

BEEF SUGAR INDUSTRY.

How the Beet is Grown and How Sugar is Extracted.

Statement of the Conditions in California Relative to Beet Culture From a Business Man's Standpoint.

(From the Pacific Rural Press.)

The following article on the sugar beet industry by Albert Gerberding, President of the San Francisco Produce Exchange, is the most complete and exhaustive discussion of the sugar question yet made in this State.

Under the official seal of the United States Department of Agriculture, we are told that "agriculture is the foundation of manufacture and commerce."

Notwithstanding its antiquity, up to the middle of the past century sugar was not thought to have any special value as an industrial product.

At that time, however, the German chemist Marggraf became imbued with the idea that cane was not the only sugar producer, and thereupon began a series of experiments with different varieties of vegetables.

In 1820, the owners, two German chemists, came to California to superintend a new enterprise of the same sort at Alvarado, started by Mr. Dyer.

In 1880-90 the Western Beet Sugar Company erected its factory at Watsonville, Cal., and the next enterprise started in 1891, and about the same time factories were erected at Lehi, Utah, Grand Island and Norfolk, Neb., New Mexico and Virginia each claim one factory.

A new factory is now being constructed at Alameda, in the vicinity of Anaheim, Cal., and one has also been commenced at Salinas, Cal. This we have at present eight factories in the entire United States, three of which (with two more in process of construction) are located in our own State.

During the Napoleonic era Germany and Russia took up the work of raising beets and making beet sugar, voting funds for the establishment of schools and imitating France in the scheme of non-taxation.

This we begin the history of the beet at the opening of this century and we find its largest cultivation in Germany, France and Russia, because these Governments first gave the producer substantial bounties as a national industry.

The various Governments in laying the foundation for this great industry builded better than they know, for so many now are dependent upon the beet that low prices incident to over-production threaten the peace and prosperity of thousands of French, German and Russian husbandmen.

lastingly victorious competition with the German product on the Western markets. It appears desirable, says Mr. Yanjoul, in conclusion, to limit the production of sugar in Russia to the needs of the country's consumption.

Leaving Europe with its 3,000,000 acres of fields, its product of say 4,500,000 tons of sugar annually and its annual sale to the United States of \$20,000,000 worth of sugar, let us consider the beet at home.

Our first commercial experiment in making sugar from beets was near Philadelphia, in 1830, contemporaneously with the final establishment of the business in France, but with a wide difference in results.

For twenty-five years thereafter America made no attempt to make beet sugar. In 1863 a factory was established in Illinois. The land was unfavorable to beet culture, and after six years of unintelligent endeavor, the factory was moved to another part of the State not more favorable, and failure again was the result.

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The object of the syndicate is not to limit, as do many other similar organizations, the production of the article in order to regulate the price of it, but to divide fairly among the factories the amount exported or the country's production of sugar.

Leave only one beet in one place, and in this process all the foreign, solid and coloring matters are deposited. After this it is subjected to a careful treatment with sulphuric acid, and the filtrate leaves it almost colorless and ready for the evaporating process, where it is boiled by steam heat in vacuum.

This process, intricate as it may seem to the layman, is rapidly accomplished. The beet goes into the factory to-day; to-morrow they are pure white granulated sugar, ready to put into your coffee.

It requires between seven and eight tons of beets to make one ton of raw sugar, the pulp, i. e., what is left of the beet after the sugar is extracted, is an excellent fodder, and in Germany and France is returned to the farmer in part payment for his beets.

THE MONEY SIDE OF THE BUSINESS IN CALIFORNIA. We now come to the all-important question: Does the manufacture of sugar in California pay? Those of you who hold shares in these enterprises can answer this question better than I.

A HARD BARGAIN. This locality is 110 miles by rail from Fresno, and the average haul from the farms to the railroad is ten miles; so the farmers will lose the cost of hauling and the railroad freight, a total loss of \$7,000 per ton, or on a product of 75,000 tons they will be out \$150,000 in consequence of not having a factory.

THE FARMERS NOW KNOWING THAT they can produce the raw material as victoriously as the factory, and those already interested in the business and knowing its profits, have at present too much on their hands; and those who have the capital are waiting for some one else to put the proposition on a dividend basis, when they will of course stand in.

WHERE OUR CLIMATE COMES IN. This sugar beet has been bred and bred for desirable points, such as shape, size, color, foliage and saccharine contents, until by careful selection these valuable qualities have become fixed.

HOW THE SUGAR IS MADE. For information in regard to the manufacture of beet sugar I prefer that you visit the factory at Alvarado, a short journey, where in a few hours of interesting observation you will learn more than I can tell you. You will see in the factory long rows of covered bins overflowing with beets, for the beet is decapitated in the field. Then as you enter the factory you will observe a very peculiar and unpleasant odor to which you soon become accustomed and ere long are deeply interested in the manufacture of sugar, of which your guide will furnish a description similar to the following:

SOME SUGAR INDUSTRY POLITICS. In this country the Government, largely by investment, has been made a contractor with the people, agreeing to pay a bounty of two cents per pound on home-grown sugar for fifteen years.

SKIN IRRITATIONS CUTICURA SOAP. My little boy was afflicted with Eczema in acute form for nearly a year, during which time we tried without success every known remedy.

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forated plates covered with burlap, and in this process all the foreign, solid and coloring matters are deposited. After this it is subjected to a careful treatment with sulphuric acid, and the filtrate leaves it almost colorless and ready for the evaporating process, where it is boiled by steam heat in vacuum.

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NEW TO-DAY. \$25 REWARD! For the arrest and conviction of the parties who killed the jack rabbits at Agricultural Park last night. SACRAMENTO COURSING PARK ASSOCIATION.

industry of the world in such a short space of time. The subsidies given in Europe have made it possible within the last thirty years for the beet to surpass the cane.

SOME TREMENDOUS FIGURES. Seventy moderate sugar factories in California would utilize 50,000 acres of land; would make annually 700,000 tons of sugar, nearly one-half as much as Germany, equal to the product of France, Russia or Austria and four times as much as the Hawaiian Islands and one-sixth of the entire world's beet sugar output.

THE CITY'S FINANCES. Following is the report of City Auditor Young for the week ending Saturday, February 6th:

Amount in City Treasury \$331,713.64. APPORTIONED AS FOLLOWS: Sinking and interest fund \$43,774.80. General fund 48,409.12.

THE OPENHEIM BONDS. Frank D. Ryan, who has been to San Francisco to see if the \$50,000 in bonds representing the bulk of the Openheim estate were safe, has returned. He found that they were secure, and next week he will ask that the indictment found by the Grand Jury against Philip Openheim, when it was supposed he had made away with the bonds, be dismissed.

ESTATE OF MARIA SHORT. A petition has been filed by James M. Short, by his attorney, H. G. Soule, for letters of administration on the estate of his deceased wife, Maria Short. The property consists of a farm near Galt of 160 acres.

WOMEN'S WOOL JACKETS, small sleeves, 25c; silk push jackets, \$1; lot of long ulsters (wool) for 50c, 75c and \$1 (can be made over), at Red House.

ITCHING ECZEMA. An Etor's Little Son Suffers Terribly. Itching Intense. Raw and Bleeding from Constant Scratching. Cured by Cuticura.

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SEALD PROPOSALS. BIDS WILL BE RECEIVED AT the office of the undersigned on or before 10 o'clock p. m. on TUESDAY, February 23, 1897, for running the new pumping plant at foot of S street for the city of Sacramento.



Accidents Will Happen. For instance, take a couch. Some couches, apparently, are made just for ornaments. If they give the least service there's an accident, the couch is completely knocked out, expresses it. But no such accidents happen to couches made in our factory.

NO MOSS ON US! Our Big New Laundry. Twenty-first and O. Is the Finest and Most Complete. ON THE COAST. Our Work Can't be beat anywhere. DROP A POSTAL. RING US UP. PHONE 211. MASON'S. 528 J STREET.

EXHIBITORS HAVING SPACES: Sacramento Packing and Drying Company, canned goods, etc. LeVre, Frick & Co., Red Seal baking powder. Pacific Coast Syrup Company, maple syrup, etc.

DESIRABLE FAMILY RESIDENCE. The lot has a frontage on W. Chesley of 80 feet, and on Eighth street of 115 feet. The house is in first-class repair, and contains three reception and four bedrooms.

EBNER BROS. COMPANY, 116-118 K Street, Front and Second, Sacramento. IMPORTERS AND WHOLESALE DEALERS in Wines and Liquors. Tel. 304.

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