundred bushels to the acre may be confidently relied upon. The sweet potato may be propagated by planting short pieces of the vines as late as the month of August, after the cultivation of the cotton crop has been terminated, and with one plowing and propitious seasons, invariably affords fine rooting for the hogs in the fall of the year. Indeed, the most of the pork made in the county is fattened in the potato fields.

The cow, or field pea is another valuable auxiliary to the provision crop. It is esteemed a *sine qua non* by every judicious and provident planter, as it is the main reliance for fattening up the stock in the fall of the year. This crop requires no special appropriation of land for its production, as it may always be planted between the hills or rows of corn, without interfering with the yield of the latter. Nor does it require any special or separate cultivation for its production. Upon fresh land, or when the soil is in good heart, it is invariably sowed broadcast and ploughed in at the last ploughing of the corn, and receives no further attention as to tillage. Where the soil is somewhat exhausted, it is best to plant it in hills or drills on each side of the rows of corn at the second ploughing, and this gives it a working when the corn is to be laid by. Rice is also cultivated in sufficient abundance for domestic consumption, and the straw is very highly prized as forage, being far preferable to that of oats or rye. This grain flourishes finely in this climate, and as it delights in moisture, is usually cultivated on lands which are too wet for cotton and corn.

The soil and climate of this county is well adapted to the production of oats and rye.

Both of these grains have always been cultivated with success, and the former, especially, is much relied upon for the support of the plough team. Upon the clay soils, wheat has been tried with satisfactory results, but in consequence of the lack of flouring mills, has never been relied upon as a crop, except by a few. With proper facilities to convert the grain into good flour, a stimulus would be given to the production of this valuable grain, which would soon render the citizens of the county entirely independent on that score.

Sugar cane is also a staple provision crop, is of easy culture, grows luxuriantly on good land, and the process of converting it into sugar and syrup is so simple that but little experience is required to produce a good article. Except in a few instances, it has never been cultivated as a market crop, but it is of rare occurrence that any plantation does not produce an abundant supply for domestic use.

LONG FORAGE—GRASSES AND PASTURAGE.

The blade of the Indian corn is the chief reliance for foraging the horses and cattle of the plantation, though large quantities of hay are gathered on many plantations. The hay thus gathered costs only the labor of cutting and curing. The grass from which it is made (the "crab" and "crow foot") is a spontaneous growth, which vegetates after the crop of corn has received the last ploughing, or the oats or rye have been harvested. The hay from these grasses is soft and pliable, very nutritious, and equal to any imported article. Any land broken up in the spring, and well harrowed, will produce from one to three tons of hay to the acre, and may be cut twice and often thrice during the summer and fall. What is true of Gadsden county equally applies to every part of Florida. Our theoretical agriculturists have long racked their brains and exhausted inquiry, to discover a grass fully adapted to the soil and climate of the South, while we have at our very doors, and as pests to our cultivated crops, two grasses, either of which is fully equal to the velvety "blue grass" of Kentucky, and far superior to the harsh "Timothy" of the north for haying purposes.

Under the stimulus which is being given by the establishment of agricultural associations to the development of new ideas, the day is not distant when the shipment of hay to the South will be about as profitable as "carrying coals to New Castle."

We have never suffered any inconvenience from the lack of pasturage. The grasses before mentioned afford an abundant supply during the summer and fall, and the fields from which the provision crops have been saved, together with the reed branches, which abound in every part of the county, afford a sufficiency for winter and spring. It is found by actual experience that the summer pasturage is greatly improved by breaking up and harrowing the soil previous to the springing of the grass. This stimulates the growth and serves to keep down the weeds.

FRUITS AND BERRIES.

The peach and fig are among our most common fruits, and are produced in great perfection. But little attention has heretofore been given to the raising of the apple and the pear; but enough has been done to prove that there is no lack of adaptation in either soil or climate. Increased attention is now being paid to the introduction of a greater variety of fruits, and we are confident that in the course of a few years, apples, pears, and cherries will be as common as peaches.

The smaller fruits or berries, such as the straw and raspberries, are also cultivated to great perfection, and the dew and blackberry grow spontaneously and in great abundance in every part of the county. Indeed, we see no reason why the cranberry, the gooseberry, and the currant may not be cultivated with equal success, and we confidently look forward to the time, not far distant, when these delicious and highly prized fruits will be abundantly supplied.

CLIMATE AND SOIL.

The climate of this county, and indeed of the entire State, is far more equable than is to be found in higher latitudes. Your committee are not prepared to give the average range of the thermometer throughout the year, but they confidently assert that while the formation of ice is of comparative rare occurrence, the maximum of heat is far below that experienced in New York, Ohio, and the New England States. Your committee have no recollection of ever having seen the thermometer rise to 100 degrees. The attention of one of the committee was especially called to this matter by the reports from those States during the present season, and at no time did either of three instruments consulted, register above 99 degrees, and that only on one day. It is true that our warm weather extends over a much longer period of time than in the States farther north, but the intensity of the heat is never so great as with them, and we are entirely exempted from the sultriness of atmosphere to which they are subjected. Even in what is esteemed the "heated term," we are always relieved during some portion of the day, and almost invariably at night, by the cooling influence of refreshing breezes. This is doubtless attributed to our geographical position, which gives us the advantage of both the Atlantic and Gulf influences. As

appropriate to the subject now under consideration, it is a fact worthy of note, that so far as your committee are informed, a case of "sun-stroke" has never occurred in the county, nor has an instance of "Rabies" or "Hydrophobia" ever been known.

To our geographical position may also be attributed the "dry" and "wet" seasons. It is true that we occasionally suffer from drought, and sometimes from excess of rain, but these occurrences are not periodical, and cannot be anticipated with any degree of certainty. It is seldom that the growing crops are very materially injured by either the one or the other.

JACKSON COUNTY.

Is bounded on the north by the Alabama line, on the east by the Chattahoochee and Apalachicola rivers, on the south by Washington and Calhoun counties; embracing an area of thirty or more townships of land, diversified and varied in quality by location; somewhat undulating, trending to the water-shed, being about thirty miles from east to west, and forty from north to south. The arable lands have a substratum of lime at various depths from the surface, and are classed as swamp, hammock and pine; forming an indistinctly defined line from the stream of water as indicated by name outwardly. The swamp is wet, and subject, to some extent, to overflow; soil alluvial; heavily timbered with gum, oak, magnolia, beech, and bay. Hammock dry; soil loam, with red clay, sand and lime in various proportions; timbered as the swamp, except the gum and bay; these lands are stiff and require heavier cultivation. They are considered intermediate between the swamp and pine. The pine lands are light, easily cultivated and desirable; soil, loam, sand and lime; timbered with long-leaved pine, with oak runner, hickory, buckeye and papaw undergrowth. Lime is an ingredient in all these, also in lands of dissimilar characteristics though of the same nature and class not described, to which all are mainly indebted for their fertility and long endurance. Coarse sand abounds in the soil of some of the lands with the same substrata, but they do not yield well without extensive culture. The lands are level, though the surface is formed so as to prevent the accumulation of stagnant water or large open ponds without outlet.

The Chipola river rises in several large springs in Alabama, flows south nearly through the centre of the county, and empties into the Apalachicola river, or what is known as the "Dead Lakes." This is the main drain or water-shed of the county, except on northwest, west, and southwest, the water of which flows west and southwest into Choctawhatchie river to St. Andrew's bay. The former river is navigable for boats carrying two hundred bales of cotton, and is susceptible of steam navigation by a moderate outlay. The eastern portion of the county is furnished with facilities of transportation by the rivers, forming a boundary line. Drinking water is obtained from wells at various depths and is more or less impregnated with lime, as some large springs find vent to the surface through fissures in limestone. Water is obtained in some localities on and near the surface, which is more or less divested of lime. Wood is abundant and easy of access for any and all purposes. A lime rock or stone is found in many places near the surface, which is used for building chimneys, underpinning houses, furnaces, &c.; it is easily worked.

The atmosphere is more or less humid from the fact of the close proximity to the Gulf of Mexico, which is fifty miles distant, and the same cause gives rise to the diurnal changes, especially in the summer months. The summers are long, with the thermometer occasionally as high as ninety-six degrees; the nights, however, are cool and pleasant. In winter the thermometer recedes as low as eighteen degrees, usually about forty degrees Fahrenheit. The soil is generous and yields readily to the growth of any of the cereals except wheat and rye, which are uncertain. Cotton, sugar cane and tobacco are relied upon for exportation, to which may be added the pea-nut, palma-christi, and other productions suitable to the climate. All kinds of vegetables, except those requiring a low temperature, yield abundantly. The small fruits may also be raised with success. The apple and pear sometimes fruit well, but the climate is not congenial. The orange grows vigorously, and though above its proper limits, occasionally yields a full crop, which is equal in flavor and excellence to those of Cuba. The peach grows well and fruits abundantly of fine size and flavor. The scuppernon grape is in its true element, and excellent wine is annually made from its fruit, which elicited high commendations from connoisseurs, and created an interest in its cultivation that will lead to the most promising results. The only care necessary to raise cattle and hogs to any extent is to provide against *casualties*; the climate being so mild as to relieve from the necessity of shelter and providing food during the winter.

The most desirable lands have been entered or titles otherwise acquired. The price, however, is so small comparatively, that immigrants would prefer lands cleared with more or less improvement. The western and southwestern portions of the county are sparsely settled—heretofore being a cattle range. It is heavily timbered with pine, and abounding in nutritious natural grasses.

The health of the country differs but little from other parts of the State in the same latitude. Not a few people have attained a great age, and specimens to the "manor born" are

as well developed as in any country. The prominent symptom of disease is fever; but it yields readily to medicine, personal care, and circumspection.

Owing to isolation the country has not been settled as rapidly as some portions of the State of far less merit in every desirable essential, except facility of communication by rail, but this advantage is promised to be overcome soon by an extension from Quincy to Pensacola.

Now is the time for persons desirous of acquiring a new home to visit this country. Lands can be bought cheaper than at any subsequent period. The people are well disposed, kind and hospitable, and would gladly welcome good and industrious people, come from where they may.

CLAY COUNTY.

Your letter of the 16th instant has been received, and I hasten to give you a description of Clay county and its products. It is about twenty-eight miles from north to south, and twenty-two miles from east to west. The surface is generally level; the highest part is on the west side, near Kingsbey's Lake. The county is well watered; good water is easily procured by digging. There are ten or more good mill sites on the different streams in the county. It is healthy, with the exception of two or three locations, and they are confined to a small tract each. The court house is at Green Cove Springs, on the St. Johns river. There is a good school house within a quarter of a mile of Webster, and a good church within about a mile and a half of the same. There are four or five merchants selling goods in the county. There is one steam mill in operation. There are about four hundred voters in the county. About three-eighths of the land is third rate pine, three-eighths second rate, and two-eighths first rate pine, including small pieces of second and third rate hammock, with a small portion of first rate hammock. Hard wood growth characterizes the hammock land. Several kinds of oak, hickory, dogwood, basswood, maple, ash, mulberry, iron wood, poplar, blue beech, black and white gum, red and white bay, magnolia, and elm abound. The lakes, ponds and streams are pretty well stocked with fish and the woods with game. The climate is mild and generally pleasant. Lands sell at from fifty cents to twenty dollars per acre; very little selling at the latter price.

Homesteads can still be entered at prices stipulated in the Homestead Act. Yellow pine lumber is worth from eighteen to twenty dollars per thousand. Wages for labor, ten to twelve dollars per month on the plantations; for lumbering, eighteen to twenty-five dollars; driving teams, twenty-five and thirty dollars and board found.

Access to market. Head of navigation for steamboats on Black Creek is near the centre of the county; St. Johns river on the east side, and on the west side the railroad from Fernandina to Cedar Keys. Roads through the county are generally in good order. The lumber is mostly cut off within two miles of rafting water. Cost of clearing land varies from five to twelve dollars per acre. Cost of building a comfortable log house, from seventy-five to one hundred and fifty dollars. Framed houses from five hundred to two thousand dollars and upwards. If lands are manured and well cultivated, they will produce, with an average season, twelve to twenty bushels of corn to the acre; of long staple cotton, one hundred and fifty to three hundred lbs. of ginned cotton, and four to six hundred lbs. of short staple to the acre; sweet potatoes, one hundred and fifty to two hundred and fifty bushels to the acre; four to six barrels of sugar to the acre. Very little tobacco is raised in this county, but where it is planted, the growth and quality compares well with other crops in other parts of the State. Grapes are very little cultivated in this county; where they are, they appear to compare well with other sections of the State. Garden vegetables, with few exceptions, grow well here in winter. Vines of all kinds do well here early in the spring and the fore part of summer. Rice produces well on the low grounds—from twenty to thirty bushels to the acre. Peach orchards on the clay grounds do well, the quality and quantity compare well with any part of the State. Sweet, sour, and bitter-sweet oranges grow well where they have been cultivated. Plums of various kinds produce well in this county. Turpentine plantations will do well near the navigable streams where transportation is cheap. The county is healthy for stock of all kinds. Poultry of all sorts do well. Blackberries, whortleberries, and mulberries are found in abundance in the woods and fields. Arrow-root, cassava, and tanyas produce well in this county. Irish potatoes grow well on our hammock lands, and average one hundred and fifty bushels to the acre. The people of Clay county, with few exceptions, are friendly to new comers.

I am, very respectfully, yours,

O. BUDDINGTON.

SUWANNEE COUNTY.

Suwannee county occupies geographically nearly a central position in the State, nearly surrounded by the Suwannee river, being bounded by it on the north, west, and south nearly.

This peninsula, geologically, is in the tertiary formation, resting on what is called the bottom limestone. In many places in the undulating surface of Suwannee county, limestone crops out, from which quantities of good lime have been burned.

This part of Florida is comparatively a new country. During the war with the Seminole Indians, the pioneer settlers, "like angels' visits, were few and far between." Agricultural implements were, as in most new countries, of the rudest kind, and farming operations were performed in a careless manner; yet, such is the natural fertility of the soil, that its adaptation, in this genial climate, to the growth of cotton, (principally long staple,) sugar cane, Indian corn, oats, rye, sweet potatoes, ground peas, or pea-nuts, (the crops mostly cultivated heretofore in this part of the State,) that the planters were successful, and accumulated fortunes without the use of any fertilizers whatever, under the former system of labor. Considering the above, what would be the result of careful, improved, scientific cultivation.

From recent experiments at market gardening, we are satisfied that vegetables of almost every kind can be successfully grown here, and so early as to be put on the Northern market long before they can be produced there. Cucumbers and tomatoes can, with care, be made ready to ship by the first of May. Melons are produced here to great perfection, and with proper care, can be ready for shipment by the first of June.

Fruit culture in this part of the State has been heretofore greatly neglected. Peaches grow well, and of a size and flavor that cannot be surpassed anywhere. The trees are healthy, and the crop annually almost certain. Quinces are of good size and flavor. The different varieties of the fig (*Figus carica*) grow here to great perfection, and it is, as we think, a wholesome fruit, quite a luxury both in a green and dried state, and its multiplication in Florida cannot fail to be fraught with great advantage. It will grow well upon the poorer and drier soils, provided it is sheltered, and can be propagated with great ease, growing well from cuttings. And such is the goodness and abundance of its fruits and the number of its varieties, that it may be grown here, as in parts of Southern Europe, in so great an abundance, that it may become the "providence of the poor."

Semi-tropical fruits can, with care, be grown here. There are orange trees in this neighborhood which have been bearing good fruit for some years past; also, the shaddock, of fine, large size. We are more exposed to frost than on the St. Johns, or on the southern coast districts, and sometimes the young trees are killed by the frost. Old trees and ripe, or well matured wood of the orange tree successfully resists the effects of frost.

Grapes. Florida is certainly the home of the Scuppernong grape. It grows and produces with certainty, annually, fine crops of fruit of the best quality, and both vine and fruit have so far been entirely free from any disease whatever, or depredations from insects. We think the Scuppernong should be extensively planted for a certain and reliable crop. Last winter the writer planted at Welborn, nearly one thousand grape vines; about half were rooted vines, of one year's growth, and the balance cuttings. The varieties, "Catawba and Isabella." Half were planted on hammock soil, and the other half on pine land; top soil from a rich hammock was hauled and filled in with those planted on pine land. The vines grew nearly one hundred per cent. more than they do in one season in the Western States.

So far as we are advised, the cultivation of the Catawba and other varieties of grape for wine in the States, has not as yet been fairly tested. It is the opinion of the writer that the celebrated "Mission Grape," which has been so successfully cultivated for wine in California, should be procured and extensively planted in Florida, from the fact that in many places the Catawba, (our best wine grape,) for the last few years has been much injured by mildew. There are five varieties of grapes, which, by experiment carefully made by B. N. Bugbey, of Natoma Vineyard, El Dorado county, California, have been selected from many other varieties as the very best for future cultivation, valuing them in the order named, the first being the best, viz: Black Zinfandel, Red Traminer, White Malaga, Verdelho, and Los Angeles. By planting those varieties of the vine best adapted to the climate and soil of Florida, we have no doubt but grape growing will prove very profitable. In the rich hammocks the wild grape vines grow to great size, reaching to the tops of the tallest trees.

In the greater portion of this county good water is obtained in wells of reasonable depth, and on the borders of hammocks are some very good springs of pure, clear water; and strange as it may be thought by parties from mountain districts, there is in this vicinity good and permanent water power; beautiful and clear streams, running from lake to lake, furnishing fall sufficient for good mills.

The lands of this county are rich in their supplies of timber, the pine forest furnishing almost inexhaustible stores of pine for lumber of the best quality, the moist, extensive, rich, dry hammock lands furnishing large, fine white oak, water oak, sweet gum, magnolia, hickory, red bay, or American mahogany, bass wood, and many other kinds of timber of value. The low, rich hammock land, which is susceptible of draining, and thus being reclaimed, contains a vast amount of valuable timber, such as white bay, &c. Most of such

lands belong to the State, and are for sale at one dollar and twenty-five cents per acre, which, if reclaimed, would be of inestimable value.

A few days since we obtained a map from the Register of the U. S. Land Office for Florida, with each and every forty-acre lot of land carefully marked in this township: (No. 3, South R., No. 15 East,) in which there are sixty-nine lots of State land for sale at one dollar and twenty-five cents per acre, and fifty-nine lots vacant U. S. land, subject to entry under the homestead act. The remaining four hundred and forty-eight lots belong to actual settlers, except the school sections and that part belonging to the Pensacola and Georgia Railroad Company. We give the above statement of the condition of one township merely for illustration, that parties interested may see the facilities for obtaining lands in Florida, and we think the price of improved lands would range from one dollar and fifty cents to ten dollars per acre.

Price of lumber is from ten to fifteen dollars per thousand at the mills. I cannot say that we have any well established price of labor. The freedmen, to a great extent, are indolent and not reliable. There is an increasing disposition among the citizens (I mean white people, of course) to do what work they can for themselves, and employ white labor as far as possible.

I cannot advise you with regard to the cost of clearing, as there is but little being done. More lands are cleared now than can be cultivated with all the available labor at the command of those who own the lands. Fences are rotting down; inside fences being moved out to repair outside fences, &c. Lands of the best quality, for want of capital to furnish implements, stock, provisions, labor, &c., are lying uncultivated, growing briars, weeds, &c. With regard to the cost of building, I may say such cottages as are comfortable in this mild, warm climate, cost but a trifle compared to the cost of building in the Northern States.

The disposition and bearing of the citizens of this community towards worthy strangers is, and ever has been, kind and hospitable.

With my best wishes, I am your obedient servant,

J. GRANT.

MADISON COUNTY.

BOUNDARIES.

The county of Madison is situated between the rivers Suwannee and Aucilla, and about one hundred and twenty miles west of Jacksonville, and sixty miles of Tallahassee, the capital of the State, and is connected by rail with both places, and also by rail with Savannah, Ga., distant two hundred miles.

Madisonville is the county site, situated on the railroad, and about the centre of the county.

It is bounded on the north by Georgia; east, by Suwannee and Hamilton counties; south, by LaFayette and Taylor counties; and west, by Jefferson county. Its population now is about 7,000 inhabitants; area, about eight hundred square miles, or 512,000 acres. Of this, about 240,000 acres are private property, held by titles from the United States and State governments. Many of these tracts are choice locations, selected on account of advantages of situation, richness of soil, grazing, and timber.

PRODUCTIONS.

Corn and cotton have heretofore been the principal productions of this county. Before the war between the States, about 12,000 bales of cotton were exported, more than one-third of which was sea island, or the long staple variety. During 1867 less than 6,000 bales were sent to market. The falling short, attributed to the scarcity and unreliability of labor to cultivate crops requiring twelve months of constant attention and work, and the mischievous and erroneous policy, demoralizing those who, under other circumstances, would be a well-behaved, orderly, and useful class of citizens, and which has only created discord between capital and labor, when the strongest feelings, motives, interests, and christian requirements are to live in peace and harmony, that all classes may prosper.

For farm gardening for the earliest northern market, this county has equal advantages with any in the State, the lands being naturally adapted to such culture. Since the war, considerable quantities of early vegetables have been shipped, commanding in New York, Boston, and Philadelphia highly remunerative prices. Besides the staples of cotton, corn, sugar, upland rice, and sweet potatoes, Madison county lands abundantly produce Irish potatoes, peas, turnips, beets, cabbage, onions, egg-plant, tomatoes, carrots, lettuce, celery, rhubarb, cauliflowers, radishes, watermelons, cantaloupes, cucumbers, beans, and squashes; in short, all the vegetables known in the Northern States, and many that will not grow there, and two months earlier than the latitude of New York. Many of these vegetables flourish during the winter months.

Peaches and figs can be cultivated in the greatest abundance; also pomegranates, grapes, strawberries, plums, and with cheap and easy transportation of only six hours to Jackson-

ville, twelve to Savannah, and less than one hundred hours to New York, Philadelphia, or Baltimore.

PROFITS OF FARM GARDENING.

4 acres English Peas, harvesting 400 bushels, worth at depot.....	\$400 00
3 " Snap Beans, " 600 " " "	300 00
3 " Cucumbers, " 125 barrels, " "	375 00
3 " Nutmeg Mellons, " 200 " " "	300 00
3 " Tomatoes, " 320 bushels. " "	320 00

16 acres. \$1,695 00

The English peas, snap beans, and cucumbers are ready for market in April, and first weeks in May. The melons and tomatoes in first weeks of May, June, and first weeks in July, without hotbeds. The greatest labor is picking or harvesting, they being mostly cultivated with the plough.

If these sixteen acres are ploughed, harrowed well, and rolled by the fifteenth of July, there will spring up at once a strong crop of "crow foot", and "crab grasses," which will mow in October at least one and a half tons of hay per acre, of a quality superior to any that is ever imported from the North, and will readily command one dollar per hundred pounds, equal to \$480, the whole receipts of sixteen acres being \$2,185.

With the above can be raised a crop of ten acres of cane, making plough work of 26 acres for one horse; the harvesting and making the cane not interfering with the farm garden crop. It takes about the same labor to cultivate a sugar cane crop as it does for corn. For a farmer not cultivating more than five or ten acres of cane, the expense of an iron mill, boilers, and brick-work, house or shed, &c., would not cost to exceed four hundred dollars. To manufacture ten acres of cane would require the work of six men forty days; one pair of mules, horses, or oxen at the mill, and another pair to haul the cane from the field. The profit of ten acres planted in cane, from actual experiment, omitting capital required for boilers, mill, troughs for crystalizing, houses for draining, teams, &c., is as follows:

Dr.	10 days' work of team to break up land, \$1.50 per day.....	\$15.00
	24,000 seed cane, at \$10.00 per M.	240.00
	15 days' work planting, at \$1.00.....	15.00
	10 days' work with hoe.....	10.00
	15 days' work with cultivators and ploughs.....	22.50
	6 men 40 days, equal to 240 days' work manufacturing, \$1.00.....	240.00
	2 pair oxen 40 days, \$3.00 per day.....	120.00
	Barrels, &c.....	60.50
		<hr/>
		\$723.00
Cr.	By 3,700 lbs. sugar per acre, 37,000 lbs., at 10c.....	\$3,700.00
		<hr/>
	Showing a net profit of.....	\$2,977.00

It is no uncommon thing to produce, by proper fertilizing, two thousand pounds of sugar, and one hundred and seventy or two hundred gallons of syrup, equal to one thousand seven hundred pounds of sugar, or a total of three thousand seven hundred pounds of sugar, of a superior quality, per acre. Sugar requires natural strong land, or well manured light land, the latter making a better quality of sugar. By properly manuring the ratoon, or cane springing up from the root, after the first crop from planting, it will yield nearly the same product for two or three years; after that time, experience teaches it is best to remove the roots to other ground. It will be observed that after the first planting there is no more expense for seed cane.

Estimates of other products, founded upon actual experience, showing the profits of Florida farming, could be made, demonstrating that there is more profit in the rich lands of Florida than any other State of the Republic; but this seems unnecessary, for whoever is in earnest to better his situation ought to see for himself, and any time while the crops are growing, or being gathered, can be convinced by ocular demonstration.

FACILITIES FOR TRANSPORTATION.

The Pensacola and Georgia Railroad runs through the middle of the county, affording daily facility and cheap transportation to Jacksonville, on the Atlantic, and to St. Marks, on the Gulf, or branching at Live Oak, forty miles east of Madison, to Savannah, Georgia. The Suwannee river affords good steamboat navigation to Cedar Keys on the Gulf, the western terminus of the Florida railroad, stretching across the Peninsula to Fernandina, on the Atlantic.

JOHN WESTCOTT, President.

Vice Presidents.—L. M. BEGGS, R. H. WILLARD, H. Z. ARDIS, B. F. WARDLAW, C. H. SMITH.
A. C. WHITNER, Secretary.

COLUMBIA COUNTY.

GEOGRAPHICAL POSITION AND RAILROAD FACILITIES.

Lake City, the seat of justice of Columbia county, is sixty miles west of Jacksonville, on the St. Johns river, and is connected with the latter place by railroad, and Jacksonville has regular steamship communication with Savannah and Charleston, and arrangements are made for a steamship line direct to New York.

Lake City is also connected by rail, a distance of about eighty-five miles, with Fernandina on the Atlantic, with established steamship communication with Savannah, Charleston and New York.

Lake City is also connected by railroad with Cedar Keys on the Gulf of Mexico, which latter place has established steamship communication with Mobile and New Orleans.

Lake City is also connected with St. Marks, on the Gulf, by railroad, which latter place has also established steamship communication with Mobile and New Orleans.

Lake City is also connected by railroad with Tallahassee, the capital of the State.

Lake City is also connected by railroad with Savannah, the commercial emporium of Georgia, a distance of about two hundred miles.

LANDS.

The lands of Columbia county comprehend pretty much all the varieties of soil to be found in Florida.

Hammock—Grey and black.

Pine lands of very superior quality; many of them with clay cropping out to the surface.

Oak and hickory lands of excellent quality. All these lands are highly productive in their natural state, and yield a magnificent reward to the judicious husbandman for the labor and expense of manuring and fertilizing.

They can be purchased at from one dollar twenty-five cents, the government price, to five dollars per acre, according to the improvements. These low prices bring the lands of this county within the reach of men of limited means.

PRODUCTIONS.

The principal crops now raised upon these lands, are cotton, both short and long staple, sugar cane, Indian corn, oats, rye, potatoes, Irish and sweet, pinders, corn-field peas, rice, &c. But they will also produce tobacco of a fine quality, palma christi to perfection; all varieties of the turnip to perfection; peaches of a superior quality; grapes, several varieties, to perfection; oranges, sweet, sour, and bitter-sweet; figs, very fine; apples, tolerable; pears, tolerable; pomegranates, fine; plums, very superior; strawberries, excellent; and all the garden stuffs to very great perfection, and in time for the early New York market.

The lands of this county are rich in their supplies of timber for lumber and for naval stores. No country can offer greater inducements to the lumber men of Maine and the turpentine men of North Carolina.

Besides this, nature has formed this county with peculiar adaptability for small farms—a system which our present character of labor compels us to adopt.

In conclusion, it may be stated that Columbia county is well watered, and for good health is not surpassed by any county in the State.

The setting in of a decided current of immigration upon this county, and the strangers coming here almost every day to look at our lands, indicate a just and growing appreciation of the advantages presented by this county.

J. J. FINLEY, President A. J. A.

LEON COUNTY.

Leon county has heretofore been considered the heart of Florida. In point of population, wealth, and intelligence, it has always surpassed any county in the State. Georgia forms its northern boundary, and the rich county of Jefferson its eastern. The Ocklockonee river separates it from the fine lands of Gadsden on the west, and Wakulla forms its southern line. With such surroundings, it is not surprising to find in this county the best lands in the State. Indeed, there are no uplands in the southern States that will surpass those of Leon. The extreme southern portion of the county is a light, sandy soil, with heavy pine growth, but the remaining portion, and by far the greater portion, consists of a fine, chocolate soil, supported and sustained by a magnificent clay subsoil, rendering the lands not only very productive, but extremely durable. Lands that were cleared some fifty years ago are still very productive, notwithstanding the little care given them in the way of cultivation, and the entire absence of any manures or other fertilizers.

The surface is somewhat undulating, particularly so, in locations where the best lands

are found. The county is well watered by large lakes, pure streams, and splendid springs. The climate is delightful, the summer's heat being tempered by the winds from the Gulf coast. During the present summer the thermometer has not ranged over 90, and very seldom reached that point.

Our chief products have been short staple cotton and corn. Our lands, from their fertility and durability, are peculiarly adapted to the growth of cotton. Five hundred pounds of lint cotton have been often made from an acre of land without the assistance of manure.

Sugar cane grows magnificently, and is becoming a crop of importance. Rice will mature two crops, and yields abundantly. Field peas, pindars, millet, sorghum, bene, and palma christi are grown with entire success. Potatoes, both Irish and sweet, are standard crops, and the yield cannot be excelled in the South.

Garden vegetables of all descriptions, grow in luxuriance and abundance. Our calabages, beets, onions, turnips, &c., &c., cannot be surpassed. Melons grow to perfection. Peaches, apples, pears, figs, plums, and pomegranates are among the fruits that are successfully raised.

Grapes are receiving considerable attention of late. The Scuppernong grows to perfection, and yields splendidly. Other varieties are now being tested with every prospect of success.

The price of land varies from \$5 to \$15 per acre. Near Tallahassee, they are valued at \$30. As an average, \$10.

This county is accessible from all points by rail. Tallahassee, the capital, is situated near the centre of the county, upon high, rolling lands. It is the centre of an educated and refined society. Churches and school-houses abound throughout the county, and the people, as a class, are intelligent, hospitable, and generous.

Immigrants who come to cast their lot with us are warmly received, regardless of political views. The labor of the county is good.

In point of soil, climate, health, society, and *profits*, Leon county presents the most tempting offer to immigrants of any in the State, or, indeed, in the South.

ESCAMBLA COUNTY.

That portion of Florida situated at the extreme west, is, on various accounts, an exceedingly interesting portion of the State.

Somewhat isolated from the remainder of the State, the attractions which exist have been inadequately known, and from its remoteness there very naturally arose a decided willingness in the minds of many of the inhabitants that the territory should be annexed to Alabama. Hence, during the annexation excitement of recent years, a disposition to underrate the real value of Western Florida has been quite prevalent.

But the present prospect, through the completion of the railroad from Pensacola to New Orleans, to Selma, and to Jacksonville, which will eventually make Pensacola, with its almost unequalled harbor, and its far-reaching railroad connections, the central point of the shortest line of communication between the mouth of the Mississippi and the Atlantic, and between the Mississippi upper valley and the Gulf, has very materially changed the aspect of things, and now the intrinsic value of West Florida begins to be fairly appreciated.

The soil of this portion of Northern Florida is similar to that of the Eastern portion, but of decidedly better quality. Through the bays, rivers, and harbors in the vicinity of Pensacola, it is amply supplied with all facilities for ocean communication, and forms one of the best and most valuable timber regions in the world.

But in the expectation of receiving soon from resident citizens a detailed description of the extreme western counties, I will abstain for the present from further description and simply add an article taken from the Pensacola Express:

EVIDENCE.

At last some of our citizens are awake to the importance of advertising anything they would wish to bring to the notice of the public. And to do this effectually it requires a great deal more tact than people generally are aware of. It must be done in a liberal manner and in a style to attract attention; if done in this way it treble repays the outlay. The New City Company have at last made an effort in this direction, by issuing a neat pamphlet, with a map of the surrounding country near Pensacola. The pamphlet gives a description of Pensacola and of the country. It says:

"The city of Pensacola has natural advantages which destine it to become, by rapid strides, the *Chicago of the South*. It is situated on the north coast of the Gulf of Mexico, in latitude 30 deg. 28 m. north, and longitude 87 deg. 22 m. west of Greenwich, only ten miles from the open sea. Its thoroughly land-locked harbor covers an area of over two hundred square miles, being about thirty miles long and from five to eight miles in width.

having unsurpassed anchorage and a depth of from thirty to thirty-five feet. The entrance to the harbor is about half a mile wide, with an average depth on the bar of *twenty-four feet*. The same depth is readily secured at the wharfage line of the city. A laden ship of the largest tonnage can approach the city at any time in the year, or leaving its wharf can be in the open sea in an hour and a half.

"As a place of residence, Pensacola is attractive by a healthy and genial climate. It has an abundance of excellent pure water, and the regularly changing land and sea breezes make it a pleasant abode at all seasons. Its gardens afford flowers and fruit winter and summer. Most tropical plants grow there, and require but little protection from the cold in winter, whilst all kinds of cereals and northern fruit yield early and abundant crops. The soil of the immediate vicinity is sandy and the drainage perfect.

"The lands of the neighboring country are of the character known as swamp, hammock, and pine. The swamp lands are those lying on the Escambia and Perdido rivers and their tributaries, and are remarkable for their exhaustless fertility, those brought under cultivation yielding heavy crops of corn, cotton, rice, and sugar cane. The great body of these lands is covered with oak and cypress forest, ready to the hand of the great ship-building interests, which the progress of commerce will speedily foster.

"The hammock lands are intermediate between the swamp and pine tracts. They afford the healthiest localities for settlements, and are easily cultivated, yielding abundant returns for the labor bestowed on them.

"The pine lands have an exhaustless wealth of the best timber, whilst the herbage of the forest affords permanent pasturage for cattle, which require no shelter and very little care.

"All these classes of lands are readily reclaimed for agricultural purposes, whilst the forest will for a century to come supply the growing export trade in timber.

"The commerce of Pensacola has hitherto been limited to the export of Florida timber, brought down on the rivers and creeks emptying into its magnificent bay. Want of communication has been an impediment to its growth. But the completion, in the winter of 1870, of the Pensacola and Louisville railroad to its junction with the Mobile and Montgomery railroad, establishing a *connecting link with the entire railroad system North and West*, must speedily lift Pensacola to the dignity of a first-class commercial city. By this link in the great chain of railroads, Pensacola is brought as near to Chicago as is New York.

"The best customers and consumers of the great grain and produce growing West live upon the shores of the Gulf, in the West India islands, in Central and South America. The Pensacola route of transportation shortens the exchange of commodities between these markets and the teeming West by thousands of miles and by many days, thus effecting a double economy of time and cost of transportation.

"A glance at the map will readily demonstrate the fact, so little known heretofore, that the distance from Chicago to Pensacola is only about nine hundred miles. It will also show that, from Pensacola, the distance to Tampico is 900 miles; to Havana, 620 miles; to Matamoras, 800 miles; to Vera Cruz, 950 miles; to Hausacula, 950 miles. The last named place is the eastern port of the Isthmus of Tehautepec.

"No vessel has ever been driven ashore in any storm in the harbor of Pensacola, and no gale has produced a freshet. The rivers emptying into the bay are clear and free from alluvial deposit, and the depth of water on the anchorage ground, as well as on the bar, remains unaltered since the earliest Spanish surveys.

"With the railway connection recently established and daily expanding, this magnificent port becomes the most suitable outlet for the commerce of the entire Mississippi Valley. It has this great advantage over New Orleans, that it is close to the Gulf and not obstructed in its commerce by a shifting and treacherous bar, causing costly delays to shipping, and often upsetting the fairest calculation for commercial profits. The vast expenditure in towage up and down the river, to which the New Orleans shipping is subjected in reaching and leaving that inland port, is saved in Pensacola; and is easily demonstrable that shippers in New Orleans can slip their cargoes more cheaply from the port of Pensacola than from their own levee. Still greater will be this economy when the canals, now proposed and under survey, shall connect the Mississippi with Mobile Bay, Perdido Bay, and Pensacola Bay, permitting steamers to bring their upland cargoes directly to Pensacola and to lay them along side the sea-going vessels.

"The splendid water-front of the city admits of running railway freight directly down on the wharves, and to load vessels immediately from the cars. The elevated bluffs on this water-front afford facilities for coal depots, from which vessels can be supplied through shutes, thus saving greatly in expense of handling.

"Having thus briefly alluded to the physical features of the port, we will now examine the advantages of its relative position to other ports.

"Taking Chicago as the initial or starting point, as being equally distant from New York and Pensacola, railroad trains destined to each of the cities would arrive at their destination within the same time. The one arriving at New York would have traveled

over 900 miles, and would then be as *far North* as when it started from Chicago, whereas the one arriving at Pensacola would have gone directly *South* 900 miles, thus saving that number of miles between the 'initial' point (Chicago) and any other point south of Pensacola. This distance, to be balanced by transit to and from New York, is equal to a gain of six days in favor of Pensacola.

"Take now the return cargoes, one *via* New York, and the other *via* Pensacola—say coffee, &c., from Havana, distant from Pensacola 620 miles. The one by way of Pensacola would have reached its ultimate destination, and have been distributed, before the other could possibly have reached New York. These remarks apply with equal force to all the cities and towns lying along and in connection with this great national artery of intercommunication, trade and commerce.

"The Pensacola and Louisville railroad line and its connections, unlike those leading to the Atlantic ports, *bisect* the parallels of latitude of the United States, hence it must collect and transmit the productions of these different latitudes, consisting of wheat, flour, corn, pork, bacon, lard, cheese, bagging, rope, iron, lime, coal, and a great variety of industrial products, such as furniture, clothing, machinery, implements, &c., concentrating them all by one line at one single point of shipment, and giving that point the same advantages to be offered to the shipping interests of the world that are now afforded at the said Atlantic ports through a hundred different channels at a vastly increased expense, both in time and money, and enabling ships desiring freights to any part of the world to make such selections as their interests or exigencies may require.

"The commerce of the world will hereafter be carried on through the agency of steam, and will expand in the use of that agent just in the ratio in which fuel (coal) can be easily and cheaply obtained for that purpose. The coal beds of Alabama, estimated to cover between four and five thousand square miles of area, are intersected by this line of road, and from their contiguity to Pensacola, must become the great source of supply for the steam marine and coaling stations of all points south of Pensacola. The coal now used for this purpose is principally brought from Great Britain, a distance of 3,000 miles. From the Alabama coal-beds to Havana (which can be thus supplied) the distance is about 810 miles, and coal from these mines can be placed on shipboard at Pensacola at \$4.75 per ton—the sea transportation is but 620 miles. These facts and figures guarantee that the day is not far distant when Pensacola must become the great coal depot of the Gulf, making annual shipments of millions of tons of this article, developing the resources and wealth of the country, and expanding into one of the first cities in the world.

"The rapid development of the iron mines of Alabama, whose natural outlet to the markets of the world is the port of Pensacola, will not only contribute a considerable quota to the commerce of this port, but will, in connection with the Florida forests, furnish superior material for ship-building, which, at no distant day, must rival in extent the similar industry of northern ports: the proximity and cheapness of all material required giving builders in this locality peculiar advantages.

"These brief remarks are addressed to the intelligent and enterprising young men throughout the United States, as an indication of the commercial inducements of Pensacola. They are not intended to portray an El Dorado, where ready-made fortunes fall into the lap of indolence. Success here, as elsewhere, follows thrift and industry, forethought and perseverance; but the many opportunities of Pensacola for young men of energy and intellect to build up a splendid future are unsurpassed by those of any place in America, and unrivalled by those of any port on the southern coast.

"The object of this publication is simply to arouse a spirit of inquiry and to induce the inquirer to *come and examine for himself* the natural facilities of Pensacola, and the scope there is for the application of capital, industry, and talent."

Somewhat enthusiastic as the above may seem to those not acquainted with the locality, I venture the prediction that in 1880, Pensacola will contain 30 000 inhabitants.

CENTRAL FLORIDA.

This division is made up of the territory lying between the parallels of 28 and 30 deg. N. latitude, and is composed of the counties of LaFayette, Alachua, Levy, Marion, Putnam, Volusia, Orange, Sumter, Hernando, and the southern portions of Taylor, Clay, and St. Johns counties.

The surface of this division is less broken, and, as a whole, more level than Northern Florida. It has more of savanna and marsh, and is bountifully supplied with water, having the Steinbatchie, Suwannee, Santa Fe, Withlacoochee, Crystal, Hillsboro, Ocklawaha, and St. Johns rivers, and is profusely studded with ponds, lakes, and smaller streams.

The climate is very perceptibly milder, not only from its more southern geographical position, but the narrowness of the peninsula here, giving an average breadth between the ocean and the Gulf of only about ninety miles, exposes it to the daily sweep of the

winds from either side, and by this means the extremes of both heat and cold are very essentially modified and ameliorated.

The exposure to daily winds from each side increases, also, the rain supply, so that this division has more frequent and abundant rains, and suffers less from drought than the northern division.

The soils of Central Florida are similar to those of Northern Florida, with a larger proportion of hammock and savanna, and are perhaps of better quality, as a whole. Levy, Hernando, Alachua, Marion, and Sumter counties, taken together, form a body of land that, for productive capacity, is not excelled by any similar body in the United States.

The staple crops are similar to those of Northern Florida, but the peculiar adaptability of this division to the cultivation of the sugar cane and all the semi-tropical fruits, has caused cane to advance rapidly of late in the estimation of farmers, and within a few years it will probably become the leading agricultural production. The sugar cane in this division matures and perfects its seed; it ratoons for six or eight years in succession without protection, and often attains a height of from ten to fifteen feet, even when grown for a number of years on the same land without manure.

Particular attention is asked to the statistical return of crops in Hernando county, which is appended, and which, with other facts given, fully sustains the assertion that Central Florida is the best cane region in the United States, and probably in the world.

The entire division is the natural habitat of the whole citron tribe; numerous groves of the wild orange have been found and still occasionally appear, and as would naturally be anticipated, the orange, lemon and lime are natural and very prolific and profitable crops. The peach and the fig thrive everywhere; the guava and the banana do well without protection; and the pine-apple is cultivated, although it does not flourish as in South Florida. Irish and sweet potatoes, melons, and all kinds of garden vegetables are cultivated with great success, and can be brought to maturity at almost any season, at the option of the cultivator.

The descriptions hereto added of Hernando, Alachua, and Orange counties are very generally applicable to the whole region, and render further general description unnecessary.

ALACHUA COUNTY.

FRUITS.

The orange is at home here, and especially so in the southern portion of the county. Judge Edward's beautiful grove is an absolute demonstration of this fact. We will here repeat that the freeze of December, 1868 did not affect his and other grove, while as far south as Charlotte Harbor, on the Gulf, and Indian river, on the Atlantic, all trees suffered more or less, and some were entirely ruined. There may be better reasons, but the one generally given is that the northern winds are obstructed in their passage southward by the tall timber, while they have a clear sweep of the Gulf and Atlantic. We think the elevation and the large fresh water lakes have their influence. It is an absolute fact that our best groves are located on the most elevated points, and in the vicinity of large lakes. But let the cause be what it may, it is nevertheless a stubborn fact that the trees do not freeze here. One tree will produce 3,000 oranges, which at a $\frac{1}{4}$ of a cent a piece, are worth \$7.50. Then one hundred trees to the acre (the usual number) would give the handsome sum of \$750.

The lemon is of the same family as the orange, and it has the same habits and requirements; is very productive and of untold value. There are but few trees in the county, while there ought to be thousands.

The lime differs from the lemon in size, but is more prolific. It is the best possible substitute for the lemon. It also comes in use earlier.

The citron can be grown here with ease and safety. When sugar becomes a staple crop, we think the citron will play a very important part in both our agriculture and commerce. Its production certainly may be made very profitable.

The peach stands next to the orange in importance. It grows almost spontaneously, hence its cultivation is attended with very little expense. Trees sometimes bear at the age of fifteen months, a thing unknown to any other section of the United States. For proof of this extraordinary growth, we refer all those who doubt to the nursery of Ed. Jones, a citizen of our town, for a living demonstration. Havana, Cuba, is an excellent market, and is only thirty hours distant by steam. Peaches in that market are worth fabulous prices.

The fig is propagated with greater ease than even the peach. It grows from cuttings, and generally bears in two years, and is a luscious fruit. There is no reason why the fig should not be made valuable as a commercial commodity.

Pomegranates, plums, apricot, and nectarines flourish luxuriantly. They are not abundant, but should be.

Grapes are not generally cultivated, but enough is known to establish the fact that this is their natural home. In the hammocks they flourish in the wildest luxuriance, which is, perhaps, the highest possible evidence of their adaptability to our soil and climate. The prospect now is, that their production will soon constitute an important part of home industry. Wine, equal to California's best, can be made in unlimited quantities from the Scuppernong with the aid of a little sugar; a vineyard can readily be established by engrafting it into the wild muscadine. The Concord, Black Hamburg, Isabella, and other fine varieties have done well wherever tested.

BANANAS.

We have verified the fact that this luscious fruit can be raised here to perfection, and that under circumstances which seldom occur. Some of the finest we ever ate grew in our garden last summer. The freeze of 1868 and '69 did not kill them. They are propagated from suckers and ripen in about eighteen months. An unlimited number of plants can grow on an acre. Two dollars a bunch is a fair price.

STAPLE CROPS.

Of these crops, we think sugar is destined to be the most important. The hammock lands of the county are exceedingly well adapted to its culture, also the better class of pine lands. On some of these lands cane has been known to ratoon for several years, thus saving expense to the planter. The same natural causes that operate to protect the orange, apply equally well to sugar cane, thereby giving the county an advantage over even those further south. Believing as we do, that actual facts form the only safe basis upon which to proceed, we here submit two or three test cases. T. C. Ellis, Esq., of this place, sold the products of one acre of cane (pine land) for \$300; J. E. Dodd, of Newnansville, raised fifty thousand stalks of cane on one and a half acres, which at the usual selling price, one cent a piece, would amount to \$500. Mr. Hyre sold products of an acre at \$396. The examples are, perhaps, above an average crop, but they nevertheless show the wonderful capacity of our soil and its adaptability to the culture of the crop.

Cotton heretofore has been "king" of crops, and under the old system of crops was quite remunerative. Of late years there have been certain causes which have operated strongly against its regal power, and which, we think, have worked its partial overthrow. The sequel will be, we predict, an introduction of a great variety of labor. Indeed some planters have already introduced a new order of things, and are giving sugar and fruit that consideration and attention their importance demands. The folly of relying on a single crop for food, raiment, and income is plain, and especially so when that crop is exposed to inroads from a thousand enemies.

We do not wish to be understood as opposed to the production of cotton, only its exclusive culture, for we believe it can be made very profitable in connection with a full provision crop. We know instances where 2,000 lbs. of "seed cotton" have been picked from a single acre. Cotton in the seed, last fall, sold readily at from 8 to 15 cents per lb. in our town market. We have made some considerable inquiry after the prices of Florida Sea Islands, at home and abroad, and from a fair comparison of prices, are forced to the conclusion that Alachua cotton is the best made outside of the Islands.

PROVISION CROPS.

Corn, sweet potatoes, Irish potatoes, and rice constitute the principal provision crops. Twenty-five bushels per acre is an average corn crop; sweet potatoes will yield as high as two hundred and fifty bushels, and Irish potatoes the same per acre as in the more northern States. Peas and pea-nuts are very prolific and very remunerative. They sell readily at from \$1.50 to \$3.00 per bushel. From twenty to one hundred bushels can be raised on a single acre. Peanuts are a splendid substitute for corn to make pork with. Rye and oats are a profitable crop. The castor bean grows wild and luxuriantly; tobacco would certainly do well. The squash and melon are in their element on our soil, and to their yield there is no end.

GARDEN TRUCK

Is abundant in every month of the year. Peas, cabbage, beets, turnips, onions, lettuce, radishes, &c., do admirably in winter and add much to our tables. They can be raised in quantities sufficiently large to ship to northern markets with very little labor or expense and at a handsome profit. Tomatoes, beans, cucumbers, rhubarb, okra, egg-plant, pepper, &c., grow to perfection in summer. We are of the opinion that the tomato is destined to be raised on a grand scale for northern markets. There is a fortune in it for any one who engages in its culture permanently. The snap bean and cucumber can be raised for the same market with equal success. We have been assured by a friend that he shipped over two hundred boxes of tomatoes, gathered from a single acre, (pine land,) to New York,

where they were sold at an average rate of \$6 to the box. Where is there a business more profitable?

TOWNS.

Gainesville is our largest and most important town, and is the county site. It is noted for the general good health of its citizens and its important locality. It has direct communication by steam with Fernandina on the Atlantic, and Cedar Keys, on the Gulf, and thence with every port in the world. The proposed railroad from here to Tampa will doubtless be built within the next three years, which, in effect, will make it the depot of all South Florida. The proposed road north to Live Oak will also, when built, add much to the improvement of the place. The hotels in course of erection are destined to be well patronized by invalids and pleasure seekers when completed. The invalid's great dread, cold, bleak winds, fogs, and dampness, are confined to our coasts and large rivers, and seldom reach the interior. Gainesville is located on about the highest points of the Florida railroad between the Atlantic and Gulf. The atmosphere is generally dry and bracing. The retail trade of the town is very large. The Methodists, Episcopal, and Presbyterians have their respective places of worship. School facilities are ample. Union Academy, Live Oak Institute, and the East Florida Seminary are among the best institutions of learning the country affords. It has two newspapers. Lumber is plentiful. Micanopy is a much older place than Gainesville, but is not so easy of access. Its destiny, however, is an important one. The surrounding country will make it; it is in the heart of the great orange and sugar section of the State. The proposed railroad, when built, will give it an impetus that will both surprise and gladden the natives. Newnansville is the oldest town in the county, and is next to Gainesville in point of population. It has a good back country, but lacks for want of communication. Waldo and Archer are two important depot towns on the Florida railroad.

MISCELLANEOUS.

All that is required now to put this county on its feet, is a true statement of her finances and resources. This fact in part accounts for the rapid increase of the population of the county, which has more than doubled itself in the last decade. In 1860 it was 8,282; in 1866, 16,000; and judging from the number of registered voters, it must now be about 20,000.

Game and fish are plentiful; the latter are easily caught and of excellent quality. Stock raising can be made exceedingly profitable. Our prairies furnish pasture the whole year, and with the aid of a little grain, stock will keep fat the severest of winters. A better class of stock should be introduced. Skilled labor is in good demand; ordinary day laborers can be had at rates ranging all the way from \$18 to \$20. The price of land ranges from 75 cts. to \$50 per acre; \$5 and \$10 are the most common prices.

Naval stores can be produced in abundance; our pine forests are peculiarly adapted to the business.

Lands can be cleared here as cheaply as in other timbered States. Fertilizers are abundant in our swamps and marshes, and easy of access.

Immigrants will be kindly received, their politics respected, and we will here assure them that they will find a reasonable, well-ordered, and peaceable community. We advise those who desire to settle among us to come and see for themselves. We will be pleased to show them about.

Yours respectfully,
CESSNA & HILL.

VOLUSIA COUNTY.

The following reports were read at the late meeting of the State Agricultural and Immigration Association:

- I. General Sketch of History. II. Locality and Climate. III. Health. IV. Surface and Soil. V. Products of Forest, Field and Garden. VI. Accessibility to and Distance from Market; Mail Facilities and Roads. VII. Supply and Price of Labor. VIII. Price of Land and Cost of Clearing. IX. Houses and cost of Building. X. Water, the Supply and Quality; References.

1. *General Observations.*—In 1836, the whole Peninsula of Florida below the present south line of St. Johns county was comprised in three counties—Monroe on the south, Alachua on the Gulf coast, and Mosquito on the Atlantic coast. The wild region between the last named counties was known as the Indian River Reserve.

The name Mosquito was afterwards changed to Orange, and in December, 1854, all that portion of Orange county lying east of the St. Johns river was incorporated under the name of Volusia county, since which time Enterprise has been the county seat. It is supposed that the early Spanish navigators landed on our coast. An ancient roadway is graded through the sand hills from the beach to the Indian river, near the south end of Merritt's Island. A similar road has lately been discovered near the upper end of the

Halifax. The first settlement in this county was made by Dr. Turnbull, who, in the year 1667, established a colony of fifteen hundred persons, of Spanish and perhaps, Grecian origin, whom he had induced to emigrate from the Island of Minorca, in the Mediterranean. Turnbull's wife being a native of Smyrna, therefore, the settlement was named New Smyrna. The crop cultivated by Turnbull was indigo, of which he raised thousands of dollars worth annually. These colonists not being dealt with according to contract, all abandoned the settlement and located in and near St. Augustine, where their descendants now reside. The only permanent monument left by Turnbull is a large canal, draining the swamp that bears his name into the Hillsboro' river at New Smyrna. The old settlement at Spring Garden was mentioned by Bartram in his travels before the Revolution.

Before the Seminole war, which broke out in 1836, there were eleven sugar plantations between New Smyrna and St. Joseph, the site of Gen. Hernandez's plantation; several of these establishments cost sixty thousand dollars each; all were destroyed by the Indians in the first year of the war.

The first fight with the Indians in this county was at Dunn Lawton, on the Halifax, in which sixteen Indians and one white man were killed. Log forts were built at Bulow and at McCrea's on the Timoka, at which place the whites were surprised outside their fort and three men killed and scalped. At Volusia on the St. Johns, was one of the outposts and a fort. From this post Gen. Eustis, in command of the left wing of the army, composed mostly of regulars and drafted three month's men from South Carolina and Georgia, set out to cross the country to the Withlacoochee to join Gen. Scott. After the brief and fruitless campaign of three months, Gen. Scott and his army crossed the river at Volusia on their way to St. Augustine. The first settlement at Volusia was made in 1816 by Horatio S. Dexter.

This village, situated pleasantly on the east bank of the St. Johns, on a hammock formed of fresh water shells, although the largest village in the county, has but three stores and a half a dozen dwellings. At Enterprise is a large hotel and the county court house, one store and three dwelling houses. There is no store on the coast north of Sand Point, at which place there is one store and several families residing. Within a mile of New Smyrna post office are six families; within two miles of Port Orange post office, on the bank of the Halifax, are eight white families and four colored.

The rivers on the coast furnish an abundance of salt-water fish and oysters. Deer are troublesome to farmers by eating the vines of the sweet potatoes.

This county contains about 1,800 inhabitants; most of them immigrated from Georgia and the Carolinas, but every State is represented here. The northern settlers are along the coast and on the St. Johns. Those who live near the best lands are of moderate means and they have not cleared the richest lands; consequently, visitors passing through the country and only seeing the pine lands under cultivation, might get the impression that we have no first class hammock.

The public schools are not yet in operation.

No clergyman resides within our borders. We have no politicians; offices go begging; two of my neighbors who have commissions as Justices of the Peace decline to act; the office of County Treasurer has been vacant for two years, seeking a man to accept it. We have no jail and little need of one.

When settlers come here and go to work and attend to their business, nobody cares where they come from; they are welcomed and encouraged.

In 1866 and '7 an attempt was made to establish a colony of freedmen from South Carolina at Port Orange; some 500 families were brought here by Gen. Ely, from the vicinity of Columbia, in three steamboats from Charleston; but the proper preparation and location of their homesteads had not been made, and some disliked the pine land of the government for homesteads, and most of them went into the interior counties; not over a dozen families are left here, and probably not a hundred in the county.

Some of the most interesting antiquities in the State are the Indian Mounds in this county. Turtle Mount, or Mount Tucker of the old maps, is a pile of oyster shells, variously estimated from fifty to eighty feet high, standing on the east bank of Mosquito Lagoon; it is covered with bushes and small trees on the top and all sides, with the exception of the west face, fronting the river, which is perpendicular and of loose shells. Earth mounds are common near the river banks along the coast; but the most remarkable of these is on Spruce Creek, on the south bank, four miles from the Halifax. It is about fifty feet high and a hundred feet in diameter at the base, and as steep on the sides as the soil would lie, excepting on the east side, which ascends gradually, as if for a roadway. Deep excavations close by show where the earth was taken from to build this immense pile. In these and other mounds in this county have been found pieces of pottery, stone pipes, and other implements, charcoal and human skeletons in various stages of decay; the latter are comparatively recent. These relics of a distant and unknown age lead the imagination back beyond the early dawn of written history; beyond even the gray twilight of tradition, and leave it to grope in the night of the forgotten past.

2. *Locality and Climate.*—Volusia county is bounded on the north by St. Johns county, east by the Atlantic ocean, south by Brevard county, and west by St. Johns river, which separates it from Orange county. It extends from near the Matanzas river on the north to Lake Washington on the south, about 100 miles. Its width varies from 40 miles at the north end to 15 miles in the southern portion. It lies between the parallels of 28 and 29 deg. 40 min. north latitude.

Meteorological observations have been taken since 1866, which are published in the reports of the Department of Agriculture at Washington.

The following is the range of the mercury between the extremes, taking the lowest and the highest observations in each month of 1869: January, coldest, 47 deg., hottest, 80 deg.; February, 24—85; March, 34—83; April, 54—81; May, 60—90; June, 74—90; July, 71—92; August, 74—82; September, 72—90; October, 49—75; November, 35—81; December, 33—81. The mercury rose to 90 deg. and upwards as follows: In April once, in May once, in June twice, in July ten times, in August nine times, in September twice. The prevailing winds in the winter are from the northeast, north, and northwest; the frosts are usually brought about by the last named winds; in summer the winds are southerly and southeasterly; the west winds are the most disagreeable. When comfortable hotels shall have been erected along the beach, it will be a common place of resort in summer for the residents of the interior of the State.

I speak from experience when I say that this portion of the coast is cooler and pleasanter in summer than Jacksonville, Savannah, or Charleston.

Whatever injury the orange trees suffer from cold is in the spring, after they have started to grow, and not in the colder weather of midwinter.

In February, 1870, (last month) Mr. Bostrom had roasting ears from a small patch of corn that grew in his field on the east bank of the Halifax.

Bananas and pine apples do well in the southern part of the county, but cannot be relied on as a sure crop at the northern part.

3. *Health.*—The coast, or that portion which lies east of the Halifax, Hillsboro', and Indian rivers, all of which run parallel with the beach, may be set down as perfectly healthy. With reasonable care to provide comfortable houses and wholesome food, families may confidently expect to be exempt from any disease that can originate here. Patients suffering from fever and ague, which they have contracted in malarious regions, soon recover here.

The high banks of fresh water creeks, above the reach of tide water, are also healthy. So is the middle region of the county, although much of it is taken up with flat, low pine woods and bay galls, and shallow cypress ponds are numerous. The whole length of the county along the St. Johns, at the distance of two miles back from the river, is also free from malarial diseases, excepting always, low, flat bottom lands on lakes, rivers, or creeks that are subject to overflow.

The danger in all these instances is not in the water, but in the action of the heat of the sun on the rich soil after the water has drained off or evaporated.

The miasm which produces fever and ague, is a minute organic structure, which is invisible to the naked eye, or to an ordinary microscope, and is always produced when the requisite degrees of heat and moisture are brought to bear on decaying vegetable matter, on the same principle that the plants forming mildew and yeast suddenly grow when the proper conditions are furnished, springing from invisible seeds that are constantly floating in the air.

Salt marshes that are regularly covered with the tide do not produce this miasma; but where the marshes and bottom lands on the banks of creeks and rivers are occasionally covered with fresh or brackish water, intermittent fevers may be confidently looked for. An apparent exception to this rule prevails in the case of cypress and grass ponds in the interior, so long as they are filled with growing vegetation, such as trees, bushes, and grass. There are several families now living in perfect health near such ponds in this county, and I have no doubt that if the ponds should be cleared of the growth of vegetation during the summer, every member of such families would be attacked with chill and fever in a few weeks. The most common form of disease in this county is the intermittent fever, or chills and fever, and that only exists in the localities I have described above.

4. *Surface and Soil.*—This county is surrounded and intersected by water-courses as follows: The Atlantic Ocean washes the eastern shore; the Halifax river is formed by the junction of the Haloven and Bulow creeks and the Timoka river; it is about a mile wide in its whole length of thirty miles, and so straight that midway of its length the horizon meets the water, as one looks to the northward or southward. It runs nearly parallel with the coast, and discharges its waters at Mosquito Inlet. The tide flows up the entire length of this river, and renders the water brackish in the tributaries just named for six miles or more above their mouths. This river was formerly called Mosquito North Lagoon. The Hillsboro' river, or Mosquito South Lagoon, extends from Mosquito Inlet, southwardly, parallel with the coast, thirty miles. For twelve miles south of the Inlet the river is

filled with marsh and mangrove islands, and divided into crooked and narrow channels. Below these islands the river is a broad expanse of water five miles wide, varying from three to six feet deep. The channel is rendered tortuous by coral reefs and sand banks. This portion of the river is now termed the Lagoon. This river is entirely salt, having no tributaries from the land of fresh water.

Indian river is separated from the Lagoon of Hillsboro' river by a narrow strip of land two hundred yards wide, called the Haulover. A canal has been cut through connecting the two rivers, and allowing boats drawing two feet of water to pass through.

The Indian river is, more strictly, a bay. Its waters are salt, and it has no current independent of the winds. It varies in width from two to eight miles. The portion east of Merritt's island, thirty miles in length, is called Banana river. Indian river runs parallel with the coast about 100 miles, to the inlet of the same name. Elbow creek, which rises in the swamps near Lake Washington, on the St. Johns, empties into the Indian river, nearly opposite the south end of Merritt's island, and is the only stream of fresh water of any note that empties into this river within the limits of this county. In this region, for several miles, the Indian and St. Johns rivers are only six miles apart.

On the whole length of the county, on its western border, is the St. Johns. Of the streams which drain the swamps of the interior, are Timoka river and Spruce Creek, with its tributaries, viz: Turnbull Creek, Hawk Cypress, Sweet Water, and Little Spruce creeks, emptying into the Halifax, the first at its head, the latter only a mile north of the inlet, and Deep Creek and How Creek running westerly, the first into Lake Harney, and last into Dunn's Lake. Spring Garden Creek is a remarkable stream, rising abruptly in a spring, and furnishing a water-power of sufficient force to drive machinery for ginning cotton and other purposes.

The surface of the county and its soil can be described most conveniently in five divisions, running lengthwise of the county.

1. Commencing on the east, we have a narrow strip of land between the beach and the Halifax, Hillsboro', and Indian rivers, extending the whole length of the county, only interrupted by the Mosquito Inlet. The width of this peninsula varies from a half a mile to five miles, which is the distance across at Cape Canaveral lighthouse. This peninsula is composed mostly of sand hills; the more recent ones bordering on the sea are covered with grass; those further west, with saw palmetto, oak, and other scrub, increasing in height as the river is approached, until near the river, in many places, are fertile spots that would pay for cultivation, and covered with tall pines, oaks, and other trees. Captain Dummitt and Burnham's orange, the largest in the State, is on the west side of this peninsula. If this region is ever made use of, it will be for residences of those who cultivate the swamp lands on the main. There are no springs or streams of fresh water, but good water can be had from wells dug a few rods from the river on the beach.

2. The west banks of the three rivers above named constitute a peculiar feature in the face of the county. On the whole length of the Halifax and Hillsboro', and in many places on the Indian river, is a range of oyster-shell banks, from three to ten feet high; these constitute the "shell-hammocks;" the shells, when mixed with the soil, are a constant source of fertility by their gradual decay. The scattering of these shell-heaps over considerable tracts, probably by large bodies of Indians who came from the interior to feast upon fish and shell-fish during the winter, has created much of our second-rate hammock; this class of soil terminates abruptly at the last shell-heap, and the pine barren commences. Some portions of the banks of Indian river are fifteen feet high; some places of sand, and at others, of coquina or shell rock. There is but comparatively little of this kind of shell-hammock on this river. In the vicinity of Mosquito Inlet are considerable tracts of land, where the subsoil is composed of disintegrated and decayed shell rock, which, a few feet lower, is sound enough for building purposes. This is the character of the river front from New Smyrna northwest some seven or eight miles. This soil produces well every variety of crop that has been planted on it. There is no part of the St. Johns where all the advantages of a fine river prospect, good soil, and healthy location are combined as on the west banks of these rivers, which are generally within two or three miles of the sea, and constantly within the influence of its invigorating breezes, and within hearing of the surf.

3. The third division from the east is the swamp region. This extends from Bulow's on the north, across the Timoka, and, southwardly, the whole length of Halifax and Hillsboro', and for fifteen miles on the Indian river, a distance of more than eighty miles in length, and varying from a half a mile to three miles wide. The celebrated Turnbull swamp, southwest of New Smyrna, is a part of this tract, as is also the Dunn Lawton estate. The soil is a black alluvial, mostly unmixed with sand, and resting on a clay or shell marl foundation. This is probably as good land as any in the State. It needs draining to render it arable, and there is sufficient fall to allow of this, as is amply proved by some of Turnbull's old canals, which still discharge the waters of the swamps into the river. It was on these swamp lands that the sugar plantations before mentioned were situated, that

were broken up by the Indians. The ruins of steam mills are still there, and the fields marked by the cane rows all covered with a dark forest of nearly forty years' growth. The greatest obstacle in the way of the settlement of this county is the uncertainty of title and ownership of these lands. They are covered with old Spanish grants, the owners of which are in the West Indies, or in the Northern States; anywhere but here. Many of these have not paid taxes for twenty years. They will soon be taxed, and the owners or agents thus ascertained, or the lands sold for taxes. In the region of this county already described, along the eastern shore, are 100,000 acres of these Spanish grants.

4. The fourth region may be called the interior of the county, situated about half way between the ocean and the St. Johns. It is mostly a table land of flat woods, from which the rains drain off slowly, interspersed with bay galls, savannas, cypress ponds, and spruce pine, and dwarf oak scrub hammocks, which are worthless for cultivation. This region is better adapted to grazing than to any other branch of agriculture. It is thinly settled by stock-raisers, and cannot sustain a dense population until the prairies and savannas are drained and turned to fruitful fields.

The western portion of the county, bordering on the St. Johns, is undulating; many of the elevations are called hills, among which are numerous small lakes or ponds. The soil is variable, and comprises every grade of soil in the State, but is mostly pine land. Some of the best farmers in the county are cultivating pine land. With cow-penning, it produces good corn and cane. Mr. George Sauls, who lives in this belt of undulating pine woods, six miles from the St. Johns, raised, in 1868, five hundred dollars worth of sugar, syrup, and molasses from one and three-quarters of an acre of pine land, with no other fertilizer but the cow-penning. The prices he obtained were higher than will ever be likely to prevail again. He sold his sugar at fifteen cents per pound, syrup at seventy-five and molasses at fifty cents per gallon.

The bottom lands on the St. Johns are of the most fertile character, and, when diked and cultivated will exceed in productiveness the sugar lands of Louisiana; for we have a great advantage in climate here, being more than a degree further south than New Orleans. It was this kind of soil, bottom land diked, on the Timoka, on which Capt. Dummitt raised at the rate of four thousand pounds of sugar to the acre. Merritt's Island is mainly flat pine land, but its climate is milder than that on the mainland in the same latitude. It is a good location for the cultivation of the whole orange tribe.

5. *Products of the Forest, Field and Garden.*—Our forests produce abundance of pine and live oak; considerable quantities of cedar, bay, hickory, cypress, and ash. Various other varieties of oak are also found here, magnolia, sweet and black gum, sassafras, black cherry, soft maple, sumac, willow, bayberry, prickly ash, and on the salt marsh islands, the mangrove. In the eastern and southern portions, the cointree root is abundant, from which starch is made. The lumber business is neglected here, there being no saw mill in operation in the county. A large steam saw mill at Port Orange, now idle, is soon to be started. The wild fruits are the sour and bitter-sweet orange, blackberry, huckleberry, and haw, none of which are abundant.

The field crops are sugar cane, both short and long staple cotton, rice, corn, potatoes, peanuts, cow peas, pumpkins, melons, and the semi-tropical fruits—oranges, limes, lemons, and figs.

Gardening is almost wholly neglected. Although nearly every variety of vegetable matter can be raised here, as has been proved by experiment, few kinds are cultivated. The variety in a southern country garden is as follows: collards, cabbages, turnips, locks, or garlies, Irish potatoes, pepper, and sage. This is the natural climate for lima beans, egg plant, okra, and many kinds of vegetables that are grown with difficulty at the North. A few settlers raise beets, carrots, rutabagas, cauliflowers, cucumbers, and radishes. It is customary to procure the seed from the North every year, as it is supposed that that grown here is not as reliable.

Among the other branches of Agriculture, should be mentioned the stock-growing interest. This is one of our most important interests. Cattle and hogs do well in every part of the county. As is usual in this State, the only attention paid to stock is the marking in the spring of the young. While the cattle are penned a few weeks in the spring, the owners obtain a supply of milk, which is rather an incident of the marking, than an object to be attained. Beef cattle sell at about fifteen dollars a head; whole droves, including "little and big," sell at six dollars per head. Beef sells at six and seven cents per pound. Horses and mules are generally scarce; not enough raised to supply the demand. Very few sheep are kept; the citizens prefer dogs, of which the supply is abundant, and none are so poor that they cannot maintain several ugly, lean curs. Fowls of every kind do well. Bees do well, and many wild swarms are found in the woods.

6. *Accessibility to Market, Post Office and Roads.*—The whole of our western border, on the St. Johns and the lakes, is within twenty-four hours' steam navigation of Jacksonville. Steamers ply almost daily between that port and Enterprise, stopping at intermediate landings. On the east our communication with the world is through the New Smyrna on.

Mosquito Inlet, by means of sail vessels, which and weekly to Jacksonville. The celebrated King's Road, projected and built by Gov. Grant, the first English Governor of Florida, extends from New Smyrna, via St. Augustine and Jacksonville, to the St. Marys river. It is not much traveled now, and portions of it are overgrown with bushes, and the bridges are out of repair; still it is passable for teams. From Enterprise, on the St. Johns, a mail road extends to Port Orange and Dunn Lawton, on the Halifax, thirty-three miles; also, to New Smyrna on the Hillsboro', thirty-five miles, to Sand Point on the Indian river, fifty miles. There are post offices at Volusia, Enterprise, Port Orange, New Smyrna, and Sand Point. A canal, through Haw Creek into the Timoka, connecting Dunn's Lake with the Halifax, would give our eastern border a direct inland route to Jacksonville, and is among the most important internal improvements that can be made.

7. *Supply and Price of Labor.*—The supply is limited and prices high. Good hands get from twenty to twenty-five dollars per month and board on the coast, and five dollars less on the St. Johns. Persons coming here to open new lands should bring their help along with them. The freedmen, of whom there are about a dozen families at or near Port Orange, all have entered homesteads, and only go out to work occasionally. We very much need an immigration of working men.

8. *Price of Land and Cost of Clearing.*—There is very little cleared land for sale at any price. The Spanish grants, unimproved, are generally held at from four to six dollars per acre. The cost of clearing heavy swamp hammock at Port Orange is not less than \$20 per acre, and in some instances may reach thirty dollars. By clearing, I mean cutting down all the trees and burning off all the logs. The Southern method of clearing, by girdling the large trees, is of course much cheaper. Some of our pine land is so thickly covered with saw palmetto as to cost fifteen dollars per acre to grub out the roots ready for plowing.

9. *Buildings and their Cost.*—With the exception of a few houses, our dwellings are rude affairs and poor apologies for houses. The cost of sawed lumber, delivered at Port Orange or New Smyrna, is eight dollars per thousand for freight, added to the cost in Jacksonville. Most of the houses are built of logs, and in the interior puncheons are bowed from split logs for floors, and glass windows are not in general use. A log house, with two rooms, fifteen feet square, can be built for a hundred dollars, exclusive of chimney. New settlers along the rivers, frequently thatch their roof with palm leaves. A well-to-do-farmer has the following buildings: a house, a kitchen, a smoke-house, which also answers for storehouse, a stable and a corn crib; if a cane planter, a sugar-house. Carts, wagons, plows, and all other farming tools are commonly exposed to the weather, and ruined in a year or two.

10. *Water, its Supply and Quality.*—Under the head of surface and soil I have already spoken of the fresh water streams and ponds, which supply the stock in the woods. Wells furnish pure, sweet and soft water, all over the country, with the exception of the banks of the salt water rivers on the coast, where the water, though sweet and suitable for cooking and drinking, is usually too hard for washing. Rain water, caught in cisterns, is used for this purpose.

References:—For general information in reference to the county, address H. G. Lungen, M. D., Volusia; B. F. Buckner, Enterprise; J. H. Fowler and J. A. Bostrom, Port Orange. In relation to orange and cane culture and productiveness, Capts. Miles O. Burnham and Douglass Dunmitt, New Smyrna. In relation to stock raising, Bryant Osteen, Enterprise. Relative to game and fish, boats and guides for sportsmen, R. N. Sheldon, New Smyrna. J. M. HAWKS, M. D.

Port Orange, Volusia Co., April, 1870.

HERNANDO COUNTY.

Hon J. S. Adams, Commissioner of Immigration, Jacksonville, Fla.:

Dear Sir:—I propose to give you a topographical sketch of Hernando county, hoping that some of the many immigrants to this State may desire a home in the southern portion of it, and that this may be of some interest to them.

Hernando county is situated on the Gulf coast, and lies between latitude 28 deg. 15 m. and 29 deg. 30 m. It is bounded on the north by the Withlacoochee river, on the east by the same river, and what is called the prong of it, on the south by the Hillsboro' river, for some eight miles, and from thence to the Gulf coast, by Hillsboro' county, and on the west by the Gulf of Mexico, for seventy miles—the entire length of the county. It is adjacent to Levy and Marion counties on the north, on the to Marion and Sumter counties, and on the south to Polk and Hillsborough counties. The average width of the county from east to west is about thirty miles, and from this you will discover that its general shape is that of a parallelogram, lying north and south.

There is no part of the State, of the same area, which has greater or equal water facili-

ties, nor can offer as great variety of inducements to energy and capital. To particularize, I will commence by speaking of the many water advantages.

On the northern and eastern border we find the Withlacoochee river, already navigable one-sixth of the circumference of the county, and can be made so for fully one-fourth. From the interior of the county, we have the sources of Crystal river, Homosassa river, Cheisowilsky river, Wickavachee river, and Anclote river. These rivers are generally about ten miles apart, and from six to one hundred miles long, emptying into the Gulf, at from ten to twenty miles apart. They are all navigable to some extent, and some of them to their sources. Aside from these rivers, there is a lake connected with the Withlacoochee river, (Lake Charlie popka,) which is one of the most extensive bodies of water in the State. It is about fifteen miles long and from one to six miles wide, and lies diagonally in a southwesterly direction across a portion of the country.

This lake seems to be a series of lakes running into each other, and thereby creating long peninsulas of the most fertile land between them, and in many instances, islands, which have proven to be the most productive.

On the western border of this lake, the land is elevated, and so on the islands, and some of the most beautiful locations are to be had within on the main or on some island. On the eastern border the county is flat and interspersed with cypress swamps for some eight miles, where you will strike the river. In this "cave," as the people call it, are to be found wild cattle and hogs in abundance, with every imaginable species of indigenous vermin and some larger animals; but this is a digression.

This lake, with but little expense, could be made navigable into the Withlacoochee river at all seasons, as it is now during the wet or rainy season. The connection of the lake, however, is above the head of navigation on the river, but only about six miles, and no falls to encounter to reach the navigable point on the river for steamboats. The Withlacoochee river is a narrow but deep stream, and rises in the northern part of Polk county, runs north till it reaches the northern boundary of this county, when its course turns westerly until within a distance of about twenty-five miles by land from its mouth, when it turns due west and empties into the Gulf about twelve miles from Cedar Keys, the western terminus of the Florida Railroad.

Crystal river rises about twelve miles from its mouth and eight miles south of the Withlacoochee river; runs west and empties into the Gulf ten miles from the mouth of the Withlacoochee river. It is navigable to its source with small schooners, and for three miles from its mouth with sea-going vessels. Its source is produced by numerous springs, all within an area of half a mile, producing a beautiful broad and crystal stream, from whence it takes its name. It abounds in fish and oysters of superior quality. A flourishing village is situated at its head, and takes the name of the river. Six miles further south, we find the Homosassa river, which is also produced by numerous springs, and is ten or twelve miles long; runs west and empties into the Gulf eight miles from the mouth of the Crystal river. It is navigable for small steamers and schooners, and inside its mouth many large vessels have loaded with cedar timber for New York. At the head of navigation on this river was formerly the home of Hon. D. L. Yulee, where he cultivated and manufactured sugar cane on a large scale. This plantation is now in the hands of Northern men, who are working it to some extent. About four miles south we strike the Cheisowilsky river, which gushes out from numerous rocks and forms a bold and deep, but short river, not more than eight miles long. At the head of this river was (twenty years ago) the principal trading point for this county. It was the principal shipping port before the war for cedar timber taken from its adjacent swamps, where many cargoes of this valuable timber yet remain. The river is navigable for good sized river steamboats and coasting sail vessels. It abounds in all the fish common to the Gulf coast.

Twelve miles south lies the Wickavachee river, a narrow and serpentine stream, which is formed by a spring, the basin of which is about an acre large, but from fifteen to thirty feet deep. This stream is hardly entitled to the name "river" until within about five miles of the Gulf, when it widens and becomes navigable for small steamers, and at its mouth there is enough water for sea-going steamers. The village of Bay Port is situated at the mouth of this river, and was a place of considerable commercial importance during the war, as a point for "blockade running," and many a valuables were landed, both from sail and steamboats, at this place. A considerable mercantile and forwarding business is still carried on here. From the head of this river large quantities of cedar timber have been rafted to its mouth for shipment to New York.

About thirty miles south of this river, we find the Anclote river, which takes its origin from numerous lakes in the southeastern portion of the county, in the flat woods, and not a great distance from the source of the Withlacoochee river. Its course is southwest, and empties into the Gulf about four miles north of the county line. It is a wide and deep stream for about ten miles from its mouth, but from thence to its source it is but a shallow stream, the most of the time fordable. Some ten miles south of its mouth commences the settlement of Clear Water Harbor, of which you no doubt have heard,

It is somewhat remarkable that all the rivers and creeks between this river on the south, and the Withlacoochee on the north, should take their origin, some from numerous springs, and others gushing boldly from a rocky labyrinthine source, and all from the side or near a range of barren, high, sand hills running north and south, and from six to twelve miles from the coast.

The first impression in reference to the quality of the land is, that where there is such an extensive water border, there must be a large quantity of that which is good; and such is the case. Not only on the border of this extensive lake, but in the valley of all those short rivers, there is land that will compare favorably with the Louisiana or Yazoo lands, but every location sinks into comparative insignificance to the large bodies of land near the centre of the county. The principal body of this land lies in Annattalogga Hammock, five-sixths of which is of the first quality of hammock land. It lies north and south, and is about thirteen miles long and from three to five miles wide. It lies between two ranges of high hills, which run parallel with the hammock on either side; and although the land is elevated, and in some parts rolling, you will very perceptibly discover that it is an extensive valley when viewed from one of these hills, the altitude of which is from two to three hundred feet. In some instances, arms of the hammock project out between these high hills, but in no instance to obstruct the view, which, it must be admitted, is beautiful. As a general thing, the land on these ranges of hills is poor, but affords the most beautiful and healthy locations as residences, affording plenty of cool "spring water," from which one has taken the same of "Spring Hill;" another that of "Mount Airy," from its great elevation and the delightful breezes that are almost continually wafting the invigorating salt air from the Gulf, which is only about fourteen miles distant. The survey from this hill is greatly beautified by a large and placid lake at its base.

The growth upon this hammock land consists of white oak, live oak, water oak, ash, hickory, elm, sweet gum, cedar, mulberry, orange, and all other trees indigenous to this climate, and which do not select their habitation in the pine woods. Some of these trees grow to an enormous size, such as the white oak, live oak and hickory. It is not uncommon to see them from four to six feet in diameter. Quantities of undergrowth are under these large trees, and it is in some places almost impenetrable, which renders the clearing of the land difficult and expensive; but the greater part of it can be cleared for five dollars per acre, which is a trifling expense, considering the productiveness and durability of it when once under cultivation. It yields, per acre, of corn is from twenty to thirty bushels, and when well cultivated and cared for, will produce forty bushels, as is frequently the case. Tobacco does well. Oats yield about the same as corn when planted in November or December, but later they do not do so well. Cotton, as might be expected, does as well here as on the sea-islands. The land, climate, and atmosphere, all suit the growth of sea-island cotton. As a proof of this, the yield of this staple for the past three years, when unmolested by the caterpillar, has been from five to seven hundred pounds of seed cotton per acre, and in some instances as many as eight hundred pounds have been raised. But it seems that Nature has more particularly adapted this land to the growth of sugar cane. It yields from two to three thousand pounds of sugar per acre, according to the age of the ratoon, and this runs from five to seven years. Those who are acquainted with the cultivation of sugar cane know that it is one of the most exhausting growths to the soil that is planted; nevertheless the natural land of portions of this county continues to reproduce good stands of cane from the ratoon from five to six years without any deterioration in the yield of sugar; and that, too, without any attempt at fertilizing or enriching the ground by the husbandman. This is certainly an evidence of the desirability of this land, nor is the failure of your seventh year's ratoon regarded as a failure of the soil, but of the cane roots, and all that the planter is required to do is to plow up and plant in the middle of the rows, when he will be prepared for another five years' success in the growth of sugar cane. As further evidence of the desirability of this land, I will relate a little conversation that occurred not long ago. The writer suggested to one of the oldest and most successful planters in this county to subscribe for an agricultural journal, and told him in a joke, that it would teach him how to apply fertilizers of various kinds, &c.

He said "he had no use for them; that he had used them in Alabama and Mississippi, but he would never plant land any more that required them; that his present plantation (in the Annattalogga hammock) had been cultivated every year for fifteen years, and no appreciable diminution in its yield, nor would there be in his or the rising generation's life time; but should it fail in the third, all they would have to do would be to take a little more fresh land and work on."

It is really so that the little fields which the pioneers of the country cleared up some thirty years ago, have been under cultivation all the time, and unless on some little knoll or other place subject to wash, are nearly or quite as propuctive as when first planted. There are many small detached hammocks around this large body of land, all of which partake of its fertility and durability.

At the south end of this large hammock is situate the village of Brooksville, the county

site. Two miles south of this village, we come to another large body of hammock land, the Charcoocharlie hammock. It is seven miles long, but somewhat broken with scrubs and swamps, yet thousands of acres of good, high timber land lie in it covered with a growth similar to the Annattallogga. South of this body of land, keeping rather in the centre of the county, lies a remarkable country. It is high, rolling, and reminds one of the red hills in Georgia. The land is what the residents term "mulatto land," which name is indicative of its color. It is quite productive, and yields the best quality of sea-island cotton raised in the county. The land reaches to the flat woods in the southern portion of the county, and ceases very abruptly, affording in some places a beautiful view of the extensive plain before you. Along the border of the flat woods are many desirable locations for those who desire to engage in raising stock, as the pasturage is excellent in this section. Those flat woods extend twelve miles south to the county line, and give origin to some of the tributaries of the Hillsborough river as well as the Anclote river.

Notwithstanding there is such quantities of good and lasting lands in this county, accessible to almost any one, if an individual should select a location that is unproductive—for its beauty or good water, or some fanciful object—all he will have to do is to apply to any of the numerous marl-beds, rich in lime, to be found all over the county, to fertilize his land; and if he should be in reach of Charliepopka Lake, he will find humus enough to enrich the poorest county in the State of New Jersey, to mix with his marl.

Had I not already said more than I designed I would give you some statistics of the products at large, and of some particular parts of the county.

The country about Crystal river, and the rolling country near the flat woods, deserve special notice; but suffice it to say that if a man desirous of following an agricultural pursuit will come and see the country for himself, I will venture to *assert* he will not be disappointed.

The inhabitants of the county number about twenty-five hundred. The white portion consists principally of the second purchasers, as but few of the first settlers of frontiersmen have remained.

Notwithstanding "Florida is unknown in other sections of the country, but is looked upon as a small piece of valueless land," the white inhabitants, even of this county, represent almost every Southern State and some of the New England States.

They are a peaceable and quiet people, frugal and hospitable, courteous to strangers, and glad to see them come when they bring the insignia of honesty and enterprise. There are but few who take any interest in politics, and the most of these are among the colored people. About a dozen churches are distributed throughout the county—Baptist and Methodist—no public, but several private schools. A northern, southern and western mail twice a week; one telegraph office in the county, communicating with domestic and foreign cities. The surveyed route for the Waldo and Tampa railroad passes through and near the centre of the county.

In conclusion, I would say to the immigrant, that if he desires to plant an orchard of tropical fruit trees, let him come to some of the short rivers in this county, clear off one acre of ground, plant out one hundred orange trees, twenty-one feet apart, and in three years he has a capital of ten thousand dollars bringing an interest of ten per cent. The land will cost him but little, ranging from nothing to six dollars per acre. Each tree will produce one thousand oranges every year, at the least calculation, and they will bring on the trees one cent a piece and sometimes two, so he has an income of ten dollars per annum from each tree, equivalent to one hundred dollars at ten per cent interest. The propitiousness of the soil and climate, with facts, fully justify these estimates. If he desires to plant cane, corn, cotton, tobacco, oats, potatoes, garden vegetables, pine-apples, bananas, or all of the tropical fruits, he will be doubly recompensed for his labor, and enjoy as good health (as might be expected from the proximity to the coast) as if in any other portion of the State.

Very respectfully your obedient servant,

S. STRINGER.

Brooksville, Fla., Dec. 9, 1869.

BROOKSVILLE, Fla., Jan. 18, 1870.

Hon. J. S. Adams, Commissioner of Immigration:

Dear Sir:—Yours of the first inst., asking for some statistical information as to *what had been done* in the way of crops in this, Hernando county, came to hand a week or ten days ago.

In reply, I regret to say that I have not been able to make search for such information as I would like to have given; still, such as I have collected comes from men of intelligence and unimpeachable veracity. In gathering these facts, I selected those who represent different parts of the county in order that a fair exponent of what had been done in

the county at large, and not favorite localities, might be given. The figures below are intended to show what has been produced per acre:

NAME.	CORN.	OATS.	POTATOES.	COTTON.	SUGAR.	RICE.	TOBACCO.
A. T. Frierson....	bu. 56	bu. 40	bu. 400	lbs. 700	lbs.	bu. 25	lbs.
Jesse Clarady....	bu. 63	bu. 50	bu. ...	lbs. 1000	lbs. 3400	bu. 43	lbs.
J. H. Gould.....	bu. 20	bu. ..	bu. 400	lbs. 1100	lbs. 3600	bu. ..	lbs.
Wm. Nicks.....	bu. 30	bu. ..	bu. 400	lbs. 1000	lbs. 2600	bu. ..	lbs.
James Parkston...	bu. ..	bu. ..	bu. ...	lbs.	lbs.	bu. ..	lbs. 1800
Dr. W. T. Mayo...	bu. 60	bu. 40	bu. ...	lbs.	lbs.	bu. 52	lbs.

Mr. Frierson made 200 gallons of wine from eleven Scuppernong grape vines—over one-sixth of an acre.

Mr. Gould says the above is his average crop.

Mr. Nicks gives the above as his average crop.

Dr. Mayo makes 4,900 pine-apples per acre.

It is not to be understood that these crops are raised every year, nor by every farmer, but they have been raised by the gentlemen time and again, and with labor that could be controlled, could be raised successively. Mr. Frierson says he can do so now if the seasons are *not unfavorable*.

Suffice it that these figures have been attained, and, too, by the old fashioned way of farming, there not being a single improved farming implement in the county, none being used save the turn-plough, scooter, sweep, and hoe.

Mr. Clarady says that he fully believes, with the improved method of farming now in use in the Middle and Northern States, with the energy of the people of those sections, we could cope with any of the States in raising cereals. He has seen an experiment made in wheat-growing in this county, on a small scale, and says that it was as fine as any he ever saw in Tennessee, Kentucky, or Georgia; "that in almost every instance there were four grains of wheat in each mesh, while in those of other States, two were common, three very good, and four, extra." Wine can be raised on these lands with but little trouble. Mr. Frierson makes one hundred and fifty to two hundred gallons every year from only eleven Scuppernong grape vines, and others in the county do equally well from small arbors.

Hoping this brief but reliable report of what has been done in the way of crops in this county will be of some service, I subscribe myself your obedient servant,

S. STRINGER.

ORANGE COUNTY.

APOPKA, Orange Co., Fla., July 20, 1869.

Hon J. S. Adams, Commissioner of Immigration, Jacksonville, Fla.:

Dear Sir:—In accordance with your published request, I shall proceed to give you a brief description of this part of Orange county.

Our principal lake is Apopka, and the parallel of latitude, 28 deg. 35 min., runs through the centre. This name means in the Seminole language, "Potato eating town." This lake covers an area of about three townships, its greatest length being northeast and southwest. It is surrounded by fine bodies of hammock, a portion of which has been cleared. These lands are well suited for the growth of corn and cotton; the latter, however, on fresh land goes too much to weed, but if properly cultivated, does well on old land. Sugar cane does well, the rattoons being used for six years before replanting, and in the spring tassels. It is not uncommon for one cane to yield one gallon of juice. The average produce is from 350 to 400 gallons of syrup, or 2,000 pounds of sugar to the acre. We raise as fine cabbage as can be found anywhere, and sweet potatoes are grown all the year. They are planted in the fall for spring and summer use, and are termed "standovers." We have tomatoes and green peas during the winter, and many other vegetables. The soil is a sandy loam, with a clay subsoil, which, in some places, comes to the surface. Persons cultivating these lands should have their residence at least a mile from the lake, with timber intervening, to be healthy. Col. H. L. Hart is now engaged in opening the Ocklawaha river into the lake, and expects to have his steamers in there this fall, thus connecting the lake with Palatka, on the St. Johns river. The orange and all the semi-tropical fruits, as far as tried, do well. Game is abundant, and the lake affords fine fishing. There are some drawbacks; the alligators destroy the hogs, and at times the mosquitoes are bad. The cost of clearing hammock land is from ten to fifteen dollars per acre. The produce of long staple cotton is from five to eight hundred pounds of seed cotton to the acre; of corn, I do not know the average sufficiently well to state it. Labor is scarce, and is generally one dollar per day; by the month, with board, fifteen dollars.

The pine lands are mostly high and rolling, interspersed with clear water lakes of different sizes, abounding with fish. There are some streams of running water, and sulphur

springs abound. On the margin of some of these lakes are small bodies of hammock. A large portion of these lands is still subject to the Homestead Act, and in some cases claims can be purchased where small improvements have been made. There are still some good State lands which have not yet been taken up. The price of land varies so much, and is advancing so fast in value, that it is scarcely possible to make a fair estimate. From eight to twenty dollars per acre, I should think, was now about correct. Last fall a small place was offered to me for \$1,800, another for \$2,550. In two months after, one sold for \$2,100, and the other for \$3,500. The soil of these lands is sandy; some have clay subsoil, and others a sandstone of recent formation. As a general rule they are healthy. Good water is obtained from wells at a depth of from eighteen to forty-seven feet. There are some good springs. The pine lands produce good long staple cotton, the best bringing one bag to two acres, but the average is one bag to three acres. Corn is not, as a general thing, a certain crop on these lands, as it sometimes "white-buds;" where a person has cattle, penning obviates this, and the land produces surprisingly. A little manure would not hurt any of it. By cow-penning, fine sugar cane is produced in nearly the same quantities as on the hammocks, and the sugar and syrup are much purer. Orange groves are doing well on this land, and, thus far, all the semi-tropical fruits I have tried. A steamboat now makes regular trips from Palatka, up the Wekiva river, to Clay Spring, distant three and a half miles from the Masonic Lodge, and from the lake some five miles. We have saw and grist mills and stores, Methodist and Baptist preaching several times a month, and a Sunday school. Next month a day school will commence. We have, generally, a good population; as an instance, the corn cribs and smoke houses have no locks upon the doors. There are but few negroes here, and they are good citizens. To persons wishing to change their location, I would say come and see for yourselves. The best time to move a family is about the last of October.

Respectfully yours,

ZELOTES H. MASON, M. D.

APOPKA, Orange Co., Fla., February 16, 1870.

Hon. J. S. Adams, Tallahassee, Florida:

Dear Sir:—In a former communication I gave a description of this section, which was published in the Florida Union. A longer residence here has deepened the favorable impression first made on me, and I am better satisfied that the statements made in my first letter are fully borne out by experience.

I reside in township twenty-one, range twenty-eight, south and east, in the county of Orange. As a general rule, our pine lands are high and rolling, the soil a sandy loam, in some cases underlaid with red clay, in others a sandstone. The principal growth is pine, in some portions the undergrowth is tuskey-oak, post-oak, and sunac, with white and post-oak runners. Most of the land, however, has no undergrowth except the oak runners.

The cost of clearing is about \$1.50 per acre. Rails cost from \$1.00 to \$1.25 per hundred; carpenters \$2.00 to \$2.50 per day and board; farm hands \$10 to \$15 per month, and hired laborers are scarce and hard to get.

These lands are well suited for the growth of cotton, both long and short staple. The average is a 333 lb bale of long staple to the acre. They are not so well suited for corn without manure, though some plant it. This grain is generally raised in the hammock land, which has been planted twelve years in succession without manure, and yet yields 20 bushels per acre. Rye does well on pine lands, and a number of my neighbors are sowing oats. I am told they do well, especially the black oat.

By cow-penning, we raise sugar cane nearly equal in quantity to hammock land, while the sugar and syrup are of fairer quality, the average being 300 to 400 gallons of golden syrup, worth here 74 cents per gallon, or from 1,200 to 2,000 lbs. of sugar per acre. From experiments made, swamp muck is equal if not superior to cow-penning as a manure.

The orange, and fruit of that class, succeeds well, and many persons are planting out groves. Many of the semi-tropical fruits succeed here, such as the guava, plantain, banana, and pine apple.

Sweet potatoes are raised throughout the year, and unless the winter is unusually severe, can be left in the ground and dug as needed.

The cassava and arrow-root might be made a profitable crop; thus far I have only planted for family use. Tobacco will grow during most winters. I have some plants of Cuba on the north side of my house, and they are still green.

Our lands are well suited to the production of grapes, the land being rolling. We do not have standing water. In fifteen minutes after a heavy rain the water has all passed off. My grape vines produced abundantly, and in the fall a small second crop. The only enemy is the mocking bird, and I am willing to give them a share for the sweet music they give in return.

There are some springs, but we mostly use well water, and it is a good article. We have but few creeks; the country is, however, well watered with clear water lakes of va-

rious sizes. In winter they afford good drinking water and abound in fine trout, bream, and perch.

There is a good opening for a steam saw mill, which would not only pay well but become a means of settling our county. There is a water mill within four miles, but there is a difficulty at present of getting lumber as fast as we want it. Building lumber costs \$15 to \$17 per thousand.

Six miles off, at Rock Spring, is a large bed of blue limestone, which in many places comes to the surface, and only wants developing to become of great service in making muck compost.

All kinds of garden vegetables do well, and there is no trouble in having a constant succession during the year. In most families vegetables are scarce, from the fact that they do not try to have them. I have had no difficulty in supplying my family throughout the year, and on low ground have as fine cabbage as could be wished for. I have resided in Florida nearly ten years, and from experience can say that persons moving here from a colder climate need not be uneasy in regard to health, provided they do not settle on Lake Apopka, or have their residences at least a mile off, with timber intervening. The best time to move here is in the month of October. Though we live in latitude about 28 deg. 40 min., we have a delightful climate, enjoying the sea breezes both from the Atlantic and Gulf. Last summer, which was unusually warm, we did not have more than six nights that we did not require some bed covering.

The Apopka lands are rich, being mostly hammock, and are held at high prices, while a large portion of the pine lands can be homesteaded. Steamboats now run regularly from Palatka, weekly, to Clay Spring on the Wekiva River, three miles from our post office. Fare \$6.00. Supplies can be obtained in the stores here or brought from Jacksonville or Palatka.

We welcome to our section all moral persons who are willing to work and assist in developing the vast, and in many cases, untried resources of our State.

Respectfully yours,

Z. H. MASON, M. D.

MARION COUNTY.

Marion is one of the central counties of East Florida, and occupies a commanding position among the best agricultural counties of the State. Surrounded by and bordering upon Levy, Alachua, Putnam, Orange, Sumter, and Hernando counties, it participates in the characteristics of all of them, and may with propriety, be called the agricultural heart of East Florida.

Although entirely an inland county, and nowhere extending to the coast, still, bordering upon Lake George, upon the east, divided nearly in twain by a branch of the Ocklawaha, and communicating through its numerous and beautiful lakes with the St. Johns, it is not by any means deficient in the means of access to market and the facilities for exportation of its produce.

It extends in latitude from 29 deg. to 29 deg. 30 min., and thus has a mild and genial climate, well adapted to the growth of many semi-tropical fruits.

Nearly midway between the Atlantic and Gulf coast, it is daily visited by the winds from either side, which meet over her territory and pay frequent tribute from their moisture-bearing clouds, so that continued droughts are almost unknown.

In addition to the facilities of access by water, there is now a strong probability of the speedy completion of the railroad from Waldo, on the Florida Railroad, to Ocala, the county site, through a recent organization of energetic business men, under a new charter.

The surface is generally level, but in several sections is gently undulating, and, interspersed here and there with numerous lakes and ponds and beautiful springs, is characterized by a beauty of natural scenery seldom found in Florida.

The soil in Marion county is better than that of the average of the State, having an unusual proportion of hammock, both high and low, and the pine lands having a richer sub-soil and nearer to the surface, than is commonly found. Marl and muck, giving abundant supplies of natural fertilization, are to be found in all portions of the county, and easily accessible, and insure a permanent agricultural capacity.

Cane, cotton, corn, and sweet potatoes may be cited as the staple crops, but so favorable is the geographical situation that almost any of the strangely varied productions of Florida can be successfully cultivated here. Oats, rye, the peach, the fig, and the grape, with the tobacco of Northern Florida, succeed equally as well, while the natural adaptation to semi-tropical fruits, indicated by the existence of numerous and extensive natural groves of the wild orange, is amply demonstrated by the successful cultivation of the orange, lemon, lime, citron, and banana.

The county is unusually provided with rivers, lakes, and springs, and good water can be secured in all parts by wells of little expense, furnishing abundant supplies of wholesome water.

Good health, as a rule, prevails throughout the county, and the only diseases that can be said to be prevalent are those always encountered in a rich and new country, and consist in the lighter types of bilious and intermittent fevers.

Valuable kinds of timber abound everywhere throughout the county. Yellow pine is universal, and in the hammocks are found ample stores of ash, oak, live-oak, cedar, bay, cypress, and magnolia.

Sea-Island cotton has hitherto been a favorite crop, but the ravages of the caterpillar have turned preponderating attention to short cotton and cane; and, with perhaps the single exception of Hernando, Marion will probably become the cane county of the State. If the actual sugar capacity of these two counties was well understood and fairly appreciated abroad, the price of land would double in one year.

Two routes are open to those wishing to visit Marion county, one by the St. Johns to Palatka, and thence by the Ocklawaha steamers to Silver Springs and Ocala, or still further up the river to the lake region. Another is by the Florida Railroad to Gainesville, and thence by hack *via* Micanopy and Ocala.

Orange Spring is simply the bursting forth of a full-sized river from the very bowels of the earth, and with its beautifully clear waters and circular basin, carved out of the evergreen of the forests, forms one of the gems of nature. The admiration of strangers would be equally divided between this singular freak of Nature and the quiet and placid beauty of the upper lakes.

Lands in this county are comparatively cheap, improved places being in the market at reasonable terms. Good sugar lands can be bought at from \$3 to \$10 per acre, and large quantities of United States and State lands are open to entry and purchase.

The people are well disposed and orderly, and will extend a hearty welcome to all newcomers.

With its genial climate, agricultural capacity, cheap lands, varied crops, and commanding position, the future of Marion county is not uncertain. In Florida, sugar will, ere long, dispute supremacy with cotton, and sugar lands that are good for an average crop of 2,500 pounds per acre, must soon command a ready market at good prices.

INDIAN RIVER REGION.

The following description of the Indian River region, by an intelligent resident planter of long experience in Jefferson county, confessedly one of the best counties of the State, and induced to migrate by actual and personal knowledge of the special inducements offered, will be of more than usual interest. It conveys the impressions, not of one coming down from the cold regions of the North or West, who would of course be temporarily captivated by the climatic attraction necessarily enhanced by force of recent contrast; but of one long accustomed to the mild atmosphere of Northern Florida, and the agricultural advantages there afforded.

In transmitting the communication, Mr. Magruder remarks:

"Enclosed you will find an article in reference to Indian river. I have endeavored to set forth the advantages and attractions of the river in the strongest light possible consistent with facts. But for such strong corroborating evidences from other sections, I would hesitate to place before the public such flattering accounts and enormous results; yet I verily believe I have not done full justice to our section of country."

Hon. J. S. Adams, Commissioner of Immigration:

Dear Sir:—Allow me to call your attention to a section of country which I conceive to be the most desirable now known. Indian river runs parallel with the Atlantic coast 23 deg. N. W. and S. E., extending south of latitude 27 deg., and running north of 28½ deg., measuring from one and a half to seven miles in width, and from four to sixteen feet in depth of channel, though in many places one may wade more than half a mile from shore.

She abounds in every variety of fish, but is distinguished for her most superb mullet, the general weight of which is from two to five pounds, but in many instances they weigh from six to nine pounds, measuring twenty to twenty-two inches in length. The sheep-head, sea trout, cavalier, and bass are large and fine. There are very extensive beds of oysters in the southern portion of the river, of the largest size and most superior flavor; and these are so accessible that the canning of them would prove a profitable occupation.

Turtleling is carried on to some extent and proves quite lucrative. The river is separated from the Atlantic by a narrow strip of land from one to three-fourths of a mile in width, the majority of which is poor, sand scrub, though it contains bodies of very rich hammock. Approximating thus near the Atlantic, we have the benefit of the sea-breeze in its pure state, and this, combined with the mild, genial climate of a southern latitude, is what renders it so famous for health, such a thing as sickness being scarcely known upon the river.

The pine lands largely predominate, some of very fair productive quality, with beautiful sites immediately upon the river, having an altitude of eight to sixteen feet above the water. There are also fine bodies of the most splendid hammocks peculiarly adapted to the growth of tropical fruits; the leading varieties of which are the orange, lemon, lime, citron, banana, plantain, pine-apple, guava, and pomegranate. I am now testing the more tender growths, the tamarind, sapadillo, avocado, pear, French lime, mama-apple, sugar-apple, mango, paw-paw, cocoa, date, cocoanut, English walnut, pecannut, yam, ginger, casava, etc. The orange is the leading crop of all others. It requires three years from transplanting to commence bearing, then pays hundreds of dollars per acre, and soon runs to thousands, there having been four to six thousand dollars per acre realized this season. Bananas grow considerably north of this and pay from twelve hundred to two thousand dollars per acre. Pine-apples promise from eight to twelve hundred dollars per acre. Sugar cane grows astonishingly, attaining a height of twelve to sixteen feet, single stalks yielding more than a gallon of juice, which being boiled down, makes over a quart of thick syrup, and produces five to six hundred gallons of syrup per acre. Of peas, pumpkins, two crops from the same vine are raised in abundance, and potatoes flourish the year round. The natural growth of the hammock is the sturdy live-oak measuring from two to six feet in diameter, the stately hickory, two to three feet in diameter, and twenty to forty feet to first limbs, the red elm, mulberry, wahoo, cabbage palmetto, with an undergrowth of hack-bush, torch-wood, marl-bush and vines. There are also the iron-wood and crab-wood, approximating in weight to the lignumvita, and susceptible of the finest polish.

We have springs of good water just under the bluff, and by sinking wells 12 to 16 feet obtain water almost anywhere. The water in the hammocks is more or less impregnated with lime, there being a stratum of coquina rock underlying the surface, forming an inexhaustible supply of the most valuable fertilizer. Our woods abound in small game and deer, bear, and an occasional panther, with the most superior range for every kind of stock. Four year old steers weigh from four to five hundred pounds; two year old heifers from 250 to 300 pounds, and they calve at that age. Hogs are raised with but little attention, to weigh 150 to 200 pounds at two years old. Here is the white man's refuge. Let him quit his large plantation and his cotton, and upon a few acres here make his net income of two to ten thousand dollars. Incredible! you may think, nevertheless true. The labor of one man, when once properly established, may make his thousands. We want transportation. By referring to the State map, you will perceive that a canal eight miles in length will connect the Halifax and Matanzas rivers; then a little work upon the fault, between Halifax and Indian rivers, puts us in connection with St. Augustine. So that a line of light draught steamers plying through these rivers, a distance of over 100 miles, connecting at St. Augustine with large class steamers outside, and by railroad to Jacksonville, gives us direct communication with the world. It will also attract the trade, and develop an extensive section of country, the Kissimmee, that is now lying almost in obscurity. We also desire to have an outlet or pass from opposite the mouth of St. Sebastian, into the Atlantic, (there being eight feet of water in the river, and a steep shore on the Atlantic, which we think will prevent its ever being filled with sand,) admitting large class steamers and increasing the turtle interest.

Give us these connections, and then Indian river comes into repute for vegetables. She can supply even New York in the months of January, February and March, with the most delicate varieties; tomatoes, peas, beans, green corn, cabbages, melons, etc. I have reason to believe the varieties of grapes can be grown here with success,—the scuppernong to perfection. Where is there a country combining so many advantages? The most genial, delightful climate, perfect health, fine sporting, fine range for stock, and a soil producing in abundance almost every variety of production?

Respectfully submitted,

C. B. MAGRUDER.

SOUTHERN FLORIDA.

South Florida, consisting of that portion of the peninsula south of latitude 28 degrees north latitude, is composed of the counties of Hillsboro', Polk, Brevard, Monroe, Manatee, and Dade. From its low latitude, its peculiar location, as interposed between the Gulf of Mexico and the Atlantic Ocean, and its proximity to the Gulf Stream, this division has marked characteristics which specially distinguish it.

The surface is in the main flat, and excepting the extension within its northern portion of the flattened ridge or plateau upon which the State is mostly situated, the greatest elevations found are around the external boundaries, while the depressions are in the interior, causing it to resemble the basin of a shallow lake. Thus constructed and under the influence of the rain-bearing clouds from both sides, while the elevation of the exterior border prevents the easy egress of superabundant water, this division is not only well supplied with rivers, streams, and small lakes, but has, also, the broad shallow lake of Okeechobee, and that remarkable receptacle of surplus fresh water called the Everglades, within its

borders, and occupying a large proportion of its extent. It is quite probable that a clearing out of the obstructions formed in the channels of the numerous river courses reaching out from the interior to the Gulf and Ocean, will relieve this section from much of its excessive humidity, but at present a large part of this territory is so liable to submersion as to derogate largely from its value for cultivation, although scattered along the exterior borders, and upon the banks of its many lakes and streams, can be found rich and fertile lands, which, under the fostering influences of a climate of unsurpassed mildness, become exceedingly valuable for their immense productiveness in special crops.

The savannas, or grass prairies, that are liable to periodical inundation during part of the year, but hidden with a rich growth of nutritious grasses during the balance of the time, form a characteristic feature of South Florida, and constitute some of the best cattle ranges in the world.

The climate is singularly equable and uniform, the difference between summer and winter being very slight, and the range of the thermometer during the year confined within very narrow limits. Warmer in winter and cooler in summer than any other portion of the State, the climate is equal to that of the most favored regions of the world, and nearly resembles that of the Sandwich Islands.

The crops in this section would not include the cereals grown with success in Northern Florida, and even corn is not grown with much success, while the apple, pear, and peach do not do as well; but on the other hand, cane, cotton, tobacco, the orange, lime, lemon, citron, and grape find here a congenial home; and the semi-tropical and tropical fruits thrive as well as in any part of the world.

And on the "Keys" or islands which line the coast and vary in extent from a few acres to a number of square miles, forming a very peculiar feature of the section, the bananas, pine-apples, and cocoa are easily grown in great abundance and of great size.

A more complete idea of the region will be obtained from the accompanying account of Manatee county, and the letters of Lieut. Governor Gleason, who resides in extreme South Florida, and is thoroughly acquainted with the whole region.

MANATEE COUNTY.

MANATEE Co., Fla., March 4th, 1870.

J. S. Adams, Esq., Commissioner of Immigration :

Your letter of Feb. 1st, and circular of January, reached me the 22d ult., at Manatee.

In answer to your inquiries, I will endeavor to answer so far as this county is concerned.

The surface is, with very few exceptions, level; soil sandy, divided into pine woods and hammocks, with considerable prairie. The pine land is well adapted to all the crops of our climate when sufficiently fertilized by cow-penning; but especially for raising sweet potatoes, which grow the year through, and average in price from fifty cents to one dollar per bushel. The hammocks are from a light to a dark grey color, and naturally rich; they constitute our sugar cane land, principally, and will average two hogsheads of sugar and eighty gallons of molasses to the acre; ratooning from six to eight years, or longer, according to the cultivation. Also best for oranges and corn. The prairie is regarded as poor, and has never been cultivated to my knowledge. It constitutes a part of the great range for cattle, hogs, &c.

Our climate is all that can be desired, exempt from excessive cold or heat, differing but a few degrees between summer and winter, the thermometer rarely reaching 90 deg. in summer, or falling to 60 deg. in winter. Sometimes we have excessive rains in the rainy season, and sometimes we are affected by drouth in the dry season, but not more so than occurs elsewhere.

The chief products are immense herds of cattle; the estimate of the county being 75,000 to 100,000 head.

Sugar cane, which is our specialty, is not only the most profitable, but decidedly the most reliable crop. Cotton is just beginning to claim attention in the county, and by selecting suitable locations it produces well. I allude to the long staple. Tobacco can be raised in great abundance on the rich lands. Rice in the lower and stiffer soil, if planted early, will mature two crops, the last being ratoon, yielding in both, at least seventy-five bushels to the acre.

Corn on worn-out cane land will, in a favorable season, produce twenty-five bushels to the acre, but corn is not regarded as a sure crop. The whole class of garden products yield in extraordinary degree, embracing the whole melon and pumpkin class. Field peas are raised abundantly, and of excellent quality. Pindars do well but are not much cultivated. Millet, sorghum, bene, chufa, arum, cassava, tanyah, are all grown in this county to some extent. Palma Christi becomes perennial, and yields its oil bean perfectly. Both the East and the West India varieties are introduced.

Of fruits, the whole citrus family grow to perfection. Between sixty to seventy thousand oranges were shipped at one time alone from Manatee settlement last fall. Bananas

ordinarily do well, but the last two winters have been unusually frosty, and the plants seem slow in recovering from the effects. On the Islands and Keys, pine-apples, dates, and that class of fruits may be raised. The olive, the tea, and coffee plants are supposed to be adapted to our soil and climate, but have not been tried. I think the two former would grow well in South Florida. Of native wild fruits, we have the mulberry, persimmon, Indian fig, blackberry, huckleberry, plum, etc. The quince, fig, guava, avocado pear, etc., are raised. Also pomegranates and tamarinds. The native grapes consist of several varieties, one resembling the Catawba and the others perhaps the Southern Muscadine.

The price of land varies according to improvement, say from \$1.50 to \$20. Turpentine pine, live-oak, water-oak, hickory, soft maple, elm, red and white bay, sea ash, pop ash, mulberry, cypress, magnolia, cedar, black gum, India rubber, cabbage palm, mangrove, black and red myrtle, pride of India, West India birch, swamp dogwood, Florida acacia, aloe, willow, oak, etc. Lumber twenty-five dollars per thousand, (mills much needed.) Labor one dollar per day with board; one dollar and a half without. Not much means of procuring it. Markets, Key West, Havana, and Tampa, and home consumption by newcomers. Cost of clearing hammock land about twenty dollars per acre. Building expensive, unless using pine logs and palmetto covering, which answers for this climate—then very cheap.

Water soft out of the hammocks, and hard in them, but good. Health no better in any part of the world. Owning stock is a good business. Schooners and steamers carry cattle from Manatee river and Charlotte's Harbor in this county nearly constantly, paying about fifteen dollars per head for steers. Hogs do well, but are prone to run wild; and subject to many enemies, viz: eagles, cougars, lynx, foxes, alligators, bears, and if the hogs are fat, *white folks*.

The rivers, creeks, and bays teem with all sorts of fish, both scale and shell. Mullet might be put up in Terra Sea, Palma Sola, Sara Sola, and other less and greater bays, to supply the Union. Clams and oysters abound. Deer, turkeys, and other game are plentiful. The county is settled in spots; sometimes twenty-five, or even fifty miles between neighborhoods.

Nearly every neighborhood has its church and school, and one Masonic Lodge in the county, situated at Manatee village. Insects are bad in portions of the county at certain seasons, but not past toleration by any means. Grass grows luxuriantly and requires watching to make good crops, but industry always gets the better of it. The people are very kind to strangers. Neighborhoods can be found to suit the political complexion of any modern type.

Immigrants must not come to Manatee to live without work, nor to expect no privations. If they do, they will be disappointed.

Respectfully, &c., I. M. FIROR.

POLK COUNTY.

FORT MEAD, Polk Co., Fla., April 2, 1871.

Hon. J. S. Adams, Commissioner of Immigration, Jacksonville, Fla.:

Dear Sir:—Agreeably to request I will herewith endeavor to give you a truthful and succinct topographical view of Polk county.

BOUNDARY.

Polk county is bounded on the north by Sumter county, on the west by Hillsboro' county, on the south by Manatee county, and on the east by Orange county.

SURFACE.

The surface is generally level and the lands may be classified as follows: First, hammock land; second, pine land; third, prairie land.

The hammock lands comprise two qualities, viz: grey and black, and are the lands adjacent the lakes and rivers, and are covered principally with heavy timber characterized as follows: Live and water oak, red and white bay, hickory, dogwood, gum, orange, the tall and graceful magnolia, and the iron wood, a very hard, adamantine species of wood. The soil is a dark, rich, sandy loam, being of great natural fertility. The pine lands are covered with the long-leaf pine, which also is considered a superior quality. All of these lands are highly productive in their natural state, as lime or marl are more or less an ingredient of them, and when properly fertilized by cow-penning, the usual *modus operandi* down South, will yield a bountiful reward to the prudent, judicious, and diligent husbandman. Mr. John M. Pearce, a gentleman of much reliability and veracity, also of enlarged and practical views of planting, gives me the following as a fair statistical criterion for fertilized lands: Cotton, long staple, 400 pounds per acre; sugar cane, syrup, 350 gallons per acre; Indian corn, 40 to 50 bushels per acre; rice, 60 to 70 bushels per acre; oats, 40 to 50 bushels per acre; potatoes, sweet, 400 bushels per acre.

Besides the above, tobacco, pindars, cow peas, and Irish potatoes, I have no definite estimate, but fully a *pro rata* yield, as much as the nutritious "hytie" potato, which is appreciated as the *sine qua non* for this whole southern country. The above crop is only a fair average when labor can be controlled and seasons favorable. The prairie lands are immense meadows, clothed with luxuriant verdure, interspersed with clumps of oak trees and palmettoes of from five to ten acres each. These lands are looked upon as inferior for agricultural purposes, and are subject to periodical inundations during the summer season, i. e. from the beginning of June to the 25th of August. They are the favorite resort of vast herds of cattle and game, which roam and graze upon its fragrant herbage. The estimate of the amount of cattle is from 60,000 to 75,000 head—thereby forming one of the principal products of the county. Stock cattle sell for \$5 per head, and beef cattle from \$9 to \$13 per head. Hogs also do well, and, when strict attention is paid to them, pay well. I have known and heard of several instances in which the common woods hog, two and a half years old, weighed from 400 to 500 pounds gross. Sheep and colts, with the natural advantages that this county possesses, could be made profitable. The forest abounds in game, such as bear, panther, deer, cats, raccoon, squirrels, and turkeys, and the lakes and rivers afford innumerable multitudes of fish and waterfowl. The whole vegetable kingdom thrives well. The county is well adapted to the culture of all the semi-tropical fruits, as has been practically demonstrated. The price of common labor is from \$15 to \$17 per month and boarded. Mechanics receive from \$2 to \$3.50 per day. The clearing of hammocks here varies from \$5 to \$15 per acre, all according to how you desire it. The usual method of preparing pine land, is to "deaden" the timber—i. e. girdling the trees—cut and pile the logs for \$5 per acre. The price of land varies according to the improvement upon the land, which you can purchase from \$2 to \$20 per acre. You also can purchase wild or unimproved land from \$1.25 to \$5 per acre. Lumber sells high, \$20 per thousand. Mills are sadly needed—not one in operation in the county. Excellent opening for investment of that kind. The county is somewhat sparsely settled; the population numbers about 3,100. Many are "new-comers." The number of votes polled 350. The colored population is small—about 50 and all told. The healthfulness of the county is excellent, and the water is abundant and of good quality. We have little sickness and only light fevers, which you can, with a little proper attention and a few grains of quinine, easily dispose of. The proof of the assertion is the fact that doctors have to "dig "hyties" and cow-drive to make a decent living.

Bartow, the county site, is pleasantly situated in the centre and in one of the most thickly settled portions of the county. It has a very respectable court house, but a miserable jail, a masonic lodge, a male and female institute in quite a flourishing condition, a post office, and a telegraph office communicating with inland and foreign cities. Bartow is 50 miles from Tampa, 75 miles from Okahumkee, and 70 miles from Charlotte's Harbor. The society is very good. We have no public schools in the county at the present time. The county has several *independent schools* in operation, and all in quite a prosperous and flourishing condition.

We are free from the pest of insects, with the exception of fleas. But the *desideratum* that our section sadly feels the necessity of is accessibility to market, and transporting facilities with the outer world—Tampa being our chief market, and nearest, being 46 miles distant. Also the principal port of admission and transit of all produce shipped to or from this section, with this exception, that beef cattle, when bound for the Cuban market, find, en route via Punta Rosa, an excellent port on the coast of Monroe county, 108 miles distant, which renders it very inconvenient and unpleasant. All transportation between Tampa and our section is carried on with ox teams, a very dilatory process indeed. Pease Creek, a very respectable stream, running in a serpentine course through the centre of the county, having its source in Sumter county, and emptying into the Gulf at Charlotte Harbor, could be made navigable for small steamers up to Fort Meade, 80 miles from its mouth, with the application of a very small amount of capital and labor. Our people have been hoping that some enterprising capitalists would comprehend this point and take hold and demonstrate the practicability of navigating the stream, which would bring this county in direct communication with the cities of Tampa and Key West, and the Gulf line of steamers. If such an enterprise could be accomplished, it would make known the dormant wealth, and advance the interest of this whole county to a great degree, and bountifully recompense the prosecutors. The county, in the whole, is favorably watered, in bold, flowing, and transparent streams and lakes, but the misfortune is, the streams are all minor in size. Fort Meade is a flourishing and growing little village, beautifully located on the lofty bluff which rises from the right bank of the river, (Pease Creek,) 80 miles from its mouth. The village is bowered among groves of trees, surrounded with a very fertile and healthy country, and society of the *first order*, and in the centre of the cattle trade, doing three-fourths of the whole business in a radius of 70 miles north, east and south. There is quite a remarkable glade in the forest of the southern portion of the county, composing about 65,000 acres of land. The timber has all been killed from time

immemorial. No historical or traditional account can be given to form a correct opinion of the cause. Some suppose that fire, and others that an extraordinary cyclone visited that section ages ago. The surface is high comparatively, dotted with small lots of young growth from a quarter to three acres—oasis-like, covered with succulent grass. It is considered quite fertile. The small remnant of dead timber that is standing upon it is highly esteemed by the adjoining settlers for rail timber, being rich lightwood, and of great durability. There are also, near Fort Meade, having been found and taken from the swamps of Pease Creek River, fossils of an extraordinary sized animal now extinct.

I will say, in conclusion, that our climate is serene, genial, and uniform, the difference between winter and summer being very little, and the range of the thermometer during the whole year is circumscribed to within very narrow limits. "Warmer in winter and cooler in summer than any other part of the State, the climate being equal to that of the most favored regions of the globe," thereby offering superior inducements to the immigrant who seeks for a home of repose, of peace, health, and plenty. And to the stranger of energetic proclivities, the citizens of the county will extend a cordial and hospitable welcome. Whishing that the "Colonist" may meet with the extensive circulation, the boon and appreciation it so greatly deserves—redounding as it does, to the interest and glory of the State, I have the honor to be, yours, &c.,

ROBERT LAMARTIN.

TROPICAL FLORIDA.

The following letter was written some time ago by Hon. W. H. Gleason, late Lieutenant-Governor, and published by order of Governor Walker:

His Excellency, D. S. Walker, Governor :

Sir:—Agreeably to your request, I will undertake to give you a description of the southern portion of Florida, through which I have been traveling for the past few months, its products, its capabilities, and its resources. My examinations have been confined principally to that portion of the State south of the railroad leading from Jacksonville to Cedar Keys, and, more particularly, south of the 28th deg. of latitude, which I shall denominate as Tropical Florida.

This portion of the State comprises an area of 20,000,000 square miles, and a population, previous to the war, of about 6,000 inhabitants. The population has not materially diminished, as there is quite an immigration tending in that direction, and is sufficient already to compensate for its losses occasioned by the war. About one-half of this population reside upon the island of Key West and the neighboring keys and islands, and are engaged in the business of wrecking and fishing, while a large proportion of the remaining one-half are engaged in the raising of cattle. Farming and the growing of crops has hitherto been neglected, and has been confined principally to small patches or gardens around the houses of the woodsmen.

The raising of cattle upon the mainland is the all-absorbing business of the inhabitants, who reside from 30 to 40 miles apart, and allow the cattle to graze upon the public domain. As the food disappears in one place, they change to another, so that the people have become migratory in their habits.

The raising of cattle upon the plains and prairies of this portion of the State is a profitable business. It is not uncommon to find men who, a few years ago, had no means, that are now the owners of from two to ten thousand head of cattle, and this after furnishing large numbers to the armies of Lee and Johnson. The country is divided into hammocks, pine-openings, and prairies. The hammocks are very rich, and are covered over with a dense growth of timber, consisting of live and water oaks, magnolia, bay, and a variety of other hard-wood timber. The soil is sandy and mixed with marl and limestone. The pine-openings are covered with scattering pines and a grass which affords fine pasturage. The soil is sandy and not as desirable as the hammock lands or prairies. The prairie lands occupy the interior portion of the State bordering upon the Kissimee river, the head waters of the St. Johns, and the upper Caloosahatchee. The soil is a rich, sandy alluvium, and they are covered over with a heavy growth of grass, and from their appearance, must be very productive. They are dotted over with small clumps of hammocks, containing from one to five acres each, which give beauty and variety to the scenery, and afford shelter during the heat of the day to innumerable herds of deer and cattle. There are also numerous small lakes of pure water, filled with fish, some of which are only a few rods in extent, while others are from two to ten miles in length. These prairies are the paradise of the herdsmen and the hunter.

The cattle require no feeding during the winter, and one can hardly travel over the prairies a whole day without seeing from 50 to 100 deer. The savannas which border on the Everglades and Biscayne Bay, are inundated during the rainy season from an overflow from the Everglades. As the water subsides, there is left a debris from one-fourth to one-half inch in depth. This process has been going on for centuries, and has provided

one of the richest soils in the world. The rich lands which skirt the savannas upon the coast side are covered with rotten limestone, and have mixed with the vegetable matter to that extent that the soil will effervece as soon as it comes in contact with acids. These savannas are valuable for sugar plantations, as the sugar cane requires a large per centage of lime, and the climate is so mild that the cane will not require planting oftener than once in ten or twelve years. The Palma Christi, or Castor Bean is here perennial, and grows to be quite a tree. I saw a number as large as peach trees, twenty feet high. Sea Island cotton seems to be a perennial in this section of the State, and is of a fine quality. The pure water, the chalybeate and other mineral springs, the magnificent beauty of its scenery, the salubrity and equability of its climate, must make Biscayne Bay, at no distant day, the resort of the invalid, the tourist, and the lover of adventure. The bay is filled with green turtle and a variety of fish, and, indeed, the entire coast of Tropical Florida is one immense fishery. At Charlotte Harbor we found quite a number engaged in fishing with seines. The value of the fish caught averages per hand, for the season, (three months) \$600. I doubt if any fishery pays better. The fisheries of Charlotte Harbor could profitably give employment to 1,000 persons; and the fisheries at Sarasota and Indian river are equally good. Every river, creek and lake seems to be alive with fish, and oysters are found in great abundance at different places all along the coast.

All that portion of the State which I have denominated Tropical Florida, is capable of producing oranges, lemons, limes, arrow-root, cassava, indigo, sisal hemp, sugar cane, sea-island cotton, rice, figs, melons of all kinds, as well as the vegetables grown in the more northern States. The country around Charlotte Harbor and Biscayne Bay is susceptible of producing coconuts, cocoa, pine-apples, guavas, coffee, bananas, plantains, alligator pears, and all the fruits and plants of the West Indies.

Like all other tropical countries, Tropical Florida has its wet and dry seasons. The wet or rainy season is during midsummer, which has a tendency to cool the atmosphere, and render the summer months cooler than it is in the more northern portions of the State, or in other portions of the South. During the rainy season nearly the whole country is flooded, the country being so flat and level that the water does not flow off readily. A great portion of the country requires ditching and draining, and when some systematic method shall be adopted to let off the surplus water during the rainy season, this portion of the State will prove the most productive part of the South. It has but few swamps or marshes, unless you consider the Everglades a marsh. They can hardly be considered as such, but more properly a lake. The water is from six inches to six feet in depth, is perfectly clear, and is grown up with grass, pond lilies, and other aqueous plants. The Alapivkee swamp, upon the head waters of the St. Lucie river, is the only swamp of any magnitude in Tropical Florida; and this part of the State has less swamps than Northern Wisconsin or Michigan. The country north of the 28th deg., east of the St. Johns river, and south of the railroad, is more thickly settled than the part just described. There are quite a number of plantations under cultivation, and more attention is paid to agriculture. The lands are more rolling than the country farther south, and produce a fine quality of sea-island cotton, which is the principal crop raised. It produces good sugar and an excellent quality of tobacco. Alachua, Marion, and Hernando are all fine counties of land for farming purposes, and have many beautiful lakes. The country east and south of the St. Johns river has more swamps than any other part of the State through which we have traveled. They are principally covered with cypress timber, and being easy of access from the St. Johns and Indian rivers, are valuable. There are fine land upon Halifax river, Mosquito Lagoon, which, at a former period, were under cultivation, but were abandoned during the Indian war by their owners. I think that there is no part of the South that offers as great inducements to the immigrant as Florida. The salubrity and healthfulness of its climate, the equability of its temperature, its accessibility, the cheapness of its lands, the ease with which its products can be marketed, are inducements which are not to be overlooked by the immigrant; and the fact that Tropical Florida is the only portion of the United States susceptible and capable of producing the fruits and plants of the West Indies, needs only to be made known for an immigration to settle in that direction to a sufficient extent to supply the Northern cities, and the entire North, with oranges, lemons, and all other tropical fruits.

We have traveled upwards of fifteen hundred miles in the newest and most unsettled portion of the State; we have mixed freely with the people of all classes, and being Northern men, and wishing to learn the sentiments of the people, as well as to examine the country, discussed the leading questions of the day, the war and its results, negro-suffrage, and, in fact, everything connected with the war and secession. We were everywhere hospitably received, and although many did not agree with us in all our views, all agreed that hereafter the grievances of the South, or of any portion of the country, must be settled in accordance with law and the Constitution, upon the floor of Congress, and not by a resort to arms. An immigration from the North will be welcomed by a large majority

of the people, and almost every one is anxious to see the State settled up and fully developed. A northern man of the most radical views is perfectly safe in traveling through any portion of Southern Florida, and to give full vent to his ideas and sentiments. The people have no real love for the North as a section, but they will treat Northern men with respect and courtesy, and will encourage them to settle.

All seem to be heartily sick of the war, and we heard no expression of hostility to the general government. On the contrary, the feeling seems to be, upon the part of many who were formerly secessionists, to carry out and enforce the laws, and they will give their aid and sanction in so doing. Like all new countries in the South and West, the laws have been loosely carried into effect, and the people have heretofore been in the habit of settling their grievances without an appeal to the law; but things, as near as we could learn, have changed for the better in that respect since the war.

Respectfully yours,

WM. H. GLEASON.

LETTER TO GEN. CHARLES MUNDEE FROM W. H. GLEASON.

MIAMI, Fla., September 3, 1868.

Agreeably to your request, I will endeavor to give you a description of this portion of the State, extending from Jupiter's Inlet to Cape Sable, including the Keys and Islands along the reefs and Everglades. The Keys are a series of islands extending along the south coast, from Cape Florida to the Dry Tortugas, lying between the mainland and the Florida reefs, and within from three to five miles of the Gulf Stream. They are of a similar character, being of general formation and very rocky. Some are only a few acres in extent, while others contain as many as 15,000 acres. Cayo Largo is the largest. These Keys are only a few feet above tide water, and are principally covered with a growth of hard wood timber, consisting of mastic, red and sweet bay, gumbo-limbo, crabwood, palmetto, mangrove, and a variety of oaks. The land is too rocky to admit of general cultivation, but is well adapted to the growth of cocoanuts, aloes, sisal hemp, and pine-apples, all of which seem to live on a rocky soil and grow here with but very little attention.

Between these Keys and the mainland is Barnes' Sound and Biscayne Bay. Barnes' Sound and Card's Sound are interspersed with innumerable small keys, covered with mangroves, and are under water at high tides, and are the resort of snipe, curlew, and other birds.

In both of these sounds and Biscayne Bay are great quantities of turtle, and sponges of the finest and best varieties. The sponges and turtle taken from these waters exceed \$100,000 in value per annum.

The bay and all the passages between the Keys and the streams running into the bay from the mainland are well supplied with a great variety of fish, such as mullet, sheep-head, grouper, etc., while incredible quantities of king-fish and Spanish mackerel are caught on the border of the Gulf Stream.

Biscayne Bay is an excellent harbor for all vessels drawing less than ten feet of water, and can be entered at all times. The Everglades are a vast shallow lake, overgrown with grass, pond lilies, and other aquatic plants, interspersed with innumerable small islands of from one to one hundred acres each. These islands are principally hammock lands covered over with a growth of live and water-oaks and cocoa plums, with an undergrowth of morning glories, grapes, and other vines, and are extremely fertile. The water is from four inches to four feet deep, and is very clear and pure. In many places are channels and sinks where the water is from ten to fifty feet deep; these holes are well supplied with fish, of which the trout is the most desirable. Alligators and turtle are abundant, and panthers, wild cats, and bears are quite numerous.

Flowers of the sweetest fragrance, and of every hue and color, greet the eye. The border and outer margin of the Everglades is prairie of from one-fourth to one mile in breadth, and comprises some of the finest and richest land in America, having once been a portion of the Everglades, and formed by the receding of the waters. The soil is sandy, with a mixture of lime and vegetable matter, and freely effervesces when brought in contact with acids.

The strip of land between Biscayne Bay and the Everglades is from three to fifteen miles in breadth, and is principally rocky pine land, with an undergrowth of a species of Sago Palm, called by the Indians "Koonitic," which name has been generally adopted by the whites. It makes a very good article of starch, and excellent gavi, which cannot be distinguished from Bermuda arrow-root, except by microscopic tests.

This section of the country has evidently been an uplift or upheaval, as the rock dips at an angle of about twenty-three degrees, and slopes both toward the Bay and the Everglades. The rock, in many places, is in circular form, and is coral.

The soil is sandy, which, mixing with the decomposed lime of the coral rock, forms an excellent and inexhaustible soil for grapes and sugar cane. The country north of Biscayne Bay, towards Jupiter Inlet, is of a similar character to that already described, with

the exception that there is no rock. Fine springs of water are found in different localities, and burst forth with great force; some of these are mineral springs, principally chalybeate. Sea-Island cotton is grown here, and it is a perennial, and can be picked several times each year. Grapes flourish well, and are not subject to mildew, and ripen about the middle of May. Tobacco raised along the Bay will compare with the best of Cuba. Bananas, plantains, oranges, coffee, dates, pine-apples, rice, indigo, sugar, apples, arrow-root, cassava, all grow and thrive well, and the garden vegetables of the Northern and Middle States. Indigo, when once sown, remains in the ground and ratoons as it is cut off. Sugar cane ratoons and requires planting only once from four to five years. Sugar cane can be raised here with less labor than in Cuba, as the land is easier cultivated; and a sugar plantation can be made for one-fifth of the money which it can in Louisiana.

This section of the State is capable of producing all of the different products of the West Indies; and there is no doubt that, when this portion of the country becomes known, it will be rapidly developed.

Sea-Island cotton can be raised with half the labor that is required in the northern part of this State or in South Carolina, as this is beyond the region of frost. The climate is very agreeable, being tempered by the Gulf Stream. It is not as warm here in summer as in New York, or as cold in winter as in Cuba, as we have no mountains or high elevations of land. The thermometer averages 73 degrees, and the extremes are 51 degrees and 92 degrees.

There is a constant sea breeze off the Gulf stream, commencing about 8 o'clock a. m., and lasting until nearly sundown. The climate is very exhilarating, and a white man can do as much labor in a day as in any portion of the United States.

The constant Indian wars, which have been more severely felt in this county than in any other portion of this State, have retarded its growth and prevented its development.

Biscayne Bay is within four days of New York, and is the best locality in the United States for raising vegetables and fruit for that market. All kinds of vegetables can be raised in the winter, and pine-apples and limes are three weeks earlier at this place than in the Bahamas or Cuba.

Grapes ripen from the 15th of May to the 1st of June, and lands can be purchased at the government price; and the healthfulness of the climate, for which it is noted, even here in Florida, will have a tendency to settle up this portion of the State as peace and quiet are restored.

Yours, &c.,

W. H. GLEASON.

SUGAR CANE.

Sweet potatoes, cotton, corn, sugar cane, tobacco, rice, peaches, oranges, lemons, citrons, grapes, melons and garden vegetables may be said to be the leading staple crops of Florida. And of all these, sugar cane has gradually been winning its way in general estimation as taking the lead of the whole for desirability, for the certainty of the crop and the profit attending its cultivation.

Heart-sick of the manifold vicissitudes attending a reliance upon the cultivation of cotton alone, multitudes of the best cultivators of the State are turning towards other crops, and by a general and rapidly increasing public sentiment, cane is believed to be, *par excellence*, the crop of Florida. It is more certain, less exacting, more simple in its management, occupies less time, is subject to less danger and gives a more profitable return than cotton, and probably equals, if it does not excel, any other crop in these particulars. But to the new-comer it is a crop entirely unknown, and such hesitate to engage in it on that account. It seems important, therefore, both to commend this crop to new-comers and to enforce its claims to the attention of all, that correct and reliable information in regard to it, its cultivation and its claims to consideration, should be disseminated as widely as possible. I have therefore deemed it advisable to gather from all attainable sources such information in regard to sugar cane as is within my reach, and embody it in a practical essay to be herein incorporated. Reliance has been mainly had upon the New American Encyclopedia, the London Encyclopedia, the Patent Office Reports, and also upon conversations with practical men and their written productions, that are reliable and attainable through the newspaper and periodical press.

Believing in the desirability of cane as a leading crop in the State, with full faith in its lucrativeness, the aim is not to produce a pretentious essay, but simply to fairly and fully set forth its real claims and to furnish such plain and fundamental hints as to its management as will offer good inducements to new-comers, who may be unacquainted with it, to enter upon its cultivation.

SUGAR CANE NOT A NOVELTY.

Sugar, recently and universally regarded as a leading necessary of human life, although known and used by portions of the race for many centuries, has only at a comparatively recent period come into general and common use. It was undoubtedly referred to in the Old Testament as the product of a sweet cane, and was probably known and used at that date by the nations of the East. It was first introduced to the nations of Europe by the conquests of Alexander the Great. Strabo states it to have been found in the East Indies some 300 years before Christ, and it was alluded to by Theophrastus; and Varro who lived 63 years before Christ; and, indeed, it is mentioned or referred to by many others of the ancient writers as being found in Arabia and the East Indies.

The Saracens introduced sugar cane into Rhodes, Cyprus, Crete and Sicily in the 9th century, and very soon the cultivation and manufacture of sugar were established in the Levant. It was introduced into Venice as early as 996, and in the 12th century was largely exported from Egypt and from Sicily. And the cane was quite widely spread, too. Thunberg found it in Japan in 1784; Osbach found it in China in 1751; Marco Polo in 1250, reported it in Bengal; Vasco de Gama, who first doubled the Cape of Good Hope, in 1497, reported a considerable trade in sugar in Calicut; Dioscorides and Pliny state it to be a native of Arabia; Mr. Bruce found it in Egypt; in 1500 it was reported in Nubia, at Thebes, and in other parts of Northern Africa. The Crusaders found it in the East and brought it back with them to Europe, and it was found in Hispaniola or Saint Domingo during the second voyage of Columbus. Indeed, there is a very strong probability that sugar cane is an indigenous production of the West as well as the East Indies, and quite widely spread before the advent of Europeans to this continent, and that the West is indebted to the East not for the introduction, but only for improved methods of cultivating and manufacturing sugar cane.

VARIETIES OF CANE CULTIVATED IN LOUISIANA.

The planters of Louisiana cultivate five different varieties of cane: the Bourbon, the Green-Ribbon, the Red-Ribbon, Otaheite, and the Creole cane.

1. The Bourbon cane is very extensively cultivated. I found it almost the only kind of cane raised on some plantations. It has a good coating of silica, which forms a strong protection against the cold; the dark color of its cortex increases the absorption of light and accelerates its maturity. It is thought a hardy cane, rattoons well and yields good sugar. It has large eyes which resemble those of the red-ribbon, and somewhat the eyes of the creole, and withstands the influence of a slight frost.

2. The Green-Ribbon is undoubtedly a different cane, not only from its light yellow color but also from the difference of its shape and the formation of its eyes. The cortex is less strong than that of the Bourbon. It yields well but is much more easily affected by frost than the former.

3. The Red-Ribbon, next to the Bourbon, is the most extensively cultivated in Louisiana. It is a beautiful cane, and its purple stripes vary from one inch to a line in width. Like the Bourbon, it has a strong coating of silica, which makes it more hardy and capable of resisting a slight frost. Its eyes are in shape and size like those of the Bourbon, and are less affected by the inclemency of the weather than the Green-Ribbon, Otaheite or Creole cane. It rattoons well, yields well, and the juice from the ripe cane is rich in sugar.

4. The Otaheite cane has large joints, but grows less high, and its cortex is less thick than in the former species; its eyes are of a very delicate structure. This cane does not ratoon well, which must be ascribed to its delicate eyes. It is easily affected by the frost, in consequence of which little is cultivated, although its juice is rich and yields very abundantly.

5. The Creole cane, formerly extensively cultivated, has been nearly superseded by the Bourbon and Red-Ribbon, on account of their hardy nature. In the vicinity of New Orleans it is raised for eating, in small patches. Its cortex is easily crushed, and yields a rich juice, from which a superior kind of sugar is made. Its eyes are rather small, but larger than those of the Otaheite, and resemble those of the Bourbon and Red-Ribbon. This cane grows short, with straight leaves and drooping like those of the Bourbon and Red-Ribbon.

SOILS ADAPTED TO CANE.

The London Encyclopedia says: "The soil most favorable to the cultivation of cane is the dark gray loam of the island of St. Christopher, which is so light and porous as to be penetrable by the slightest application of the hoe. Next to the ashy loam of St. Chris-

topher, is the soil which in Jamaica is called brick mould; not as resembling brick in color, but as containing such a due mixture of clay and sand as is supposed to render it well adapted for the use of the kiln. It is a deep, warm and mellow hazel earth, easily worked; and though its surface soon grows dry after a rain, the under stratum retains a considerable degree of moisture in the driest weather. After this comes the black mould earth of several varieties of Barbadoes, Antigua, and the other Windward Islands."

METHOD OF PROPAGATION.

Sugar cane, like other similar plants, has blossoms and what appears to be seeds, but whether from want of perfection in the seed or from custom founded on experience, it is never attempted to be propagated from seed, but is raised from "cuttings" so called. Indeed, a very competent English authority, Mr. Wray, in the "Practical Sugar Planter," says: "As I have often been applied to on the subject, and have instituted many inquiries and experiments, in order to satisfy myself and others, I take this opportunity of stating what I have ascertained on this point. First, that no variety of sugar cane is known to perfect its seed, (or indeed to produce anything like seed) either in India, China, the Straits of Malacca, Egypt or in the South Sea Islands; as in all those countries the cane is entirely propagated by cuttings. Second, I have myself tried numerous methods which I imagined might by some possibility cause the plant to perfect seed."

Sugar cane grows in joints of from 3 to 6 or 9 inches in length, like the reeds used for fishing poles, with a sort of partition between each two joints of a hard vegetable substance. At or near each of these partitions, on one side of the cane, is an eye, which is always exactly opposite to the eye attached to the next joint above or below. So that the eyes on a perfect cane together form two rows of eyes on opposite sides of the cane. From each of these eyes, when covered with earth to the proper depth, proceed the sprouts and roots which constitute in time the complete cane.

MODES OF PLANTING.

Cane is planted in the South, either in drills or in hills, and each method has its special advocates. If in drills, double furrows are drawn across the field at a distance of from three to five or more feet from each other, and the canes, either whole, or in pieces containing two to four joints, are laid, usually in double or triple lines, in the furrow and lightly covered to a depth of two inches, in Spring planting, and five or six inches if planted in the Fall, requiring greater depth for protection in Winter.

If the cane is to be planted in hills, three heavy furrows, doubled if necessary, are run across the field, at the required distances apart, which must be the line of the rows one way, and cross-furrows are run to mark the place of the hills in the row. At the intersection of the furrows two pieces of cane, each containing two to four eyes, are carefully dropped and then lightly covered. In which ever way the cane may be planted care must be taken that none of the eyes are turned downward, for this always retards and sometimes prevents the sprouting of the cane.

Each way of planting has its advocates, and the drill-planting method is more widely prevalent. Drill-planting requires more seed, and probably will secure a larger number of canes; while it is claimed that hill-planting, in addition to requiring less seed, will give much the larger canes and as many as the land will thoroughly sustain.

The conviction is becoming general among planters of experience that the value of the crop is more apt to be injured from planting too much than too little seed, and that rows and hills should be farther apart than is customary. In Mr. Fleichman's report to the Patent office, he says: "There exists a great difference of opinion among the Louisiana planters with regard to the distance that cane should be planted apart. Many still adhere to the old mode of planting, that is, in rows from three to five feet, while others plant it, with great advantage, eight feet apart, or at such distance that the carts and cattle straddle the rows in carting cane from the field without injury to the ratoon."

I have seen cane planted at eight feet, which was so luxuriant in its growth that the rays of the sun could scarcely penetrate, although it was a field planted with cane for twenty successive years, and had only the year previous a crop of Indian corn and peas on it; that one year's rest, wide planting, and proper culture, gave it such a vigorous growth as I never saw in agricultural produce. Mr. Geo. J. Squier & Brother, in their Sugar Manual, remark as follows:

"There is great diversity of opinion and practice among cane planters with regard to the distance the rows should be apart, and different individuals plant all the way from three to twelve feet apart. But the weight of authority seems to be in favor of planting from 6 to 9 feet apart, or so that the carts and cattle can straddle the rows in carting the

cane from the field without injury to the stubble. Some very wonderful results have been attained by planting the rows 12 feet apart.

"The following plan has been tried with good results, and has many points to commend it: Lay off the ground in rows six feet apart; plant two rows of corn and two of cane. In the corn, peas may be planted to enrich the land, and it may be further heavily manured after the corn is gathered. The cane will afford a good crop of stubble the second year. Plant the corn and peas also the second year. Then in the fall after the corn is gathered prepare the corn ground for cane, and cut the cane from the rows along side and plant before the grinding season. The advantages of this system are these: The planting is done early, in fine weather; all hauling and matting of the cane is saved, and sound cane is secured, with no risk of its spoiling in the mat. This mode gives an alternation of two years of cane and two years of corn and peas, with an opportunity to cultivate and enrich the soil, and gives nearly or quite as great a yield of sugar to the acre, besides a very good crop of corn."

RATTOONING

Cane does not of necessity require replanting every year, the stalks being cut in the fall. From the same roots, in the next year, unless the root is injured by cold, drought or excess of moisture, there springs a second growth of sprouts similar to the first. This subsequent repeated growth from the same root is called ratooning, and may be repeated from year to year for several years. The value of these succeeding or ratooning crops is variously estimated, some asserting that it continually deteriorates after the second year, and others maintaining that with care it may be ratooned indefinitely.

The common opinion is that replanting is necessary once in 3 or 4 years. But Judge Dupont, of Quincy, in Gadsden county, one of the northern counties in this State, told me that he had raised cane from the ratoon six successive years without either diminution or deterioration.

I am informed that on the lands of Indian river, the nineteenth crop of cane from the same planting, and on the shores of Lake Worth, cane is now growing which has not been replanted since the early Indian wars. The probability is that the character of the ratoon and the extent of their repetition depends upon the quality of the original seed, the cultivation and the fertilization it has received.

MODE OF CULTIVATION OF CANE.

The cultivation of cane is almost exactly the same as that given by good farmers to corn, and is so nearly similar that special description is not necessary. Like corn, it requires to be kept clean of weeds and grass, and thorough tillage, and if any difference exists, it is in this, that cane will, more surely than even corn, repay the cultivator for frequent and deeper cultivation.

SELECTION OF SEED.

It is as true of cane as of many and indeed of most other crops, that a heavy percentage of loss is incurred in its cultivation from carelessness and pinching economy in the selection of seed. As with every other known crop, good seed, other things being equal, will produce good fruit, and vice versa. In reference to this point, Mr. Fleichman well observes: "It is with cane as with all other plants; imperfect seed produces a poor plant and bad fruit. The planter cannot expect that seed-cane with delicate, imperfect eyes and short joints will produce a cane like one of vigorous growth, with perfectly well developed eyes and a great deal of juice, which supports the young shoot till its roots are strong enough to obtain nourishment from the soil. The young sprout from poor cane is less able to support the inclemency of the climate and is more liable to disease." And he goes on to make some remarks as applicable to Louisiana, which apply with nearly equal force to cane growing in Northern Florida. "In the West Indies, we are told, the few upper joints of the plant nearest the leaves, commonly designated as the 'cane-tops,' are used for seed-cane. In the West Indies, where the cane arrives to perfect maturity, where every joint is ripe, and every eye well developed, the top joints may answer; but in Louisiana, where the cane is never entirely matured, where it must be cut before the upper joints are formed, the tops are not fit seed, and the result must necessarily be bad."

TIME OF PLANTING.

In the West Indies, where no danger is to be apprehended from frost, cane is almost universally planted in the Fall, at the time of cutting; but in Louisiana and the northern

half of Florida, the Spring, from February to April is the safer time, while in Central and Southern Florida the Fall doubtless would be the best, being equally safe and saving any extra handling of the cane-seed, which is injured in keeping over winter.

PRESERVATION OF CANE AND PROTECTION AGAINST COLD.

Whenever cold weather prevails in the Winter, of a degree sufficient to freeze or injure cane, such cane as it becomes necessary to preserve for grinding at a later period or for seed, is secured against the effect of cold weather by a process of very simple character called "matting." Matting consists in throwing the cane after being cut, into beds of such thickness and so arranged, that the overlapping or covering of the butts of one portion by the tops of another will insure sufficient protection. Beginning at one end of a bed 10 to 20 or more feet in width, the newly cut cane is thrown upon the ground from six inches to a foot or more in thickness across the width of the bed, the tops projecting outward, the butts of the cane so laid are then covered with the tops of other parcels and so on, giving to the bed when finished a thickness of from $1\frac{1}{2}$ to 3 feet, according to the expected degree of cold, and continuing it in length as far as necessary. And when finished the sides and ends are covered with dirt, and if severe cold is apprehended, the top also.

PROTECTING THE ROOTS.

In cold climates, and in proportion to the degree of cold apprehended, the roots of the cane upon which reliance is had for ratooning, must receive more or less protection. This is accomplished by first throwing the refuse leaves and tops which remain after harvest upon the roots or stubble of the cane, and then additional protection is accomplished by running a furrow close to and on each side of the drill, thus turning a furrow of dirt upon it, and thus it remains till Spring, when the refuse or "trash" is raked off and soon new shoots spring up from the old roots.

FERTILIZATION.

Cane is a plant of so succulent a nature, and of such strong growth, that it must of necessity be an exhaustive crop, and requires a deep, strong soil for favorable results. Therefore frequent and thorough fertilization is an essential condition precedent to success. Indeed one look at a thrifty growth of cane of full size is enough to convince any one that it is hardly possible to give too much stimulus in the way of proper food to this crop.

While cane is one of the most certain of all known crops, and one of the hardiest, that will tolerate a degree of neglect that would be fatal to almost any other crop, yet it as certainly responds to deep and frequent cultivation and generous feeding as any crop that can be cited, and in its varying result of from 500 to 5000 pounds of sugar to the acre, will bear unmistakable testimony to the degree of care awarded it.

SIZE OF SUGAR CANE.

In Louisiana, says Mr. Fleischman, "the length of the ripe joints varies; those of the Bourbon and Red Ribbon varying from four to nine inches in length. The cane cut for grinding measures from three to five feet in length. I saw some over eight feet high and with from twenty-four to twenty-eight good joints, but they are rare instances."

The New American Encyclopedia says: "It grows in a succession of joints, or rather nodes, from 4 to 20 feet high and the stem is 1 to 2 inches in diameter. The Otaheite grows in Jamaica, it is said, to the height of 10 to 12 feet the first year, with stems six inches in circumference, and joints six inches apart."

The London Encyclopedia says: "The sugar cane or *saccharum officinarum* of Botanists, is a jointed reed, commonly measuring (the flag part not included) from three and a half to seven feet in height, but sometimes rising to twelve feet."

Mr. Beckford, an eminent English authority, in his account of Jamaica says: "It, in common rises from 3 to 8 feet or more in height; a difference of growth very strongly marks the difference of soil or the varieties of culture."

YIELD TO THE ACRE.

The London Encyclopedia says that cane planted in particular spots in St. Christopher's Island have yielded 8,000 pounds of measured sugar to the acre, and the average crop is nearly two hogsheds of 16 cwt. per acre for the whole of the land in ripe cane.

In the new American Encyclopedia, it is stated: "The yield of sugar in the Southern States is from 500 to 2,000 pounds to the acre; in the West Indies, 3,000 to 5,000 pounds. and in the East Indies, the highest product is about 7,000 pounds."

ADAPTABILITY OF FLORIDA TO THE CULTURE OF CANE.

No topic of greater practical and immediate importance can possibly be brought to the attention of the farmers and planters of the State; for much as has been said and written upon the matter of cane culture in Florida, the real value of this crop, and full adaptation of our State to its successful cultivation, are as yet unknown to most of our people, and fully appreciated by few.

In the pamphlet prepared for the State are statements that cane can be grown on almost any of the soils of the State, on some, of course, more successfully than others; that in far the greater portion of the State it rattoons, or springs up from the old roots, and so does not for several years require re-planting; that it produces more largely and is more easily cultivated in Florida than in any other State, not excepting Louisiana; that 1500 lbs. of sugar and 300 gallons of molasses have been raised to the acre, &c.

Doubts have occasionally arisen as to the correctness of these statements, and opinions expressed that they must have been exaggerated, for, otherwise, everybody would immediately go into sugar cane culture.

The superiority of Florida over any other section of the United States in adaptability to the growth of cane, is mainly based upon her milder climate, the greater length of the seasons, and the correspondingly longer growth and larger size of the cane. In Mr. Fleischman's report, from three to five feet is given as the average size of cane when harvested, while in Florida from five to seven may be taken as the average size of the cane over the whole State, extending from north to south nearly 400 miles, and with fair culture, 8, 10, 12 feet are quite common lengths. Florida is so located, geographically between the Gulf and the Gulf Stream, and is of such peninsular form and of such narrow width, that its climate is essentially ameliorated by its being constantly traversed by the soft and balmy winds of both Ocean and Gulf, and thereby so much better fitted for the growth of cane and tropical fruits.

In an article on sugar cane, in the new American Encyclopedia, the climatic disadvantages attending the cultivation of the sugar cane in Louisiana, are stated as follows:

"Yet, the climate of Louisiana itself is rather north of that best suited to the plant, the cane being frequently killed by the frost after starting in the spring, and at maturity in the latter part of October and in November, the effect of which is to materially diminish its production of sugar. In 1857 injurious frosts thus occurred in April, as late as the 22d, and on the 19th and 20th of November. In November, 1859, the cold was very severe on the 12th, 13th, 14th, and 15th, in all parts of Louisiana, the thermometer on the 14th standing at 25 deg. F. at New Orleans, and thick ice being formed in the most southern parishes. The effect of this was that the cane was everywhere frozen, and land which had previously given above two hogsheds to the acre, yielding barely half a hoghead, and this of inferior quality. The climate is also subject to long continued drougths, which seriously injure the growing crops."

But in Florida frosts are of infrequent occurrence and in South Florida are unknown. Of the few frosts that do occur, instances as early as November or as late as April, have been known only at intervals of years.

It may be stated that the statements of the pamphlet are all susceptible of abundant verification, and are carefully made to fall considerably within the limits of ascertained facts; and in order to show the agricultural importance of the culture of cane to the people of Florida, it may be well to give some account of what has been done as ascertained by authentic accounts from men of undoubted character and veracity.

General Cassadey, in a paper read before the Putnam County Agricultural Society, says: "It is a circumstance of frequent and common occurrence with us for \$300 and over to be realized from the produce of sugar and molasses made from the cane grown on one acre only of our common pine lands, enriched by cow-penning."

Judge Dupont has known in one instance 19, and in another 21, and another gentleman speaks of 24 barrels of syrup made to the acre in Gadsden county, one of the northern counties of Florida.

Statistical returns from Marion, Alachua, Suwannee, and Orange counties make 2,500 lbs. of sugar per acre an average return for good cultivation. Accounts from Hernando county give 2,600, 3,400, and 3,600 lbs. of sugar as the actual product per acre of three sugar crops in 1869, in that county, thus giving an average of 3,200 lbs. to the acre. This, at 15 cts. per lb., will give an average product of \$480 per acre.

It is computed that one gallon of syrup will make five pounds of sugar. 20 bbls. of 40

gallons each of syrup, therefore, would give four thousand pounds of sugar, and four hogsheads of sugar have been made to the acre in this State.

In my office may now be seen a cane grown along the railroad on pine land in Sanderson, more than seven feet in length. In Middle and South Florida it grows to ten and twelve feet in height, and in South Florida has grown to the height of seventeen feet. There it matures, tassels, and produces seed.

There are millions of acres in our State that can and will produce easily two thousand pounds of sugar to the acre; and many of our most intelligent planters firmly believe that the pine lands fertilized will produce a better quality of sugar than can be raised on the black, so-called, "sugar lands." An actual trial proves that a compost of muck or marl is the best possible fertilizer for the sugar cane, and muck and marl abound everywhere.

Good cultivation will accomplish wonders with cane. It is known that one small planter near Picolata, during the past year, with no help except his own little boy, made from two acres of land forty barrels of sugar and five hundred gallons of syrup. Well cultivated, one acre of fair land will produce from twenty-five to thirty-five thousand canes. Seed cane has been sold in Jacksonville, within a week, at thirty-five dollars per thousand.

Why do not more men go into cane culture?

There are several answers to this very natural question. First, The real value of this crop, and the perfect adaptation to it of our soil and climate, have not been fully known; Second, There has heretofore been a difficulty in procuring seed; Third, There has prevailed an opinion that, though profitable when cultivated on a large scale, requiring much capital, it would not pay the small cultivator having limited means; Fourth, Until latterly, the machinery necessary for expressing the juice and manufacturing the sugar has been very expensive, not within the reach of small planters.

All these obstacles are rapidly disappearing, and more sensible and better founded opinions are beginning to prevail. And now at last mechanical ingenuity has come to our aid, and many varieties of sugar mills and evaporators are offered to those who desire to go into the raising and manufacture of sugar. A cursory inspection of the various mills now presented to the choice of the sugar planter will convince any one that now, at least, the expensiveness of the necessary machinery need not deter any from sugar planting.

Deeply interested in the extension of sugar planting in our State, fully believing that Florida can easily become the Sugar State of the Union, and fully aware that a wrong idea of the great expense of the necessary machinery has operated as a bug-bear to deter many from entering upon this exceedingly profitable culture, I deem it entirely proper to call the attention of our planters, and all those who are hesitating to embark in the cultivation of sugar cane, to the great variety of sugar mills now offered by the merchants of our city. Mills can be seen here that have ground one hundred gallons in twenty-one minutes, and are sold at \$225. There are mills of all sizes, and adapted to the wants of any individual planter, or those of a neighborhood, and vary in price from \$60 to \$250. An inspection of these mills will be full of interest to the practical planter, and as well to him who would fairly estimate the capacity and adaptation of Florida to the cultivation of sugar cane.

PRODUCTIONS OF FLORIDA.

So much has been said of the vast scope of vegetable growth in Florida, that it is a cause of surprise to all strangers, and suspicion to many; as though there might be well-grounded suspicion of exaggeration or over-statement. On this account it is deemed best to refer to some of the older standard writers on this subject.

In the "Observations" of Charles Vignolles, published in New York in 1823, on page 99, we find the following: The following list of productions capable of being raised in Florida, has been made out with some pains, and it is believed all these stated are profitable and practicable articles:

Oranges, various kinds,	Currants, Zante,	Pimento,
Lemons,	Pine Apple,	Sago Palm,
Lime,	Fig,	Red Pepper,
Citron,	Plantain,	Saponica,
Shaddock,	Banana,	Jesuits' Bark,
Mango,	Yam,	Besine,
Pawpaw,	Bread Fruit,	Palma Christi, Castor Bean,
Cocoa,	Arrow Root,	Tea, "
Date,	Gallnuts,	Sugar,
Sweet Almond.	Doliahos, or Soy-lean,	Tobacco,
Bitter Almond,	Jalap,	Rice,
Pistachio,	Tree Rhubarb,	Cotton,
Acuagua,	Ginger,	Silk,
Gum Gleni,	Gum Guaiacum,	Cork Oak,

Pustic,	Brazilotte,	Chestnut,
Balsam,	Senna,	Sassafras,
Hemp,	Turkey Mudder,	Sarsaparilla,
Camphor,	Balm of Gilead.	True Opium Poppy,
Frankincense,	Cloves,	Tumeric,
Leeche Plant, of China,	Liquid Amber,	Nutmegs.
The Olive,	Aloe,	
The Vine, all varieties,	Cinnamon,	

Such a list seems wonderful enough as attributed to a territory no larger than that of Florida, being about the size of the State of Missouri, even upon a cursory examination, the list having been made more than 40 years since. But when practically we come to examine the actual availability of these lands, and to ascertain the strength of the inducements offered to occupation, we find many important productions omitted and no allusion made to many pursuits that can be engaged in successfully. To the list as quoted, several important additions are proper. Coffee may, with little doubt, be grown to great profit at least in all South Florida, and probably in a great portion of the State. Coffee trees are now in existence in the South, and practical coffee planters are confident of success whenever the effort shall be made to cultivate this important staple. The experiment is now being thoroughly made, and thus a practical test will be applied; and since the revenue duties on the product will amply repay the expense of cultivation, the question is an important one. Rye, Oats, Wheat, Sweet Potatoes, Irish Potatoes, Pindars or Peanuts, and Pecannuts can be added. Sisal Hemp, common Hemp and Ramie can all be very profitably raised. Sorghum and the Silesian or Sugar Beet, both can be relied upon for certain and good crops.

Lands, upon which such a variety of valuable productions can with ease and certainty be raised, must ere long be sought with avidity. And such prospect is still more reliable when consideration is given to the probabilities that unquestionably exist for the success of several leading avocations and employments.

Such is the fortunate conjunctive effect of soil and climate, that countless herds of cattle may be raised and sustained absolutely without care, and at almost no expense, when allowed to run wild. And if the opinion of many intelligent dairymen, that even in the best grazing States cattle can be "kept up" and fed with green crops even through the summer, more profitably than they can be provided with pasturage, then surely there can be little question about the chances for cattle-raising upon these lands where either growing grass or green crops can be made use of throughout the year. If so, then the raising of cattle, the disposition of the hides and tallow, the curing of beef, and the manufacture of leather must go to swell the actual inducements offered.

The vast extent of excellent yellow pine and pitch pine timber lands, accessible as they are, by railroad and navigation, present, in the growing scarcity of first-rate timber, excellent chances for the manufacture of lumber and for speculation, the timber being of more value than enough to pay for the land; leaving the land itself in improved condition for settlement as a margin for additional profits. The turpentine farms are, to a great extent, operated by men from the Carolinas, who find here a better field for enterprise, and with the known capacity of this section for the cultivation of cordage plants, a fine field is open for the production and manufacture of naval stores.

The Orange, the Lemon, the Bay, the Mangrove, the Box, and the varieties of Palm, and the Magnolia, as well as the Cedar and Live Oak, show the worth of these lands for the production of rare and valuable woods. The inexhaustible supplies of Cypress, a wood standing next to Cedar for different varieties of wooden-ware, procurable at only nominal prices, must soon stimulate to the establishment of a great variety of manufactures. Add to all these the fact that with very little care for forage or feed, or expensive buildings there is no civilized country where a man of small means can be more absolutely certain of a comfortable living for himself and family, and the list of inducements to the purchase of these lands is nearly full.

It is hardly possible for a man from the Northern or Western States or from Canada, to believe that it is practicable in any one locality, without the varied temperature that is given in the immediate vicinity of elevated mountains, to cultivate successfully within the same enclosure, the oats, rye and wheat of Canada, the peach, quince and sweet potatoes of the Middle States, the corn, cotton and tobacco of the Southern, the coffee, indigo, ginger of the West Indies, the orange, lime, lemon and citron of Central America, the olive and the grape of the East, the date and palm of the desert, the guava, the sugar cane and the tea of Southern Asia; yet the dweller in Hernando and Manatee actually does this very thing and can do so every day in the year.

WHAT MAY BE DONE ON THE LANDS IN FLORIDA,

SUGAR.—This is the best sugar region known. Sugar lands that in the West Indies are

rated at \$250 to \$500 per acre, can here be bought at \$1 to \$15. The season is longer than in Louisiana. Cane fit for grinding grows on these lands from 7 to 10 feet in length, while in Louisiana 5 feet is very good length. The planting of sugar is a little more expensive than that of corn, but where, as upon these lands, cane will ratoon 6 and 8 consecutive years, the cost may be called the same. And with the same preparation, the same fertilization, and the same cultivation required for a crop of 45 bushels of corn to the acre in the Northern, Middle, or Western States, worth \$60, at \$1.33 per bushel, Florida lands will produce on an average 2,000 pounds of sugar, at 12 cents per pound, worth \$240. Three thousand lbs. have often been raised. Three plantations in Hernando county made, in one neighborhood, an average of 3,200 pounds, and as high as 4,000 pounds to the acre, has been made in Florida. Again, from 15,000 to 25,000 canes can be raised on an acre well manured and well cultivated, and these canes sold for seed from $1\frac{1}{2}$ to $2\frac{1}{2}$ cents, which at the average of number and price, give \$338 to the acre.

ORANGES.—Oranges may be made to begin to bear fruit in 4 years from the sour stock and 7 years from the seed. The land occupied may be cultivated in various crops until the trees bear. 150 trees may be set on an acre. A bearing orange tree is worth from \$50 to \$100. A bearing grove of five acres, on the St. Johns, is now held at thirty thousand dollars. Ten thousand dollars and upwards is the value of its actual crop. Hundreds of thousands of acres of these lands are exactly adapted to oranges and all the citrus tribe, and the same figures will apply to the lemon and lime. Where and in what way, and by the use of what means, can a young man, in ten years, secure by the cultivation of ten acres, a more ample or certain competence? What better inheritance can a man leave for his children?

CITRON.—A thrifty and well cared for citron tree will produce 100 lbs. of fruit, and 200 may be set on an acre. Five acres of these trees would produce 1,000 trees, annually yielding, at 50 lbs. to the tree, 50,000 lbs. of fruit. One acre of cane would furnish the syrup to preserve the fruit. When well cured, it may be boxed and held for transportation and a market, and sold for 25 to 40 cents per pound.

FIGS.—Figs are easily raised from cuttings and begin to bear in three years, producing one good, and one or two additional but inferior crops annually. Two hundred trees may be set at nominal cost on an acre. There is no reason why, where the cost of fuel is so insignificant, figs may not be well cured, if not by natural means, then in a few hours by artificial heat, in a dry house that any man can build with an axe.

CASTOR BEANS.—Throughout the whole extent of these lands, the Palma Christi or Castor Bean can be made a more profitable crop and raised with less trouble than corn or wheat in the North and West.

GINGER.—Jamaica Ginger grows vigorously in any part of the State, and might be cultivated to great profit with a little care.

BANANAS.—One thousand bananas may be set on an acre. Each plant fruits in the second year from setting, and sends up, while it is bearing fruit, three to six shoots, which themselves, transplanted, will fruit in the succeeding year. Each plant will bear one, sometimes two bunches of fruit, worth \$1.50 to \$3.00, and all with little attention, though it requires rich, moist land. All of these lands, from Gainesville to the Gulf, will raise bananas.

ARROW ROOT.—Different varieties of arrow-root can be successfully raised with less care than is required for Irish potatoes, and once planted are difficult to eradicate.

GRAPES.—The tremendous growth of the wild grape in the woods, demonstrates conclusively the special adaptation of these lands to the growth of the vine. The Scuppernong seems to be the most common variety, and in Gadsden county, 1,000 gallons of wine from an acre is reported as a reliable yield. But other choice and many of the rarest imported vines do exceedingly well. This section cannot fail to attract universal notice as a wine-growing region.

ZANTE CURRANTS.—These Currants can as well be raised here as anywhere in the Levant, and their cultivation and curing can easily, and with little labor, be made profitable.

PINE APPLES.—The whole of the southern portion of the State is capable of yielding an immense profit from the cultivation of the pine-apple. It thrives especially on the southern islands or keys. Upwards of \$3,000 has been realized from a single acre on Key Largo.

OYSTERS.—No larger or finer flavored oysters exist than those which abound on both the east and west coast of Florida. They are now found in incalculable numbers. The canning of oysters is a very profitable business, and may here be carried on to almost any extent. There is no danger of a failure in the supply, as they may be multiplied *ad infinitum* by planting and cultivation as in the North, in France, and elsewhere. The cultivation of choice oysters, only recently established in France, is now a source of large revenue.

TURTLE AND SPONGE.—The taking of turtle and sponge along the coast of Florida has long been found a profitable avocation, and the supply of sponge can also be increased by cultivation, and as localities where this can be done are rare, this becomes an important consideration.

FISH.—Off the Gulf coast of Florida are more than two hundred miles of reefs or banks, upon which fish, superior to cod, can be taken in countless multitudes, while the bays, inlets and streams as well as inland lakes are all bountifully supplied with the choicest fish. The fisheries of Florida can be made available during the whole year, and on this account, as well as the abundant supply, are fully equal to those of Newfoundland. Hundreds of barrels have been taken on the Florida coast at a single haul of the seine.

PEACHES.—When peaches begin to bloom in Delaware and New Jersey, they are one-half grown in Florida, and no better peach country can or need be found than along the line of the Florida Railroad. At one year's growth from the pit, peaches often attain, even in W. Florida, the height of ten feet. Care, selection and attention can place in the Northern market the choicest peaches from Waldo and Starke, several weeks before they can be raised North. There is no country where the marketing of peaches, whether fresh or dried, can be made more lucrative, or where they can be more profitably canned.

LUMBER CAPACITY.—The reputation of the Yellow Pine of this State for flooring, strong timber and for naval purposes is such as to render any comments upon it unnecessary; and the growing scarcity of first-class pine lands, available for lumber, enhances the value of these lands. There are several hundred thousand acres, along and in the vicinity of the Florida Railroads, that are either now available by means of the road, or could be made so by the construction of short branch roads, that are shown by the experience of our own lumbermen to be both practicable and profitable. And these lands, many of them, carefully selected by competent men, can now, for a short period, be procured on exceedingly favorable terms.

Although the cutting of timber and the manufacture of lumber have long and profitably engaged the attention of enterprising men, and although the majority of the timber within two miles of navigable water, and of other roads has been consumed, still the lumber capacity of the State has never been half appreciated, and much of the best timber land of the State is included among the lands now offered.

MANUFACTURE OF WOODEN WARE.—The simple fact that from among the lands now offered, purchases may be so made as to give the manufacturer a half century's supply of stock for less than one per cent. of what a single year's supply now actually costs in the vicinity of some of the most flourishing manufactories of this kind to be found in the country, gives almost positive assurance that a wonderful development in this direction must ere long take place. Oak, ash and hickory abound, and of Cypress, which closely approximates cedar in value for tubs and pails, and forms first-class material for sash, doors and blinds, the supply is inexhaustible, while still, by careful selection, quantities of excellent Red Cedar and Live Oak may be secured. Surely the attention of manufacturers is not solicited without good reason.

THE FIG IN FLORIDA.

The remarkable vigor and thrift attending the growth of the Fig in this State, and the many facilities afforded for an unlimited business growing out of its cultivation and preparation for market are so decided, that this fruit is worthy, like the Orange and Cane, of special attention here.

A simple preparation of figs by boiling in syrup will furnish a most palatable and wholesome preserve, that only needs to be known to become a universal favorite; and if figs can be prepared for a lucrative market by drying, anywhere on earth, it can be done in Florida.

For special and reliable information concerning the Fig I here insert an excellent article from the London Encyclopedia, simply reminding readers that it is written in and for the climate of England, and is of so much the more force as considered with reference to the climate of Florida.

"*Ficus*, the fig-tree, a genus of the tricecia order, and polygamia class of plants: natural order fifty-third, scabridae. The receptacle is common, turbinated, carnos, and connivent; enclosing the florets either in the same or in a distinct one: male, *cal.* tripartite: *cor.* none: *stam.* three: female, *cal.* quinquepartite: *cor.* none: pistil, one; and one seed. There are fifty-six species, of which the following are the most remarkable:

F. carica, the common fig-tree, with an upright stem branching, fifteen or twenty feet high, and garnished with large palmated or hand shaped leaves. Of this there are many varieties; as, The common fig-tree, with large, oblong, dark purplish blue fruit, which ripens in August either on standards or walls, and of which it carries a great quantity. The brown or chestnut fig; a large, globular, chestnut-colored fruit, having a purplish delicious pulp, ripening in the middle of August. The black, Ischia fig; a middle sized, shortish, flat-crowned, blackish fruit, having a bright pulp; ripening in the middle of August. The green Ischia fig; a large, oblong, globular-headed, greenish fruit, slightly stained by the pulp to a reddish brown color; ripens in the end of August. The brown

Ischia fig; a small, pyramidal, brownish-yellow fruit, having a purplish very rich pulp; ripening in August and September. The Malta fig; a small, flat-topped, brown fruit, ripening in the middle of September. The round brown Naples fig; a globular, middle sized, light brown fruit, and brownish pulp; ripe in the end of August. The long, brown Naples fig; a long, dark brown fruit, having a reddish pulp; ripe in September. The great blue fig; a large blue fruit, having a fine red pulp. The black Genoa fig; a large, pear-shaped, black-colored fruit, with a bright red pulp; ripe in August. The carrica is frequently cultivated in this country, and is the only species which does not require to be kept under glass. It may be propagated either by suckers arising from roots, by layers, or by cuttings. The suckers are to be taken off as low down as possible; trim off any ragged part at bottom, leaving the tops entire, especially if for standards; and plant them in nursery lines at two or three feet distance, or they may at once be planted where they are to remain; observing that if they are for walls or espaliers, they may be headed to six or eight inches in March, the more effectually to force out lateral shoots near the bottom; but, if intended for standards, they must not be topped, but trained with a stem, not less than fifteen or eighteen inches for dwarf standards, a yard for half standards, and four, five or six feet for full standards. Then they must be suffered to branch out to form a head; observing that whether against walls, espaliers, or standards, *the branches or shoots must never be shortened unless to procure a necessary supply of wood; for the fruit is always produced on the upper parts of the young shoots; and, if these are cut off, no fruit can be expected.* The best season for propagating these trees by layers is in Autumn; but it may be also done any time from October to March or April. Choose the young pliable lower shoots from the fruitful branches; lay them in the usual way, covering the body of the layers three or four inches deep in the ground, keeping the top entire, and as upright as possible; and they will be rooted and fit to separate from the parent in Autumn; when they may be planted either in the nursery or where they are to remain. The time for propagating by cuttings is either at the fall of the leaf or in March; choose well ripened shoots of the preceding Summer; short, and of robust growth, from about twelve to fifteen inches long; having an inch or two of the two years' wood at their base, the tips left entire; and plant them six or eight inches deep, in a bed or border of good earth, in rows two feet asunder. When planted in Autumn, it will be eligible to protect their tops in time of hard frost the first winter, with any kind of long loose litter."

TROPICAL FLORIDA.

BY L. D. STOCKNEY, FORT MYERS, FLORIDA.

That portion of Florida south of 27 deg. of latitude has generally been believed to be covered by swamps and everglades, and unfit for cultivation; but it has been found by actual reconnoissance to contain large bodies of high land fit for agricultural purposes, and equal to any in the State for fertility.

The climate of this region is more uniform than in any country in the same latitude not similarly situated in contiguity with the Atlantic ocean and the Mexican gulf, being too remote from the north to admit the dominion of the cold winds to prevail long enough to produce any sensible effect, while its proximity to the tropics affords the mild and refreshing coolness of the trade winds.

The soil is generally light, and will not bear many exhausting crops, such, for example, as sugar, without manures; but in no country are the means of improving land more available—lime, marl, argil, silica and humus are abundant and accessible to all. By a skillful combination of these, compost can be formed adapted to any land—suitable to make poor land rich and keep it so. The rivers abound in fish; the lagoons bordering on the ocean supply turtle and oysters; the earth produces the *coco* and the cabbage tree, and the forests are alive with wild deer and other game. Food is everywhere within reach, and can be produced with the least possible exertion.

The writer about ten years ago purchased an extensive tract of land on the Caloosahatchee river, one hundred and twenty miles north of Key West, and engaged in the culture of tropical plants. The point selected, Fort Myers, had, during the Indian wars, been occupied by the United States troops as a military post. The officers stationed there caused about fifty acres to be cleared, fenced, and planted in a variety of tropical plants. The orange, lemon and lime trees have come into bearing, producing abundantly. The Sicily lemon tree planted there is much improved from the original. In this locality the cocoanut, date, guava, pine-apple, banana, plantain, sappadillo, tamarind, alligator pear, sugar apple, grape fruit, arrow-root, cassava, ginger, and coffee, are all growing, and might be successfully cultivated to supply to the States of a colder latitude much of those productions which are now imported from foreign countries, thus forming highly important additions to the agricultural wealth of the Union.

Live-oak, yellow pine, cabbage tree, and mangrove are the most abundant forest trees though formerly a good deal of fustic, mahogany, ligumivita, and braziletto was to be met with; but these valuable species of timber have been so much in demand for ship-building and commerce that trees of any size are rare. The most formidable obstacle the farmer meets in preparing ground for cultivation is the saw palmetto, (*chamaerops serrulata*) with plaited palmate fronds and sharply serrate stipes. The roots cover the surface of the ground, and are removed by the slow process of the grubbing-hoe. Several species of this genus of palms afforded the Florida tribes food, wine, sugar, fruit, cabbage, fans, darts, ropes, and cloth. Some have good fruit, like plums; others austere like dates. They are now chiefly used to make hats, fans, baskets, and mats, with the leaves.

The land bordering on the Caloosahatchee river and its tributaries is accessible by vessels drawing not more than six feet; contains enough live-oak to supply the navy of the United States for a quarter of a century. Other valuable timber for ship-building is found in the same locality. Such being the natural advantages which invite enterprise to this quarter, there can be no doubt that when its agricultural resources are more generally understood, southern Florida will be covered with a dense population of thrifty farmers. Cuba, with almost a corresponding climate, has several hundred plants which serve as a basis to her agriculture, such as grains, farinaceous roots, edible seeds, vegetables, salads, sauces, and fruits; the great staples of exportation—sugar, coffee, and tobacco, plants for dyes, yielding oil, suitable for cordage or cloth, yielding gums and resins, good for tanning; grasses; and woods employed in various uses. Now, it is well known that most of the productions of Cuba are growing in south Florida, and, with cultivation, might be made to rival those of that celebrated island. Sea Island cotton of a fine quality has been produced in the very centre of the peninsula. Florida surpasses Cuba in variety and delicacy of vegetable culture. At all seasons of the year beets, onions, egg-plants, carrots, lettuce, celery, &c, are produced with the most indifferent culture, while everything that grows upon vines is in abundance and in great perfection. Cabbages and Irish potatoes, if planted in October, produce well. The former have been grown at Fort Myers, a single head weighing forty pounds. Cattle, hogs and poultry increase astonishingly. Until the rebellion of the slave States, south Florida supplied the Havana market with beef at the rate of one thousand head per month; besides considerable quantities were shipped to the Bahamas, Key West, and Tortugas.

FLORIDA FRUITS.

In view of the peculiar adaptation of Florida to the growth of tropical and semi-tropical fruits, the following articles are extracted from the Reports of the Agricultural Department of 1861 and 1867:

THE FRUITS OF FLORIDA.

BY GEO. W. ATWOOD, ST. AUGUSTINE, FLORIDA.

In considering the subject of this communication, the writer would premise that comparatively few among our own people are aware that within less than 60 hours' travel by railroad from New York city, in our own country, there exists a fairy-like land of fruits and flowers, not less beautiful, inviting, or attractive than that described by the dramatic poet in his picture portraying the romantic and blissful abode which the ardent lover had prepared for his mistress upon the shores of the Lake of Como, whose balmy breezes and delightful atmosphere are ever redolent with the odorous perfumes of fragrant flowers, and ever-expanding blossoms of the orange, and where

"the lemon, orange, and the lime.
Amid their verdant umbrage countless glow
With fragrant fruits of vegetable gold;"

and where all the semi-tropical fruits, as the orange, the lemon, the lime, the citron, the olive, the fig, the pine apple, the banana, the guava, and the palm are produced in greater perfection of quality, flavor, size and form, than in the more tropical climate of the West Indies and Brazil, and with less care and attention, and with greater exemption from the vicissitudes of climate and the hazards of injury from the insect tribe, than are the common fruits of the north, as the apple, the pear, the peach, or the plum.

Nearly every forest and woodland, south of 30 deg. north latitude, abound with groves of the wild orange, some of which are of enormous extent.* It is from these sources that

*The writer of this visited one of these groves in East Florida, said to be ten miles long, and varying from half a mile to a mile in width.

the numerous groves of sweet oranges, limes, lemons, and citrons are collected, by digging the wild trees of the sour and bitter-sweet varieties in the forests and hammocks, and transplanting them into groves, at uniform distances, where the new shoots are permitted to grow, and are then budded with the sweet orange, lemon, &c, and thus are established groves of every variety intended for the supply of the market.

Whether the orange was introduced into Florida by the early Spaniards, or some unknown previous race, is yet a mooted question, and would require more space than the limited character of this article would admit, to give the views of the writer, or the different theories of others on the subject.

The orange or *Citrus* family of fruits, comprising all the varieties of the orange, citron, lemon, lime, and shaddock, numbers more than 100 known varieties.

Dr. Sickler, who spent six years in Italy, and paid great attention to the kinds and culture of the *Citrus* family, published at Weimar, in 1815, a quarto volume, called *Vollkommene Orangerie* Gartner, in which he describes 74 sorts. He arranges the whole into two classes, and these classes into divisions and subdivisions, without regard to their botanical distinctions or species, as follows:

Lemons—

Cedrats, or Citrons.....	4 sorts.
Round lemons.....	6 "
Pear-shaped lemons.....	11 "
Cylindrical lemons.....	4 "
Gourd-shaped lemons.....	2 "
Wax lemons.....	5 "
Lumies lemons.....	8 "
Cedrat, lemons or citronats.....	6 "
Limes.....	4 "

Oranges—

Bitter oranges.....	6 "
Sour oranges.....	6 "
Sweet oranges.....	12 "

Few other classes of fruits are more easily propagated than the citrus, and all of the species may be rapidly increased and produced either by seeds, cuttings, layers, grafting, or budding; the lime being the most difficult, and the citron the most easy of propagation. They differ from deciduous fruits in the respect that like always produces like, the seed of every variety invariably producing its kind. Cuttings of thrifty wood, two years old, strike fibres as readily as younger wood, though the mode of propagating almost universally adopted in Florida is by budding upon young stocks from the nursery, or from the larger stocks obtained from the forests. The citrus family of fruits is supposed to have originated in the warmer parts of Asia, and to have derived its name from the town of Citron, in Judea, though it has been cultivated from time immemorial in middle and southern Europe, and is now cultivated almost throughout the world, and in no higher degree of perfection than in East Florida, south of the 30th deg. of north latitude.

THE ORANGE, (*Citrus aurantium*.)—The cultivation of the orange in East Florida, previous to 1835, had attained a degree of considerable commercial importance, and the exports of this fruit from the small city of St. Augustine are said to have amounted to \$100,000 annually.

On the St. Johns river, and in some parts of West Florida, as at Tampa Bay, groves were being established as a source of commercial supply; the west coast is not considered as favorable for the cultivation of this fruit, on account of its rough winds, as is the east coast.

In February, 1835, a very severe frost visited the State, and most of the orange groves and other semi-tropical fruits were destroyed, or nearly so, leaving only the stumps and roots to spring again. Many of these sent up shoots, and began to encourage hopes of returning prosperity to this branch of industry. These hopes were not permitted to be realized, however, for, in 1842, an insect called the *orange coccus*, or scale insect, appeared in the orange groves, and spread with great rapidity over the whole country, almost totally destroying every tree attacked. This terrible calamity continued for 10 or 12 years, and bid defiance to almost every effort made to stay its blighting force. Many became discouraged in the contest and abandoned further attempts to re-establish this heretofore agreeable and profitable branch of industry. In 1853, however, the insect began to decrease in numbers and finally disappeared, since which time most of the groves now in the State must date their birth; although there are probably not now 50 bearing trees, where there were 1,000, (some of which were 100 years old,) prior to the great cold of 1835, when the mercury fell below zero, yet a new interest is being revived in the cultivation of this fruit, and new groves, probably not less than 50,000 trees, have been planted in East Florida since the close of the rebellion.³

³A more recent writer in Florida estimates that from 75,000 to 100,000 orange trees were transplanted and budded last year; and at least 150,000 since the close of the rebellion.—Ed.

The orange from the seed produces fruit in from 7 to 10 years, depending upon situation, culture, &c. Groves made from wild stocks, usually cut off at a height of three to four feet from the ground, and the new shoots budded, generally produce fruit in three years. The number of oranges produced from a single tree varies from 100 to 10,000 according to the age, situation, and treatment of the tree. The trees are usually set 20 feet apart, and an acre will contain about 100 trees. Florida oranges were usually sold, previous to 1835, at \$7.50 to \$10 per thousand. Now a demand exists for twenty times our present supply, at \$15 to \$20 per thousand, as they hang upon the trees. The present number of bearing trees in East Florida probably does not exceed 10,000.

THE LEMON is produced in East Florida to a degree of perfection far surpassing the same fruit grown in the West Indies, Sicily, Italy, or Spain, and persons familiar with this fruit in those countries are rather disposed to discredit the statement that the lemons of Florida are of the same variety of fruit. The writer has a Sicily lemon tree in his garden, which, last season, produced many lemons that weighed $2\frac{1}{2}$ pounds each; and it is not an unusual circumstance to pick from the same tree lemons weighing $1\frac{1}{2}$ to $1\frac{3}{4}$ pounds each. The lemon, lime, citron, and shaddock are all produced and propagated in Florida in the same manner as the orange, and of a quality superior to those of other countries.

THE LIME, (*Citrus limetta*).—There are five of the acid varieties of this fruit named in English nursery catalogues. The juice of the lime is preferred to that of the lemon, as being more wholesome and agreeable.

THE CITRON, (*Citrus medica*).—This fruit is commercially known in the United States as a preserved confection, imported from the Mediterranean in oblong boxes, weighing 20 to 25 pounds each, and used by families as an addition to fruit cakes, pies, &c. It is a native of the warm regions of Asia. Heretofore but little attention has been paid to the cultivation of this fruit in Florida, except for variety and ornament, and it is not usual to observe more than one or two trees in a large garden of several acres in extent, though it is grown here with the greatest ease and perfection, frequently producing fruit weighing 10 pounds, and there is no doubt but that it may be cultivated, preserved, and introduced into our home markets as an article of commerce, with great profit to the producer. There is no other variety of this species so easily propagated, and none more hardy, or that yields its fruit so quickly, or produces more abundantly; and the circumstance that both the fruit and the sugar for preserving it are produced in the same field, with equal facility, gives to the American cultivator a great advantage over the foreign producer in our market. The citron prepared and preserved by private families in Florida for home use is of much finer quality, lighter colored, and more transparent than the imported.

The writer supposes that the citron fruit may be profitably grown and sold here in its green state at four or five cents per pound. The price of sugar in Florida, before the war, ranged from four to six cents per pound, and at the same period the wholesale price of the imported citron in New York, from 15 to 20 cents per pound, and now in the same market the price is about 25 cents per pound.

It will be apparent to most persons that the cost of preparing this fruit for market on a large scale need not be great, and that the combination of two articles, green citron and sugar, the cost of producing which does not exceed one-half their actual value, where the two are combined, must leave a large margin of profit to those who engage intelligently and with proper facilities in the business of cultivating and preparing this article for market. The writer has several citron trees in his garden which produced fruit in one year from the bud in the stock of the sour or wild orange.

THE SHADDOCK, (*Citrus decumana*).—A native of India or China, is now cultivated in all warm climates, and is called Arancio Massino by the Italians, Oranger Pampelmouse by the French, and sometimes in this country Mock-orange, or Forbidden Fruit. It was brought from China to the West Indies by Captain Shaddock, from whom it derives its present name. There are at least six varieties, only one of which is useful or desirable as a fruit. Some of these attain a very large size, frequently weighing 10 to 14 pounds. It is chiefly used for ornament or show, and where several sorts of oranges are presented at dessert, it forms a striking addition to the varieties in the way of contrast. The most desirable variety of this fruit is sometimes called Grape Fruit. It possesses a reddish pulp, with most agreeable sub acid sweetness, and is excellent for quenching thirst; and from the thickness of its rind will keep longer than the fruit of any other of the citrus family. This variety is well worth cultivating for the excellence of its solid vinous pulp, which furnishes a substitute for other acid fruits in pies, tarts, jellies, &c.

LOQUAT, (*Eriobotrya Japonica*).—This fruit is known in the South as the Japan plum. The tree is an evergreen, and grows 10 to 12 feet high, and is desirable in every southern garden on account of its hardiness, withstanding a greater degree of cold than any of the semi-tropical fruits. It ripens its fruit in February and March, when most other fruits are gone; is a profuse bearer, and is readily propagated by seeds and cuttings.

PINE-APPLE, (*Ananassa sativa*).—This fruit is grown in some of the gardens at St. Augustine, but at a point so far north some slight winter protection is necessary. At

Cape Canaveral, 100 miles south of St. Augustine, it is produced in great excellence and perfection, the pines frequently weighing 9 and 10 pounds each. This fruit is easily propagated from suckers and crowns, the former preferable, however, the fruit maturing in three to four months after planting the suckers.

PAPAW, (*Carica papaya*.)—The fruit of this tree is sometimes called the Bread-fruit, and is a native of South America. This remarkable tree, though not much cultivated at the present time in Florida, is worthy of great attention, not only for the excellence of its fruit, but also for its other extraordinary properties. The tree attains a growth of 20 feet in height, and yields a large supply of fruit in three years from the seed, and should be in every garden in Florida, south of 30 deg. north latitude. It thrives well and bears profusely at St. Augustine. The fruit is pear-shaped, of a light yellow color, varying in size from three to five inches in length and from two to four inches in diameter, and is not unlike a very ripe muskmelon in taste and flavor, though sweeter. It may be pared and sliced and eaten raw as a dessert fruit, or cut into slices and soaked in water till the milky juice is out, and then boiled and served as a sauce, or by the addition of lemon or lime juice, it supplies a most excellent substitute for apple sauce or tart fruit, to which it is scarcely inferior. The juice of the pulp also forms an excellent cosmetic for removing freckles from the skin, and the leaves are frequently used, in the French West India islands, instead of soap for cleansing linen. Its remarkable medical properties, however, are most important, as it is the most powerful vermifuge known, a single dose of the milky juice of the unripe fruit, or of the powdered seeds of the ripe fruit, being sufficient to cure the worse cases, and extirpate every worm from the system of the patient.

The most extraordinary property of the pawpaw tree, is that related by Dr. Browne, in his Natural History of Jamaica, in which he says that the toughest meat or poultry may be made perfectly tender for cooking, by steeping for eight or ten minutes in the milky juice of this tree. Dr. Holden, who witnessed its effects in the island of Barbadoes, says, in the third volume of the Wernerian Society's Memoirs, that the juice of this tree causes a separation of the muscular fibre in meats that have been immersed therein, and that the vapor of the tree serves the same purpose, it being a common custom with the inhabitants to suspend joints of meat, poultry, &c., in the upper branches of the trees to soften and prepare them for cooking. Thompson, in his System of Chemistry, makes an extract from a French work on chemistry, entitled *Annales de Chimie*, which states that "fibrine had been previously supposed to belong exclusively to the animal kingdom, but this tree had been found to contain this substance."

The papaw tree is a perpetual bearer of fruits and flowers, or blossoms, and yields enormous quantities of fruit, a single tree supplying enough for a large family.

CUSTARD APPLE, (*Anona reticulata*.)—Sometimes called sugar apple. There are upwards of forty varieties of this fruit, and nearly all the species are edible. Almost every tropical country lays claim to its own favorite variety. In Peru it is greatly esteemed, and considered not inferior to any other fruit in the world. The species derives its English name, Custard Apple, from the consistence of the pulp of the fruit, and its rich color, fragrant odor, and handsome appearance, are well characterized in the expression, "Apples of gold in pictures of silver."

The Spanish-American Cherimoyer, (*Anona cherimolia*), and the West India Soursop, (*Anon. muricata*), Sweetsop, (*Anona squamosa*), and Alligator Apple, (*Anona palustris*), are of this genus. This delicious fruit is produced in excellent perfection as far north as St. Augustine, and is easily propagated from seed.

FIG-MARIGOLD, (*Mesembryanthemum*.)—Of this genus of fruit, there are upwards of 340 different species described by botanists, the larger portion of which are natives of the Cape of Good Hope. Probably not more than ten or twelve varieties are known and cultivated in Florida.

The ease with which this excellent fruit is propagated, and its great productiveness, yielding two annual crops in southern Florida, and always bearing abundantly throughout the State, should be a sufficient inducement for the extension of this branch of horticulture for the supply of our home market at least. It is easily propagated from cuttings and seeds.

GUAIAVA, (*Psidium guaiava*.)—The name, Guaiava, is a corruption of the Spanish word *guayaba*. Of this fruit there are 17 different species. It is an evergreen tree or shrub, and indigenous to Brazil, Spanish America, and the West Indies. It is propagated by cuttings and seed, and is sometimes liable to injury from severe frosts north of 28 deg. north latitude, but south of that line it is ever bearing, yielding its delicious, aromatic, and wholesome fruit all the year round. Only three or four varieties are known and cultivated in Florida.

In the island of Cuba, and in Brazil, the varieties produced are more numerous, and large quantities of the fruit are made into jellies for exportation to all parts of the world.

The fruit of the common Guaiava is pear-shaped, of the size of a large hen's egg, and sometimes larger, and has a smooth, pale yellow skin, inclosing a many-seeded pulp of

delicious acidity. In some varieties the pulp is of a light cream, and in others a pale reddish color. This fruit is greatly esteemed wherever known, and being slightly astringent, as well as mucilaginous, is very beneficial in bowel complaints. The roots and leaves are also astringent, and are regarded as excellent for strengthening the stomach and bowels. The plant is propagated by seeds, cuttings and suckers.

POMEGRANATE, (*Punica granatum*.)—This delicious shrub, or bush-like tree, is a native of Persia and Syria, and grows wild in those countries. It is perfectly hardy in all parts of Florida, and as far north as Hilton Head, South Carolina, and is widely cultivated and much esteemed in this State for the excellence of its fruit, as well as for the medicinal properties of the rind and the flowers, which are not only an excellent febrifuge, but powerful astringents, and often used with great benefit in cases of diarrhoea. The pulp of the fruit is a delicious sub-acid substance, similar in taste and flavor to the red currant, and is excellent for allaying heat and quenching thirst, and is gently laxative. The fruit of the pomegranate is spherical, the size of an orange, with a gourd-like shell or rind, which is filled with seeds, enclosed in membranous cells and surrounded with a juicy, reddish pulp. There are several varieties of this fruit, comprising early, medium, and late. The early and the medium varieties have a pale yellow skin or rind, with a beautiful tinge of red upon the side or cheek, and are sparsely dotted with fine pippin-like spots. The latter sorts have a dark russet-colored rind, and the seeds are of a pale pink color. This tree bears a beautiful urn-shaped scarlet flower; and there is no tree more slowly than the pomegranate when in flower.

The fruit begins to ripen at St. Augustine, Florida, about the middle of July, and continues until the middle of December. It bears transportation well on account of its hard rind, keeps for several weeks after it has been taken from the tree, and no doubt may be made a profitable market fruit. It is increased by cuttings, layers, and suckers, and thrifty wood two years old strikes fibres as readily as younger wood.

BANANA, (*Musa paradisiaca*.)—Of the banana and plantain, (*Musa sapientum*), there are several species. They are increased by suckers, and require a rich, moist soil, with warm exposure. Some varieties of these plants are successfully cultivated as far north as Ferdinandina, in 30 deg. 45 min north latitude. The best variety for cultivation north of 28 deg. north latitude is the one known as *Musa paradisiaca cavendishii*. This is the most hardy, and seldom attains a height above eight feet, while the more tender kinds often grow twenty feet high. When the plant is fruiting, and all the flowers are set, it is advisable to cut off the spadix an inch or two above the last tier of perfectly formed fruit, in order to hasten and perfect the remaining fruit.

There are few more excellent or delicious dessert fruits than the banana, and, as a food plant, its importance and value, as compared with other food plants, can hardly be overestimated. In an economical point of view it has never been appreciated in Florida, where but little attention has been given to its cultivation. When it is realized that a plantation of bananas once established has never to be renewed, and that one acre of this fruit will produce as much food as 130 acres of wheat, or 45 acres of potatoes, its value and importance will be readily acknowledged. As this plant is a great feeder, and when once planted lasts for a lifetime, it is of the utmost importance that plantings should be made upon strong, rich soil, or that the plants be kept highly manured, to secure permanent supplies of the best fruit.

In Brazil and other tropical countries, plantations are formed by setting the plants twenty feet apart; but as the kinds usually planted in those countries are of a larger species than those recommended for Northern Florida, plants of the *Musa paradisiaca cavendishii* variety should be set ten feet apart each way, and in a good soil they will soon cover the ground, as they increase rapidly under favorable circumstances. Each plant produces one, and only one, bunch of bananas, when it is cut down with a sharp spade or axe to give place to succeeding plants.

When the enormous yield of this fruit is considered, and it is taken into account, that when once properly planted it needs no other attention than simply gathering the fruit, and that at reasonable prices the demand be almost unlimited, it is evident that its cultivation could be made very profitable.

DATE PALM, (*Phoenix dactylifera*.)—This excellent and valuable fruit is cultivated with entire success south of 28 deg. north latitude, and the tree often perfects its fruit as far north as 30 deg. north latitude. Numerous large and beautiful specimens of this tree may be seen in the gardens at St. Augustine. It is one of the most beautiful trees of the vegetable kingdom. Its long, graceful, ever-verdant, ever-waving, ever-changing branches make it the most picturesque of all others for landscape gardening, and should adorn the grounds of every homestead in Florida.

The fruit is greatly and justly esteemed by the inhabitants of Egypt, Arabia, and Persia, on account of its concentrated and nutritious properties; large numbers subsist almost entirely upon it. It is generally the sole food of the Arabs and their camels in their long and tedious journeys over the desert, the voyagers feeding upon the fruit and

the animals upon the stones. The inhabitants of these countries also boast of the medicinal qualities of the date fruit, and of the numerous uses to which the different productions of this tree may be applied. From the leaves they make couches, baskets, bags, mats and brushes; from the branches or stalks, cages for their poultry and fences for their gardens; from the fibres of the trunk, thread, ropes and rigging; from the sap, a spirituous liquor, and the body of the trees furnish fuel.

The date-palm is propagated from the seeds and suckers, but more successfully from the former. The cultivation of this fruit should be greatly extended, as it may become an important and profitable resource of the inhabitants of Southern Florida. The bunches or clusters of this fruit often attain a weight of 15 pounds.

GRAPES, (*Vitis*).—The finer European varieties of this fruit, such as are cultivated under glass at the North, are all hardy and are grown more or less successfully in the open air in Florida, ripening at St. Augustine about the first of July. But the same diseases which have affected this valuable fruit in other countries, and in our own, have been more or less prevalent here. The northern or native varieties have not been sufficiently tested to form a correct estimate of their value, as compared with their European rivals, for cultivation in this climate.

Several vineyards, consisting of northern vines, were established on the St. Johns river just previous to the breaking out of the rebellion, during which they were abandoned, and their cultivation has not since been properly or actively resumed. It is believed, however, by some who profess to know, that many of the northern varieties will succeed well in this climate, and that their introduction will prove an advantage.

East Florida is generally flat, however, and the mean level of water in the ground only two to eight feet from the surface, according to the season, wet or dry; and as the vine imperatively demands a uniformly dry, calcareous or rocky soil, and to insure the best condition for its successful propagation should never stand in water, it would seem that Florida is not the natural home of the grape, and that intelligent and experienced vine-growers would not select it for the purpose of establishing vineyards, with the expectation of complete success.

THE PEACH, (*Amygdalus Persica*).—This tree is long-lived, healthy, and vigorous throughout Florida, and is never subject to injuries from the peach worm or the diseases which so universally afflict the fruit in the Northern States. The most delicious peaches may be raised almost without care by every family, and in abundance sufficient even for the economical feeding of swine. The early varieties of this fruit ripen in the beginning of June, and the latest sorts continue until late in August. The earliest and the latest varieties should be chosen for cultivation in Florida, as the rainy season commences in July and continues throughout that month, causing much of the maturing fruit to crack.

THE NECTARINE, (*Amygdalus Persica*), the APRICOT, (*Prunus Armeniaca*), and the ALMOND, (*Amygdalus communis*), are all at home in Florida, and not less vigorous, healthy, or productive than the peach; and all who will take the trouble to plant and care for the trees may be assured of an abundant reward.

THE PLUM, (*Prunus domestica*), and PRUNE, (*Prunus domestica*), are also healthy and productive, being entirely exempt from the ravages of the curculio so prevalent at the north. All the varieties of the wild plum are indigenous and abundant in nearly every part of the State. Many of the varieties are of excellent quality, and, when cooked, form a delicious preserve for family use or for canning.

PEARS, (*Pyrus communis*), and QUINCES, (*Cydonia vulgaris*), are worthy of more attention than they have heretofore received. It is believed that some varieties of the former will do well, but as yet their cultivation has not been sufficiently tested to fix their status among the fruits of Florida.

APPLES, (*Pyrus malus*).—The cultivation of this fruit here is of doubtful utility, though it is believed that some of the earlier varieties may be advantageously introduced. The writer has a dozen young trees in his garden, planted two years since, which are growing thriftily and give excellent promise.

THE OLIVE, (*Olea Europæa*), succeeds well in more northerly parts of Florida, and this year fine crops have been gathered at St. Augustine; but it is believed that the latitude of Fernandina is more favorable to their successful cultivation than the former point.

THE MADEIRA NUT, or European walnut, (*Juglans regia*), and the Pecan nut, (*Carya oliviformis*), succeed well and produce abundantly as far south as St. Augustine, and at Key West, the Cocoanut, (*Cocos nucifera*), and Brazil nut, (*Bertholletia excelsa*), attain their highest degree of perfection.

MELON, (*Cucumis*).—Floridians think, and often remark, that this fruit is nowhere else produced in such high perfection as in Florida. The watermelon, (*Cucumis citrullus*), matures as early as May at St. Augustine, and might be made a profitable source of supply to northern markets from this place.

CULTURE OF THE ORANGE AND CITRON.

BY LAURA C. REDDEN, SORRENTO, ITALY.

It has been remarked by scientific observers who have given attention to the subject, that very nearly all, if not all, the different climates which predominate in the various countries forming the continent of Europe, with their different gradations of heat and cold, may be found within the limits of the territory comprised by the United States.

Experience has shown that those latitudes in which the temperature is most free from the extremes of heat and cold, are the most favorable to the perfect growth, health and development both of the animal and the vegetable kingdom. The climate of some portions of southern Italy is especially noted as possessing this much-prized peculiarity; and in such places vegetable life reaches a high degree of perfection, and has that peculiar glossy, dark-green foliage which is never met with in the arid atmosphere of more torrid latitudes. The orange and citron particularly display great profusion of growth. Among the many vast and undeveloped resources of the United States—which may be regarded as still in their minority when the question of utilizing their wonderful natural advantages is considered—is their capacity as a fruit-growing region, especially the adaptation of the southern portion of them for the production of the more valuable fruits peculiar to warm climates, and still more particularly for the cultivation of orange and of citron plantations, there remains a wide and unopen field for agricultural enterprise and speculation.

The languishing condition of certain agricultural interests in the Southern States—which will in all likelihood be years in recovering from the injuries received, and in adapting themselves successfully to the changed state of affairs—makes it necessary that new and unexplored veins in the undisturbed mines of our natural riches should be struck into and followed up to atone for the deficit made by the temporary stagnation of southern trade. I maintain that a great deal might be obtained from the orange and citron plantations of the South to go to the filling up of this vacuum, if the cultivation of these fruits were only followed up as a specialty, in the best manner, and in an emulative spirit.

That this is not the case now, and never has been, is but too clearly proved by the fact that at the present time, with such wide stretches of land covered by orange groves in our Southern States, we still continue to do a large business in importing oranges and citrons from foreign countries.

The little plain of Sorrento, which is the orange garden of the Neapolitan provinces, exports annually large quantities of fruit to America. I propose to speak particularly of the method of cultivating these fruits employed in Sorrento as it came under my personal observation.

To those skilled in this special branch of agriculture, my observations may be of but little value; but to those who may think of buying up some of the deserted and ravaged lands now lying idle in the south for the purpose of speculation in orange plantations, a few practical observations on climate and mode of culture may be very useful as a guide.

A people who have for generations lived and died planting, and rearing, and harvesting oranges and citrons, should from their experience have something to tell us worth learning, especially when we, in comparison with them, are just beginning.

The more common and vigorous species, both of the orange and citron, attain to so high a degree of excellence in the plain of Sorrento, that a simplified description of its climate and situation will be found useful. A French scientific writer has called this region not inaptly the Normandy of southern Italy, because Normandy is the province of France in which the climate is most bracing and temperate, and the people most robust and vigorous.

The plain of Sorrento, entirely and thickly covered with the foliage of dense orange groves, leaving but scanty space for the very narrow streets of its villages, is encircled and shielded on three sides by high hills, and open only to the sea on the north; and the winds which have the freest access to it are from the north and northwest. From the south, the southeast, southwest, and northeast winds it is in great measure exempt, and they never reach it until their violence is, in some measure, broken.

This fact, the stillness of its atmosphere, and its situation—it being a basin or valley with a high rim, formed by the crescent-shaped hills, and stretching down to the sea, to which, however, it does not slope, as a high line of cliffs rise abruptly from the beach, and the plantations run down to the edge of these precipices—predispose its climate to humidity; and it would, indeed, be very damp but for those north and northwest winds of which I have spoken, which blow with sufficient frequency to keep it cool, and maintain the soil in that desirable state between complete humidity and too great dryness, which is the great ultimatum in the successful culture of acid fruits. Orange and citron trees need a soil inclining to humidity, a temperature not too high, (for that would be drying) but rather cool, and as even as possible, and protection from violent winds. Ir-

regularity of temperature, sudden changes from heat to cold and the reverse, are the greatest enemies to their successful culture.

Rain falls in Sorrento with much greater frequency than is generally supposed, and during the dry spell, want of rain is compensated by constant vapor rising from the sea. I state this to counteract the erroneous impression that a very tropical climate is necessary for the cultivation of acid fruits. If by "very tropical" is meant a burning and parching heat, the description will not apply to this part of southern Italy along the seaboard. The sea is constantly sending, on the wings of the wind, mist and vapor to refresh the land. The sun drinks up daily supplies of moisture, but they are renewed nightly. Then, too, the greatest quantity of rain in the region about Sorrento falls during the last hours of the night and the first of the morning. A great quantity falls, but the country, by its soil and situation, has every facility for drainage, and most of it runs off or sinks in at once, and the sun of early morning soon dries up the remainder. So that from one day to another you would think it did not rain, if you were not a careful observer, and you would wonder how the country could be kept so green and fresh, quite damp in shady places, and so free from dust. I state these facts because some researches into peculiarities of climate are necessary to arrive at a knowledge of what situations and what conditions of atmosphere are most favorable to this species of agriculture.

The time chosen for the culture of the orange and citron should be during rainy or damp weather, free from dry and frosty winds. Nothing is more unfavorable to them than cold, strong winds, or spells of freezing weather or frost. Let the time be selected for planting out the young trees be still and damp. They should be shielded against the possibility of being shaken by the winds, chilled by changes of temperature, or put back by too great dryness.

A very light soil is the best in which to plant the young trees. A clayey soil is prejudicial. When the earth contains too many parts of clay, the peculiar species of soil which is found close around and under old and decayed buildings on their demolition, rich with rotten wood and other vegetable and animal matter, will be found highly beneficial as a mixture. Even in heavy soil one may succeed well, provided that the soil be very frequently moved, and kept constantly light and soft about the roots to facilitate their spreading and growth.

The next question to be considered is that of manuring the trees. They require a great deal of manure, but it must be administered with care and prudence. The best manure for them is that of horses and cattle, but it is never to be applied in the raw state. For it should be understood that these trees are always so delicate, especially when in their infancy, that a strong manure would injure, and, in many cases, destroy, them, as it burns up the delicate fibres of their roots. The proper method of preparing a compost for these trees is to throw the manure into pits prepared for the purpose, where it should be mixed with vegetable matter of different kinds, putrid and decaying leaves and the like, and remain a longer or shorter time in order to diminish its strength. The prudent cultivator will usually have manure in his pits. In some it will be in process of preparation, and in others in readiness for application at all times as it may be needed.

The best time for applying this reduced manure is during the rainy season in the fall of the year, that the rains by dissolving it may carry the nutrition which it contains down to the roots of the trees. It is the custom to give a thorough and general manuring to the plantations only once in the year, and, as I have said, in the rainy season of autumn. But the same prudent cultivator before alluded to will always have the proposed compost in readiness in the pits at all seasons of the year, the summer months excepted, to be distributed judiciously about those plants which, being more delicate and less forward than others, require more care and nursing. After making these statements I shall have no occasion to warn cultivators against the use of guano, and to prohibit its employment in soil where the orange and citron are cultivated, as it is altogether too strong a manure, and would be peculiarly dangerous to young and delicate trees.

There are two methods of propagating the orange and citron. The first of these is technically called by the Italians "teste," that is, "from the head." This consists in planting out the young branches of the young orange or citron, care having been taken before severing them from the tree to make them put forth their roots in a kind of vase of earth which is bound around them at the junction where they are to be separated. But this method is now almost abandoned, experience having proved that the trees thus propagated are never strong and long-lived like those produced from the seed of a tree which has not been propagated by a cutting. They do not so well resist changes of temperature, nor do they bear fruit for so many years, nor in so great a quantity as the trees propagated from the seed. The best mode of propagating, therefore, is to take the young plant produced from the seed of a wild orange or citron tree. These little plants, of course, are always springing up over plantations, and must have their share of attention.

It should be remembered, however, that an orange tree is always wild, and produces in its natural state only sour fruit, until a scion of a cultivated tree, one bearing sweet fruit,

which happens to a tree originally wild only after years of cultivation, has been grafted upon it. The young plants produced from the seed of the wild or uncultivated tree, after nine or ten years have elapsed from the time the seeds first pushing up shoots, must be grafted in order to produce sweet fruit. This consists in uniting a young and tender branch of a cultivated tree, bearing sweet fruit, with the young wild tree in such a manner that the sap of the two will commingle and the wood grow together; the scion receiving the sap of the wild tree will bear sweet fruit. The grafting must be done as expeditiously as possible, as it is necessary that the branch to be grafted upon the wild tree should be united with it while freshly cut, and before losing any of its vigor.

The process of grafting orange trees is a science by itself, of which it is necessary to have a practical knowledge. In Sorrento even old and experienced cultivators do not attempt it themselves, but always have recourse to a class of men whose avocation it is to go from plantation to plantation to perform the process of grafting upon the trees; and to do it successfully one must first learn it practically from an experienced grafter.

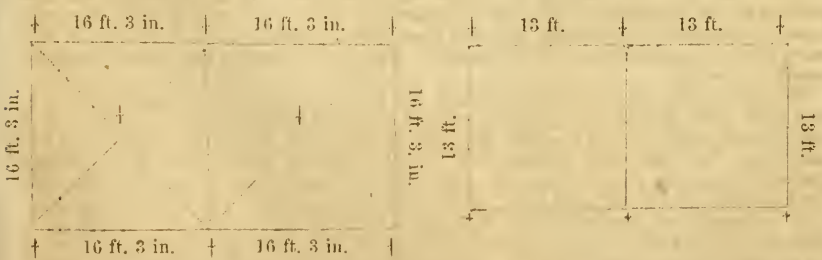
I should have stated before that the young plants during the first nine or ten years of their life should be kept well weeded, the earth around them soft, light and damp, and lightly manured. At the end of the fourth year they are separated by thinning out where they have naturally sprung up closely together, and transplanting the young trees about two feet apart, into earth which has been dug up and broken to the depth of two feet, and the same treatment as before is continued for them. After seven or eight years, counting always from the time of the coming up of the seed, a selection is made of the finest and most robust plants, and they are transplanted to a separate site at the distance of about three feet three inches one from another, and the same cultivation is continued for two or three years, according to the backwardness or forwardness manifested, and then they are grafted according to the method which I have before described. After they are grafted they remain two years longer undisturbed before being transplanted to the site where they are to remain permanently.

Three years after this final transplantation they produce, ordinarily, their first fruit; thus it will be seen that young nursery plants produced from the seed should be grafted five years before the time at which they produce fruit. Calculating from these facts, a young tree produces fruit 14 or 15 years from the time that the seed sprouts up. A promising young tree carefully cultivated will produce during its first year from 20 to 25 oranges.

It must be borne in mind that, in all the various operations just described, the earth must always be well spaded and hoed previous to transplantation, and must be kept so to facilitate the spreading of the young and tender roots. The quality of the soil and the care which is bestowed upon the young plant will retard or abridge more or less the period at which the tree bears its first fruit. Of course this method of propagating from the seed can be rendered less tedious by transplanting young wild trees, which will be found ready to the hand in the various stages of growth, and grafting the sweet fruit-bearing tree upon them.

When a considerable number of young trees are to be planted permanently, or a plantation to be laid out, there are several methods of planting. But no matter what the distances may be which are fixed upon to be left between the plants, they should be adhered to with mathematical regularity. One method is to plant two orange trees and two citron trees at regular distances, forming a square, and in the centre of this square to place an olive tree or a nut tree, or any other fruit-bearing tree whose presence will not interfere with the culture of the acid fruits.

The Italians call this planting *colquattro*. In this case 16 feet and 3 inches are left between the trees. But if it is not desired to plant a tree in the centre of the square, about 13 feet distant from tree to tree will be sufficient. The following diagrams may give a slight idea of these two methods;



The best method is to leave the centre vacant so as not to crowd the trees when full grown; but if preferred for the purpose of economizing space, it is best to plant a fifth

tree in the centre of the square; in preference let it be an orange tree or citron tree, as it is not best to mix other trees with those bearing acid fruits.

When the young tree has borne fruit for six years it is considered full grown. The Sorrentines have a sort of basket which is used as a measure for the fruit. This is called the *colletta*, which will hold about 100 oranges or citrons. This is used in gathering the fruit. When the fruit of one tree fills the basket that tree is considered full grown. From that time the yield continually increases until the tree gives ten baskets full; that is to say, 1,000 oranges, when it is considered at the height of its fruit-bearing capacity. This usually occurs about the twenty-fifth year of its age, counting always from the seed.

The trees, however, do not bear uniformly the same quantity of fruit every year. For this reason the harvest is considered complete only every two years; and note should be taken of those years when the tree is resting, especially the year after a very full harvest, when the tree will yield but little fruit comparatively. An orange tree in its natural or wild state, before being subjected to cultivation and grafting, is called in Italian "*cedrangolo*." I will make use of the word hereafter in speaking of such trees, as we have no word in the English language which will so conveniently designate the species meant.

An orange tree which is the product of the seed of the *cedrangolo*, and which has been grafted, is very long-lived, and has the advantage in this respect over every other species, being stronger, more vigorous and better able to resist all accidents of temperature. One may calculate on 60 or 70 years as the limit of its fruit-bearing capacity, in proportion to the vigor and natural superiority of the plant, always bearing in mind the possibility of some unusual cold or freezing spell which may impair the vitality of the tree. These possibilities excepted, the preceding figures give the correct limit of the period during which the tree bears fruit.

An orange tree, therefore, under the best method of cultivation and favorable circumstances, will flourish for 75 or 85 years from the time of the planting of the seed; after that it may be considered as a lumberer of the ground. But its usefulness even then is not at an end. The wood of the orange tree is much prized by the workers in inlaid woods in Sorrento for its beauty, durability, and peculiar fragrance, and always brings a fair price. The most beautiful articles are made from it. Its hardness renders it susceptible of high polish and elaborate carving.

The tree which is produced by the operation called "*teste*," before referred to, is much shorter-lived, being much less hardy. After 30 years, it begins to grow old, and is considered as having passed its prime, while on the contrary the tree produced from the seed of the *cedrangolo* resists more successfully all the variations of temperature, and even great negligence in its culture.

Orange and citron plantations must be thoroughly dug over twice a year. The best times for this operation are just before the commencement of the rainy seasons in the spring and the fall. A kind of circular ditch, or pit, is left at the foot of the tree, in which the manure is deposited, and which serves for receiving the rain and facilitating its passage to the roots of the tree, while at the same time it carries along with it the nutriment contained in the layer of manure through which it percolates to reach the roots. These holes around the trees are called, in the Sorrento idiom, "*scalzatine*," and it is both useful and important to make them about the trees frequently at other seasons of the year, especially when, after a long drought, rain is expected. In regard to pruning, it should be known that trees bearing acid fruits, especially the orange and citron, cannot be pruned like other fruit-bearing trees. Those branches alone which are sterile and give no promise of fruit, after a fair trial, should be lopped off. This is done to concentrate and increase the vigor of the tree, but requires much prudence and discrimination.

The orange tree bears fruit only once a year. It flowers in the month of May. Six months are required to ripen the fruit, at the very least; but to mature it thoroughly before gathering, the fruit hangs on the boughs until December. In climates where the temperature of late autumn and early winter nights may be severe enough to injure the fruit, it can be gathered in September, as it will ripen after gathering. This is the rule in Sorrento, where a considerable trade is carried on in exporting oranges and citrons in sailing vessels to America.

The fruit is gathered in September, while yet green, and being wrapped separately in very light paper, is carefully packed in wooden cases and shipped upon a voyage which lasts several weeks; and on reaching their destination they are found fresh, sweet and quite ripe. This does them no harm, but, in fact, improves their flavor, as an orange plucked before quite ripe and kept for some time is superior to one just from the tree. The latter has a crude and acid taste, which is lost by keeping. The distinguished quality of the oranges of Sorrento is that, from the peculiarity of the soil, they contain more spirit and flavor and a stronger essence than those of Spain, Sicily, Calabria, or even of the neighboring provinces of Salerno; this peculiar quality renders them more suitable for packing for long voyages. A fruit which is perfect in taste when taken from the bough, is almost sure to have lost its flavor and to become insipid after having been kept for a time. But the oranges of Sorrento are the reverse of this.

Only one species of orange is recognized as being cultivated in Sorrento. There is the blood orange, as it is called, which, on being cut open, is found perfectly sanguine in hue; but this is not considered as a different species, and is identical in taste with the ordinary orange of Sorrento, which attains a great size, and grows thriftily. The skin is very thick on being first gathered, but becomes thinner with keeping.

The Mandarin, that little beauty, with its delicate and fragrant rind and delicious flavor, does not succeed well in Italy, nor anywhere outside of Sicily, and is only cultivated as a fancy fruit in Sorrento by some growers who can afford the time and care necessary, as the tree which produces it is most delicate and sensitive, and a peculiar soil is needed to bring the fruit to perfection.

In the island of Ischia, the Mandarin has been found to succeed better than anywhere else in the Italian provinces. In other places its flavor is degenerated. The difference in the fineness of texture of the rind, and in the size and flavor, is so great as to render it difficult to believe that they belong to the same species.

Neither the climate nor the soil of Sorrento is favorable to the Mandarin, which requires a particular sort of culture, and, wherever a plantation of Mandarins is found there, it is necessary to cover the trees with mats in the winter time and otherwise protect them from the cold. They also require a very light manure, different from that used for the common trees, which must be frequently and carefully employed.

There is one interesting operation in connection with the cultivation of the orange tree, which I have now a good opportunity of mentioning. This is the grafting of the citron upon the orange, or rather the combination of the two fruits upon one tree. This is not profitable in a practical point of view, and is solely a matter of fancy for the sake of the novelty of having two kinds of fruit upon one tree. I was sorely perplexed when I first saw oranges and citrons both growing thickly upon one tree. It is identical with the operation called "teste," before mentioned; a young branch of the citron tree is coupled with the young branch of an orange tree, both freshly cut and united in such a manner that the sap of the two will commingle. All that has been said in regard to the cultivation of the orange tree applies strictly to the cultivation of the citron.

There is this difference between the two fruits—the tree which produces the orange is more delicate than that which produces the citron. But the fruit of the citron tree is more delicate than that of the orange tree. Take for illustration an orange tree and a citron tree, laden with fruit during the winter time. At the very slightest frost the fruit of the citron will suffer, and lose its juice, but the tree which bears it will more successfully resist the cold, while on the contrary, the cold will not much injure the orange fruit, but will prove dangerous to the tree.

To understand why the fruit of the citron is found hanging on the boughs at the commencement of cold weather, thus running so many risks, it is necessary to know that the citron bears fruit twice in the year, and for this reason its cultivation is often preferred to that of the orange. It flowers with the orange tree in May, and again, but not so plentifully, in the autumn. The fruit can be plucked and used at any time after it has attained a reasonable size, although it may be still green. As a convenience it is gathered at the same time with the orange yield in September, for exportation. Another but lighter crop is gathered in the early winter.

There are three varieties of the citron cultivated in Sorrento. One of these is called in Italian "Lustrato," and is preferred to the others; then, there is the ordinary or common variety; and a third, which is very small and always green, and of a very peculiar and pungent flavor, quite different from the others. The culture of this last variety is on the decrease in Italy, and in a short time will most certainly be altogether abandoned. The Lustrato is of a larger size than the ordinary citron. Indeed, it is frequently enormous, and, on this account, as well as for its handsome rind, and its property of preserving its flavor for a greater length of time, it is preferred for exportation to America and other distant countries. It is from trees that produce the Lustrato that are obtained those enormous citrons, as large as a small melons, which are gathered in Italy at Easter, and as presents seem to have the same significance as Easter-eggs, a custom anciently in use among us. Comparatively few of these are produced. They are obtained by gathering, while yet green, all the citrons from a tree, with the exception of a few, which are left to hang, and which, by absorbing all the fruit-producing nutriment of the tree, obtain an enormous growth, and are so heavy that they must be propped up to prevent them from breaking the boughs to which they are attached.

The ordinary citron is cultivated for consumption in Naples, and for exportation to France and other adjacent countries. For this purpose it is gathered and shipped during the summer time, and during the hot weather the demand for it is so great that from \$12 to \$15 per thousand are often given. It is not so suitable for long voyages as the Lustrato.

The different varieties are produced by grafting and the operation called "teste." But the trees will not again bear fruit for two years after the operation is performed. The grafting can be performed on the young trees, which are still tender, and any variety of

citron may be thus produced. This last method is to be preferred as being more expeditious. Great quantities of fruit are shipped yearly to America from Sorrento by established houses which make this exportation a specialty, but so far, it has been impossible to obtain any definite report as to the precise value of these exports.

Orange-flower water is not manufactured here, the plantations not being extensive enough to make this species of industry profitable. It is, therefore, monopolized by Calabria and Cicily. But of late years a considerable manufacture of the essence, which is extracted from the leaves of the "cedrangolo," has been commenced and the trade carried on in Sorrento. This is a medical preparation, and has all the soothing qualities of an opiate without any of the subsequent effects, and is most agreeable to smell and taste.

From the rind of the cedrangolo is also made a kind of marmelade or confiture, which is largely in demand and sells at a very high price, being in great repute as a stomachic and promoter of prompt digestion.

Bees should always be kept where there are orange plantations. If maintained on a large scale great profits may be obtained, as the very best honey is made from the flowers of the citron and the orange, which are the same in shape, size, color, and odor. All the honey made in Sorrento smells and tastes of the ravishing perfume of the orange-flowers, and it has become classical as the best that is produced, analogous to the honey of Hyettus.

And now to make a summary of what has been said, we have seen that there is no part of the orange tree or the citron tree which does not yield its share of profits. The fruit, the flower, the leaf, and finally the wood of the worn-out tree itself are all items of profit to the planter, and, in connection with their culture, can be carried on another industry equally as profitable, which requires but a small outlay, and is dependent only on the maintenance of the bees and the blooming of the orange flowers. The outlay, the time, and the labor involved in the cultivation of acid fruits are very much less, comparatively, than that involved by other branches of agriculture peculiar to warm climates. It is not to the point to say that we have already in the southern States vast groves of these fruits which grow and ripen with little or no culture. The point is to bring the culture of them to perfection, to make it a specialty, and thus, in some measure make up for the temporary loss of some important staples for which a peculiar kind of labor seems to be required, and laborers also of peculiar qualifications; while for the culture of orange plantations no skilled hands are required, except for the operation of grafting, and fewer laborers needed.

The improvement and cultivation of our country to the utmost of its great agricultural capabilities will form one of its most powerful bulwarks against national poverty and abject dependence upon foreign nations.

COUNTY TOWNS AND COUNTY OFFICERS.

For the convenience of those who may desire particular information, and that more in detail, from any particular section of the State, I here subjoin a list of the county-towns in the various counties. Strangers, desiring special information of any county, by addressing communications to the County Judge, Sheriff, Clerk or Post-Master of the county-towns, will receive courteous, reliable and more or less complete replies to such particular questions as they may propound, for all our people are of one mind in desiring to encourage an intelligent immigration to the State.

COUNTIES.	COUNTY-TOWNS.	COUNTIES.	COUNTY-TOWNS.
Alachua,.....	Gainesville.	Baker,.....	Sanderson.
Bradford,.....	Lake Butler.	Brevard,.....	
Calhoun,.....	Abe's Springs.	Clay,.....	Green Cove Springs.
Columbia,.....	Lake City.	Dade,.....	Miami.
Duval,.....	Jacksonville.	Escambia,.....	Pensacola.
Franklin,.....	Apalachicola.	Gadsden,.....	Quincy.
Hamilton,.....	Jasper.	Hernando,.....	Brooksville.
Hillsboro',.....	Tampa.	Holmes,.....	Cerro Gordo.
Jackson,.....	Marianna.	Jefferson,.....	Monticello.
LaFayette,.....	McIntosh.	Leon,.....	Tallahassee.
Levy,.....	Levyville.	Liberty,.....	Bristol.
Madison,.....	Madison.	Manatee,.....	Pine-Level.
Marion,.....	Ocala.	Monroe,.....	Key West.
Nassau,.....	Fernandina.	Orange,.....	Orlando.
Polk,.....	Pease Creek.	Putnam,.....	Palatka.
Santa Rosa,.....	Milton.	St. Johns,.....	St. Augustine.
Sumter,.....	Leesburgh.	Suwannee,.....	Houston.
Taylor,.....	Perry.	Volusia,.....	Enterprise.
Wakulla,.....	Crawfordville.	Walton,.....	Ucheeana.
Washington,.....	Vernon.		

AN ESTIMATE OF THE VALUE OF FLORIDA LANDS.

In 1857 there appeared a then present prospect of the immediate completion of a railroad extending from the Apalachicola river to Pensacola, reaching 154 miles along the line of the Jacksonville, Pensacola and Mobile Railroad, being rapidly extended beyond Quincy, and under contract westward under circumstances warranting a reasonable certainty of its completion to Mobile now within a very short time. At that time Mr. Judah, a railroad engineer with a national reputation for competency and accuracy, made a very laborious and careful examination of the route, and an extended and valuable report, including an estimate of the cost of construction, the probable business, and the resources of the road.

If constructed at that time, the road would have been entitled to some 500,000 acres of U. S. land, and 100,000 acres of swamp and overflowed lands from the State; and in making his estimate of the resources of the road, he of course includes an estimate of the amount of lumber which would depend upon the road for transportation, as being easily accessible therefrom, and the value of lumber, timber and land of the 600,000 acres which it was supposed would become the property of the road. Extracts from this Report of Mr. Judah are valuable because they furnish data for a present reasonable estimate of the value of Florida lands generally, although the Report contemplates lands which, beyond Jackson county, have without sufficient reason, long and very generally been considered as of less value than the average of land in the State.

I give the extracts in full that the bases of the engineer's estimates may appear and prove or disprove the conclusions reached, and thus the value of the lands in the estimation of a careful, competent and practical business man may fully appear; for it is of special importance to Florida that the value of her lands to the lumberman, the railroad and the farmer should be more widely known.

VALUE OF THE LANDS.

"The value of these lands can with difficulty be correctly estimated. Their value is two fold. They possess at the present time an intrinsic value which is estimated at \$1.25 per acre. But the construction of a railroad through them immediately confers an additional value which is difficult to determine, it being dependent on—

First, the value of the natural productions now growing upon them; (viz: yellow pine lumber and turpentine) with the facilities for getting them to market.

Secondly, upon their fertility or capability of raising the natural agricultural productions of the country after the timber shall have been taken off.

Thirdly, upon the inducements offered to settlers, and the amount of settlement that can be brought on to them."

These questions are briefly answered by stating—

First, The lumber on these lands fit for cutting into saw-logs is sufficient to furnish alone a profitable business to the road, which will require five daily lumber trains to carry to market the increase, or to transport it as fast as it grows, giving a perpetual supply.

Secondly, It can be shown that the fertility of the soil is not surpassed by that of the best western lands, and yield, with an equal amount of labor and care, as much, if not more, profit as can be made per acre, on the best western lands.

Thirdly, The lumber business will induce that kind of immigration most needed to develop the fertility of the soil, and the position of the line upon the nearest and best highway from New York to New Orleans, renders it easy of access, while the market for the staple productions of the soil is inexhaustible, and not subject to the fluctuations to which the grain market is liable, and the healthfulness of this section of the country is unexcelled, and the climate unsurpassed.

"One great advantage which these lands possess over western lands, lies in their ability to produce six great staple productions, the most valuable known, and of which the supply can not equal the demand; while the western lands produce but two great staples, viz., wheat and corn. The construction of the road also gives the advantage of a market on both the Atlantic and the Gulf of Mexico.

"These staples are, yellow pine lumber, turpentine, cotton, tobacco, sugar and rice; in addition to which may be enumerated among other productions, hay, corn, oats, potatoes, oranges, bananas, figs, peaches, guineas, and many other tropical fruits which can be grown no where else in the United States as well as here.

"The first production of these lands is

LUMBER.

Nearly the entire body of these lands is covered with a dense growth of yellow pine lumber of a quality unsurpassed by that of any other State in the Union. The principal lumber trade of Florida is carried on from Santa Rosa county, nearly the entire population of which is engaged in and dependent upon this trade for their support. Some of the largest and finest lumber mills anywhere to be found in the United States are in operation in this county, the principal among which are located upon the Blackwater River, in the vicinity of the town of Milton, which is situated near the mouth of the Blackwater and at the head of the navigable waters of Pensacola Bay.

"The amount of lumber annually shipped from this district is about 50,000,000 feet per year, yielding upward of \$500,000 to the manufacturers and costing the mill-owners, delivered in the log, upwards of \$400,000. The logs to supply their lumber are principally cut upon the margins of the Blackwater and Yellowwater rivers and their tributaries. The cutters seldom go further than $1\frac{1}{2}$ miles back from the margins of the rivers. The timber on the margin of the rivers is smaller and not of so good a quality as that growing further back from the rivers.

"These logs contain an average of about 200 feet when cut into lumber, the minimum limit of size is that the logs be large enough to square one foot. It is estimated that the logs at a distance of six to ten miles from the river will yield about 250 B. M. feet of a better quality than now furnished.

"Trees will furnish from two to three logs per tree, but for purposes of this estimate, they are considered to yield two logs per tree. The mills generally buy their logs by contract, paying \$4 per M feet for them delivered. Those mills cutting their own logs from lands owned by themselves find that it costs them about the same price.

"The best of the timber lying near the margin of the rivers is becoming exhausted, so that the cutters are obliged to go further back, and consequently to haul the logs further, in consequence of which they are preparing to demand \$5 per M feet, and the mills will soon be obliged to pay the increased price.

"The Black and Yellowwater rivers run north-westwardly through Santa Rosa county, averaging about 12 miles apart. The timber on the margins has been principally cut for about $1\frac{1}{2}$ miles back. The timber lying between is untouched, is larger and of a quality superior to that growing upon the streams. It is proposed to locate the line of this road about midway between these two rivers running north-westwardly through the county. The nature of the country will admit of this. The lands belonging to the company will therefore comprise a portion of the best timber lands in the county.

"It is proposed to furnish this 50,000,000 feet of lumber in the log to these mills by railroad. It is believed that the logs cut from this section will yield 250 feet each. To supply the amount will therefore require 200,000 logs cut from 100,000 trees, or about 670 logs daily. Allowing each log to contain 300 feet B. M. before being sawed, and it gives the amount of 195,000 feet B. M. as the daily quantity to be hauled.

"The weight of the lumber manufactured is about 2 tons per M feet, but it is here estimated, in order to be safe, at 3 tons per M feet in the log. This will give the quantity of 585 tons to be hauled by railroad. Allowing each car to be loaded with 10 tons then 60 car loads per day would supply the mills. Two daily lumber trains of 30 cars each would then supply the demand.

"The grades through Santa Rosa county will be light and descending towards the market.

"We will assume that 20 miles of road are first built, the average haul upon which will be ten miles. The prices at present paid for cutting are 10 cents per log. The haul of this timber to the railroad would for the first year or two be comparatively little, as the logs would be cut from the immediate vicinity of the road. It is estimated that for the first five years the cost would not average to exceed 25 cents per log or \$1 per M feet.

"Thus, then, we find the cost of 1 M, B. M., of lumber as follows:

Cutting 4 logs at 10 cents,	\$0.40
Hauling " to railroad at 25 cents,	1.00
Loading the same on cars, 5 cents,20

Or, cost of logs loaded on cars, per M feet.....\$1.60

Assuming railroad charges for hauling to be 4 cents per ton per mile,
the average distance of hauling to be 10 miles, and the cost of railroad
charges is.....\$1.20

Making the total cost of lumber delivered in log \$2.80 per M feet.

"Thus it is found that after making a liberal allowance to the railroad for their charges, there results a net profit to the company of \$1.20 per M feet. At the present prices of logs, viz. \$4, this on 50,000,000 feet per year amounts to \$60,000, which will pay the in-

interest on the \$200,000 of bonds authorized to be issued by the company at 7 per cent., and accumulate a fund sufficient to retire them in five years; leaving the whole of the earnings (after deducting necessary expenses) to be applied to dividends.

"It is believed that permanent contracts can be made with the mills for supplying their logs at \$5 per M feet, which would give an additional profit of \$2,500 per year. The greatest average haul by railroad will not exceed 20 miles, and the greatest extreme haul 40 miles; showing the entire length of road, 151 miles, to be available for hauling lumber.

NAVIGABLE POINTS FROM WHICH LUMBER CAN BE SHIPPED.

"There are four points on the line of the road from which manufactured lumber can be shipped, viz:

- 1st. Junction of the Alabama and Florida Railroad;
- 2d. The Blackwater River, 15 miles further;
- 3d. The Chattahoochee River, 80 miles further;
- 4th. The Apalachicola River, 59 miles further.

"Thus it will be seen that the longest division of country to be hauled over is between Milton and the Chattahoochee River, a distance of 80 miles. Assuming that lumber is hauled each way on this division, and the extreme length of each subdivision would be 40 miles, the average haul upon which would be 20 miles.

POINTS WHERE SAW-MILLS CAN BE ESTABLISHED AND LUMBER SHIPPED TO NAVIGABLE WATERS.

"There are several points where the railroad will cross streams and rivers not navigable for sailing vessels, but available for rafting down logs, some of which reach into Alabama and Georgia, and upon which grow large quantities of pine timber, which will furnish a supply for railroad transportation entirely independent of that secured as belonging to the railroad company. These points are the Shoal River, with its branches; the branches of the Choctawhatchee, Holmes' Creek, the Chipola and its branches, and the branches of the Chattahoochee and Flint rivers; with several minor streams and creeks.

"These points are available locations for saw-mills, depending upon their proximity not only on the railroad lands but also upon the lands lying upon these streams, above the railroad, in Alabama and Georgia.

QUANTITY OF LUMBER ON LANDS.

"Allowing 20 trees per acre fit for cutting into saw-logs, averaging 200 feet M. M. per tree, and the quantity amounts to 6,000 millions of feet of lumber, which is worth manufactured, at only \$12, \$72,000,000. At only five trees per acre, the quantity is 1,250,000,000 feet of lumber worth manufactured \$18,000,000. Allow it worth \$2.50 per M feet standing and it will pay the whole cost of the road. One million trees per acre per year and it affords an annual yield of 500,000,000 feet, or about 1,000,000 feet per day, to transport which would tax the road to its utmost capacity, requiring 100,000 tons per day, or nearly 1,000,000 tons per year.

"It is also the fact that timber makes anew again in from 20 to 25 years. In that of er going over a body of timber cutting off that large enough for use, and leaving the smaller timber, this smaller timber will have grown sufficiently in that time to yield another supply equal to the first.

SPAR TIMBER.

Exists nowhere in greater abundance or of better quality than in the lands lying along the land lying on the streams having been exhausted, of this timber, the quantity along the railroad will be brought into immediate requisition. Heavy European contracts have been filled from this timber, and it can be obtained to any extent that can be filled. Good spars have been obtained from these lands. Reliable parties who have traversed these lands have reported that where 12 spars could be cut from an acre. These spars have remained so until the construction of the road, when they were cut, and the activity, and every acre of land that has a spar or it is worth \$12,000 per acre.

"Allowing that one spar can be cut from each five acres, and that 100,000 spars, which at only \$100 each are worth \$10,000,000 at tide-water. It is the quality that the

land may yield an average of one spar per acre, which would give us the value of spar-timber alone, standing, of \$62,500,000. The spars of Florida are well known in Europe, and are believed to be equal to any in the United States.

"The value of such a domain as this can scarcely be estimated, and if a thorough examination confirms a present reasonable belief, the value of the lumber alone on these lands will exceed the total aggregate cost of the Illinois Central Railroad."

Whether all of Mr. Judah's conclusions are correct or not, it is most evident from the Report, that the completion of the great work of internal improvement now in contemplation will develop sources of immense wealth in regions comparatively worthless from inaccessibility, and give a powerful impulse to all the business of the State.

Such are some of the manifold and powerful inducements offered by Florida to those who are seeking a new home in a kindly and genial climate.

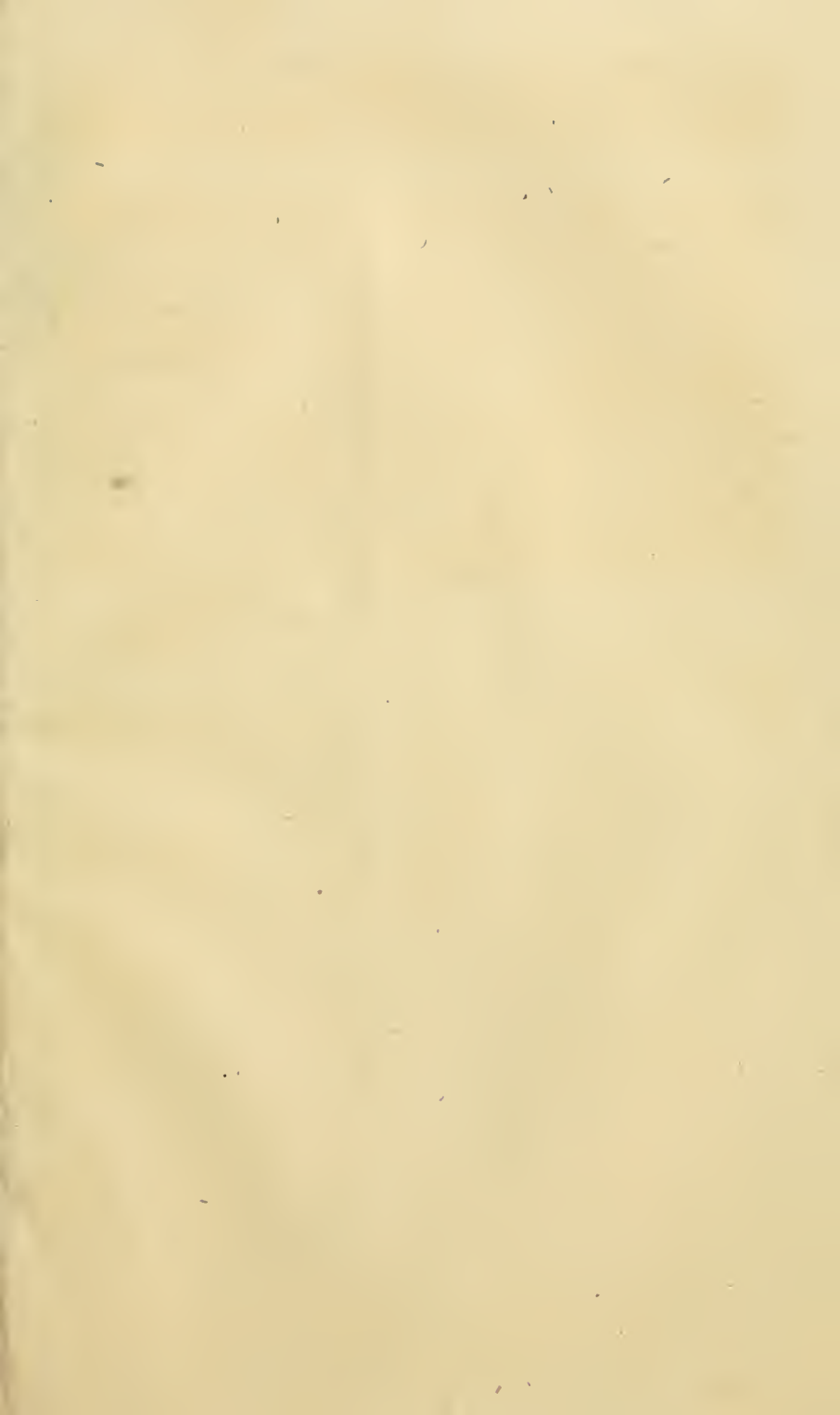
Thousands of men and women are thoroughly tired of the continued conflict with frosty and inclement weather, and are looking southward for the "better place" which they hope to find, but are deterred by apprehensions of unwholesomeness or fears of unpleasant collision. Thousands more, both in this country and in Europe, would gladly take any anticipated risk did they know of the actual attractions of this State.

The object of this publication is to spread abroad the largest amount of reliable information upon subjects of most interest and importance to intelligent inquirers who are or who may become particularly interested as contemplating settlement here.

The very object of the organization of the Bureau is to lend all practicable aid to those desiring new homes in this State, but from the want of sufficient means for more direct and efficient aid our labors were mainly confined to the dissemination of correct and trustworthy information from reliable sources.

This I have endeavored to do as efficiently as the means given will allow, and now close by saying that all further information of more special or local character, will be cheerfully to all desiring it and addressing me, paying postage.

J. S. ADAMS,
Comdr of Lands and Immigration,
Jacksonville, Fla.







OFFICE OF COMMISSIONER OF LANDS AND IMMIGRATION,
Jacksonville, Florida, December, 1871.

This book will be forwarded to all who forward postage with their applications.

Additional information, by statements of crops, statistics and sketches, is solicited from every citizen interested in the growth of the State.

Specimens of vegetables, fruits, cane and other productions, and of native woods are desired.

Address specimens and communications to

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