

ON THE ADVANTAGES OF PRODUCING BEET SUGAR IN NORTHWESTERN INDIANA.

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The subject of growing beets, for the purpose of making sugar, to supply the demands of commerce, is attracting much attention in the United States, and it now seems quite probable that the sugar consumed in this country will be produced within it before many years.

A careful study of the subject, makes it appear to be entirely desirable and feasible to do so. It has been proved by actual experience, that it may be done profitably—in itself considered—but that it will also greatly benefit incidentally and directly many other industries.

There are already ten or twelve large sugar factories, located in different parts of the country, east and west, profitably at work, turning out refined sugar, of the best quality, from sugar beets grown in their respective vicinities, and others are now being built. It is said by the Hon. James Wilson, Secretary of Agriculture, "that at least nineteen sugar beet factories will be at work in the United States in the year 1898."

And Hon. Aaron Jones, Worthy Master of the National Grange, in his annual address to the Indiana State Grange, says that he is proud to say, "that at least one, if not two, of these factories will be in Indiana, and that probably they will be in the Kankakee valley of northwestern Indiana."

It seems reasonable to believe, that if a part of the sugar used in this country can be profitably produced in it, that the whole might be, and that it should be; and it is proper that intelligent investigation should be given the subject to discover its requirements, and that whatever may be needed in the way of private effort to bring about this result, should be given it by individuals; but as an essentially wise and economic policy it should also have the encouragement and fostering help of both State and Nation.

More than two million tons of sugar (with 2,240 pounds to the ton) are consumed annually in the United States, and less than one-sixth of it (315,000 tons) is produced at home. One hundred million dollars—more or less—go out regularly year after year to pay for this

sugar. It is bought of nearly every other nation in the world (the countries of Europe, Asia and Africa, South America and the Islands of the Sea—West Indies, East Indies, Phillipine Islands and Hawaii, etc.).

We thus buy **what we can, and, with great advantage,** should make ourselves. If we were producers, as well as consumers, of this immensely large and indispensable commodity, we should become more independent as a nation, and give needed employment to our own people, thus adding greatly to their comfort and prosperity.

We have here, therefore, not only an important economic question, but an important social one as well.

It is deserving, certainly, of much painstaking study and investigation, from a broad and high plane of patriotic and philanthropic statesmanship, entirely freed from any taint of the prejudice of partisanship.

Sugar beets in large quantity, of proper quality and rich in saccharine, can be profitably grown throughout the State of Indiana, but especially so in the northwestern part of the State. Beets for sugar are said to do best in north temperate latitudes, and in friable soils. There is a large area of sandy, sandy-loam and alluvial soil, in northwestern Indiana, which is particularly favorable for growth of vegetables, as has been demonstrated by actual performance. This soil is easy to cultivate, it is warm and fertile, and there is in this part of the State the proper degree of sunshine, and an especially requisite and favorable amount and time of rainfall, for the growth and ripening of sugar beets, as well as the developing in them of the quantity and purity of saccharine to fit them for profitable sugar making. The price of the land is low, and taxes are nominal. The numerous farmers who occupy this land, in moderate-sized holdings, have the energy, the intelligence and the willingness to make a success of beet raising, and will gladly furnish to factories all that can be used. The facilities for transportation are all that can be needed, and greatly excel those of other parts of the country.

Railroads interlace the land, and shipping stations can be had at any point where freight offers in reasonable quantity. Water carriage can also be surprisingly developed, when the necessity for it is presented.

Northwestern Indiana borders on Lake Michigan, and has several rivers ~~that~~ can be used for freight highways, for taking beets to factories at low cost, and can be used for other freight. Again, the close proximity to Chicago—a great distributing point, and mart of trade, with its immense consumption—is an argument in and of itself of the

favorable location of northwestern Indiana. All the conditions for an economical and prosperous manufacture and marketing of sugar, from sugar beets, seem assured beyond peradventure for this peculiarly favored locality.

All that now seems to be lacking for this consummation is a recognition of the chance, and the determination to do that which should be done, and the accomplishment of making sugar under these favorable circumstances, is so logical and legitimate as to go without saying. Here is the land, waiting as a fair bride; here is the energy of labor and capital, with the opportunity; here is the urgent demand to be supplied, and a great commercial enterprise of incalculable value should legitimately spring into life, to cheer and bless the community.

It is known from experience, that beets rich in sugar, will grow here readily, and satisfactorily, but to place the matter beyond conjecture, scientific tests have been made, for the past ten years, at the Indiana State Agricultural Experiment Station, at Purdue University, Lafayette, by chemical analysis, by the State Chemist, Dr. H. A. Huston, and he reports that his investigations show entirely satisfactory results. He sees no reason to doubt, that from the large per cent. of sugar contained in the beets grown in northwestern Indiana, and the high per cent. of its purity, that they fully meet commercial and manufacturing requirements, for the purpose of making sugar. His tabulated report of analyses of sugar beets grown in 1897, in this section, will soon be made public, and will be found to be assuring as to the richness and good quality of northern Indiana grown beets.

Tests of the sugar value of beets grown in northwestern Indiana are also being made by the Chemist of the United States Agricultural Department at Washington, and will be found to be favorable. There is consequently definite knowledge of the sugar value of beets grown in this part of the State; and the reader is recommended to consult these statistics.

It may not be necessary to draw with minute definiteness the exact border line of what is here spoken of as northwestern Indiana—the line may be considered as quite elastic—and there is no need of naming hard and fast, the many grand counties that are within its boundaries, nor is it essential to figure up precisely its area of square miles, or thousands of fertile acres, well adapted to sugar beet growing, or to enumerate with the exactness of a census its host of intelligent people. It is a vast area, a magnificent territory, a principality, an empire of possibilities, the future home of many people, more millions than now live in the entire State.

The advent of its prosperity depends upon its people coming to the recognition of their opportunities, and in making energetic efforts to realize and to materialize them. Its close proximity, as has already been said, to the large and progressive city of Chicago, makes its domain a source of supply, from a sure vantage ground, of a large portion of that city's great and increasing wants. It has also many large cities within its own borders, and a large and rapidly increasing surplus of cash capital that very unnecessarily and mistakenly too often seeks investment outside, instead of within its own borders. A home investment would be not only safe and profitable, but would immensely increase the value of all home property.

The same kind and degree of energy, and work and faith, that have built Chicago, that raised it from the quagmire, is needed to develop the latent possibilities of northwestern Indiana. The many travelers passing on their way to and from Chicago, through northwestern Indiana, see on the face of things, much that may be unthinkingly, and perhaps freely criticised. They would have seen much to criticise also in the early Chicago.

He who foresees the great transformation that is inevitably to take place in this favored part of Indiana, wonders that it should be so long delayed.

He who has lived to see the evolution of Chicago, is prepared to believe unhesitatingly in the coming development of northwestern Indiana.

The introduction of sugar making, from sugar beets, promises to hasten this development and prosperity—for this region. The men who are actively working for this cause, are benefactors to this part of the State, and to the whole State, and to the American people. The thing to be accomplished is not a light one. It requires work and money, and time, with many discouragements, and all that is implied in awakening dormant energy from its lethargy and unbelief, and to overcome the active hostility of prejudiced opposition, but success is bound to come, slowly probably, but steadily, and then the whole thing will carry itself forcefully forward, and the wonder will be that it was not all done sooner. Sugar making here means improving all the general conditions of society, by introducing a new and successful industry that will put large sums of money into general circulation—it means improving the land, and improved culture of land, planting larger areas, the introduction of a new crop, that will not compete with present crops, but will make added market for them, and one that has the exceptional advantage to its merit, of having the price which is to be paid for it, agreed upon even before it is planted. This

last fact means much to the farmer who has toiled through heat and cold, to raise a crop, and has then found the market over-supplied, and that it could not be sold for cost of production. It means employment of a great number of beet growers, and light, healthful, and profitable employment for women and children, who can thus have the pleasure and benefit of having money of their own earning.

It means the building of factories, and consequent demand for building material (brick, lumber, etc.), and the equipment with machinery—work for mechanics and factory hands—increase of railroad business, which of itself affects all the industries of the country favorably. It means too, a greatly increased demand upon the farmer, for other farm products, to supply the increased population of his neighborhood, a demand too, right at the farmer's own door, which he will find of much more worth to him, than a distant foreign market, and one that will include many articles that could not be shipped away. New houses will be needed, greater sales of merchandise will follow, both of necessities and luxuries, as is always the case with the ability to purchase, consequent upon regular employment, with paying wages. This increase of activity would put money into active circulation and new enterprises would naturally follow, resting upon this basis of prosperity. There would necessarily be a very decided improvement of the highways—live people must move about—and good roads are a necessity to advancing civilization. It would not do to haul a small load of beets ten or twelve miles to factory, when with good roads, two or three times as much might be taken in less time, and with the same team.

All these things, high in color as they may seem, have come to pass at other points, where sugar is being made, from home-grown beets, and with so many favoring conditions, as prevail here in northwestern Indiana, there is no reason to expect anything less, but rather more.

Beets rich in sugar, of high degree of purity, will grow here—that is the foundation fact which can be made strong by a formidable array of statistics. There are here, too, good locations, for factories, with abundant supply of good water, which is needed in large quantity, and there must be ready chance for proper drainage, to take away freely, without discommoding any one, the fouled water used in washing and treating the beets.

There is here also an abundant and cheap supply of fuel, and the same can be said of the lime needed, also in large quantity, in manufacturing. And there can be found the needed number of workmen. With assurance of a full supply of beets, it would seem to be an inviting field for the investment of the requisite capital. One successful

beet-sugar factory established in northwestern Indiana, would demonstrate the truth of the positions herein taken, and would lead to the building of many more. It matters little where this first factory shall be started, it should have the support of the whole district, and of the whole State.

It takes a large sum of money—probably from two hundred to five hundred thousand dollars—to build and operate a modern sugar factory, with its new methods and improved and costly machinery. Prudent and cautious men who have money must naturally be convinced, before investing their money in a beet factory in northwestern Indiana, that all the conditions are correct, and can be depended upon to make the investment a safe and paying one. Confidence is a plant of slow growth, and new ventures, even where the promises are so favorable as in the present case, are apt to be looked upon with doubt. There must be first the sure thing, that the beets, in quantity and quality, will be forthcoming as needed, from 300 to 500 tons, each and every day, for one hundred or more days. This is a large quantity—from 30,000 to 60,000 or more tons; requiring an acreage to produce, in direct use, or to be planted each year, of five or six thousand acres. To keep the land in proper rotation, so that one crop of beets shall not follow too quickly another crop of beets, on the same land, will require a total of twenty or thirty thousand or more acres, within say a radius of ten miles of a factory.

Fifty thousand tons of beets, at four dollars per ton (and five dollars are paid in some localities), would make a health-giving sum of two hundred thousand dollars to be paid out yearly in a comparatively small farming community directly to the beet growers. Multiply the factories to the number of 500, to absorb the one hundred million dollars paid for foreign made sugar brought into the country annually, and there would be a wave of prosperity sweep over the entire land, which would banish all thought of hard times.

The beet tops, and refuse beets, have also value to the grower, for feeding farm animals, and the improved condition in which land is put by beet culture, for better and larger yields to the crops which follow the beets, is an advantage to be considered as additional money value.

The profits of successful beet sugar factories are said to be large, and rightfully they should be, for they cost much money to build and maintain. Insurance, interest and taxes are large items, and the factories run only a small part of the year, perhaps four to five months, and the costly machinery suffers while idle. The larger the capacity

of the plant for using beets, and the longer the time it can be kept running, the cheaper per pound can sugar be made. The fraction of a cent may make a large figure in the profit.

In less than twelve hours after the raw beet enters the factory, the refined sugar from it, may leave in bag or barrel ready for market.

This quick realization on the manufacture is a very big item in favor of the industry of sugar making. There is a large and growing demand for sugar in the United States. It is the largest and best market for it in the world. The consumption of sugar is rapidly increasing in the world; it has more than doubled in the past few years. Sixty-five pounds each, annually, is the average amount used, for every man, woman and child in the United States—not that every person uses directly in the form of sugar, that large amount, but it is used in distilling, brewing, preserving fruits, making jellies and jams, confectionery, chocolate, varnishes, blacking, etc., etc. There are also large quantities of foreign substances, adulterants, added to sugars, such as starch, chalk, white earth (terra alba), glucose, etc. The people should protect themselves from such fraud since it is not wise to be imposed upon in any such way. There are immense quantities of glucose, made from Indian corn, and used in the United States as well as exported. It seems to be a legitimate industry, and the time may come suddenly, when the art will be discovered of turning glucose to sucrose, and we shall have sweet sugar made from corn and other grains. There are tons of maple sugar, and maple syrup, and sorghum, and a large quantity of honey is gathered annually.

These sweets are all in eager demand, and enter largely into the food of the people of this country, and are influencing more largely perhaps, than is realized, the character of the nation. It has been said by some physiologists: "Tell me what you eat, and I will tell you what you are."

The Japanese have lived quite exclusively for centuries on rice. They are small in stature, presumably as a result of this diet, and the Japanese Government is now seeking to introduce the general use of wheat among the people, hoping from its bone and muscle making elements to induce a larger stature. The beef-eaters of merry England, are noted for a robustness and an energy, that continually reshapes the maps of the world.

The great consumption, and demand for sweets, requires an immense production, and calls for the employment of large amounts of capital, and of labor, and warrants the investment of money in the industry, so far as demand for the product goes. The question presents itself pointedly then, whether we shall continue to buy our

sugars of other nations, or shall we make them ourselves. If all the conditions are as favorable as assumed in this paper, all that seems necessary is to build the factories, and that is a question of much money. The question of investing money in sugar making in the United States, waits upon, and is dependent upon the will of the people, to be expressed in national legislation, for there must be legislative protection, to this industry, until, at least, it is substantially established, to keep it from disastrous competition of foreign made sugar. This legislation must be without fluctuation, and so reliable in constancy as to command confidence in its stability, as being the settled policy of the nation to effectually encourage and protect home made sugar. This policy would end all doubt as to the ability of the American people to advantageously make their own sugar. This matter of protection to home industries should cease to be a thing of partisan politics, and be recognized as the policy of loyal statesmanship. The experience and practice of other highly civilized, enlightened and prosperous countries, is in direct and positive evidence upon this very question of legislation in favor, and protection of making sugar by their own people. The recent experience of the United States in fostering its iron and steel, and tin, and textile industries is happily directly in point, and is convincing as to its wisdom.

Large sums of money were formerly, continually being sent out of the country to purchase manufactured articles, while the raw material was lying unused in abundance at home, and workmen lying idle, needing work. By simply invoking the aid of the necessary and sensible tariff protection, we now make at home what we formerly bought of other people, and are fully able to supply our own wants in these lines with not only better goods, but at cheaper prices. We also ship such goods profitably abroad. With such eminently and plainly practical good results, so conspicuous that "He who runs may read, and the wayfaring man tho' a fool need not err therein," all the theories that are arrayed against it, seem to be knocked silly, and have no foot, or ground to stand upon.

It is said by making our own sugar, we should prejudice a profitable trade with countries from which we now buy sugar, and this is held as valid argument why we should export wheat to pay for sugar. It is said to take all the wheat, and wheat-flour shipped from the United States to pay for the sugar brought into it. Why is there any advantage in trading, just for the sake of trading? With the yield of one acre of wheat, the American farmer might buy, say 200, or 300 pounds of sugar. That same acre planted with sugar-beets might yield, say 2,000 or 3,000 pounds of sugar, a difference in figures, and

real values, that shows big loss, in the way of friction, or manipulation, or trade, somewhere on the road from wheat to sugar. And it is probably quite true that there is really more sugar in the wheat, that the farmer trades for the sugar, than there is in the sugar he gets for it. It may be worth the while of the American farmer to look sharply into this matter.

If we should make our own sugar, the sugar workmen might consume in this country, all the surplus wheat which is now shipped abroad, making a home market for it, much better than a foreign one, and paying better prices. The farmer has very good reasons for being dissatisfied with present prices of wheat, and would be justified in attempting to create a better market for it, and there would consequently be an added new market for butter, eggs, milk, meat, clothing, and the whole thing of sugar and wheat would be of home, and for home. There is very much that might be said as to the questionable policy of shipping wheat from this country. Whatever will contribute to the healthful growth and independence of this country, whatever will improve the character and condition of our people, is desirable. A study of the promises to these ends, held out, by making at home, all the sugar needed, makes it seem to be the right thing to do. Beet raising requires a more thorough and systematic method of farming, than is usually given to the growing of wheat and corn—and it is more profitable. It is certainly desirable, and quite possible, to improve the manner and method of farming. There is much said enthusiastically about large yields of sugar-beets and of extra high per cent. of sugar value, etc., but 12 tons of beets to the acre, with sugar value of 12 per cent., with proper purity of the juice, say 70 per cent., may be considered as a standard yield, and this will require a good deal of effort to attain, although it may fortunately be quite possible to excel in this region. To make 12 pounds of beets, yield one pound of sugar, will require great skill in manufacture.

Great improvements have been made in the whole art of sugar making—in growing the beets, in the process of extracting and refining, and much more in this direction is yet possible. The horticulturist, the inventor and the chemist have united forces in the problems involved, and the State has protected and encouraged by bounties and privileges, and the battle royal between cane sugar and beet sugar is won in favor of art over crude nature. This paper might be lengthened indefinitely upon the interesting subject of the history of sugar making, and of the disturbing and agitating conditions surrounding it to-day. The subject grows with study, in magnitude and importance, but the paramount question in this subject, even at the risk of repetition, is, Shall the people of this country make their own sugar? There is of course

much chance for the play of sentiment and emotion, in weighing up or adjusting the seeming rights and wrongs which float on the surface of many great and grave questions, but the law of self interest, or apparent self interest, will, and should control in the actions of those who are affected by any given policy. How other lands, and other peoples, may be effected by the people of the United States striking directly for their own advancement and prosperity, is involved in too great and uncertain obscurity to be considered.

There can hardly be a question as to the good policy of having the people of this country fully and profitably employed. It appears so entirely self evident, that no argument of words is needed to support it. It is an unpleasant fact, that there are now, and have been for several years past, many unemployed people—who would gladly work, and their material and moral condition would be greatly benefited by doing so. There has been and still is the general complaint of hard times, and there exists a spirit of unrest and dissatisfaction, which surely constitute a serious menace to the safety of the community. This condition costs immensely in the way of self denials, of suffering and misery, and of stagnation of industry and business, and a retrogression of all material interests. The aggregate cannot be computed in money. It costs much in direct public taxation, and for an unusual support of the needy, and for prosecuting an increased growth of crime.

There is too a great tax upon the charitable, for voluntary contributions to the poor, a tax that in equity should be borne by the State, so that all citizens might bear their proper share of it. In the form of charity it has a very demoralizing effect. It is desirable to have all the people of this country self sustaining and self respecting, even if to furnish requisite employment, enterprises are instituted requiring governmental aid and protection. This means simply, when analyzed, the very proper co-operation of the whole people in the performance of a self protective duty, by enabling all to support themselves by their own labor, without any sacrifice of self respect, and to contribute to the support of the Government. A portion of the community cannot be benefited without the whole community sharing the benefit. Whatever it might seem to cost there would be equivalent value received for it. Whatever is really worth much more than it costs, and is entirely beneficial in its results, is not dear, but is cheap. As George Washington expressed it, "The aggregate happiness of society is, or ought to be, the end of all government."

There seems to be prophecy, shaping into fulfillment, in the general expectancy that sugar making on such a scale as to fully supply our own market will soon be an accomplished fact in the United States of America. It is in the thought and in the purpose of the people.