

BEET SUGAR TODAY REACHES HIGH STATE OF PERFECTION

Pure Sugar Now Produced Entirely From American Farms Meets With Growing Approval of American Housewives.

To Oliver de Serres, a French agronomist, goes the credit for discovering the fact that the beet root contained sugar. No immediate use was made of this discovery and it was nearly fifty years (1747) before Andrieux, a Prussian chemist, carried on experiments which resulted in obtaining sugar crystals from beets. His work bore fruit through his pupil, Karl Franz Achard, who after the death of Margrat carried on his work. Achard succeeded in interesting Frederick the Great in the possibility of extracting beet sugar commercially and secured financial assistance from him. The emperor died in 1788 and the work ceased until his successor, Frederick William III became interested. By 1799, Achard had developed a practical method of extraction and in 1807 a

factory was ready for operation at Cunen, Silesia. This factory succeeded in producing a small quantity of sugar at a high cost. It is interesting to note that the producers of cane sugar, alarmed at the threatened invasion of their field, offered Achard \$30,000.00 to discontinue his experiments. Two years later he received and refused another offer of \$120,000.00.

In 1802 an experimental factory was built near Paris. These early attempts were handicapped by low sugar content of the beet and by lack of efficient methods of extraction. Their actual recovery of sugar was only two per cent. The establishment of the beet sugar industry on a commercial basis was an outgrowth of the Napoleonic wars. Importation to France of sugars produced in British colonies was prohibited by Napoleon's embargo of 1806 and British retaliation cut off the supply from France's own colonial possessions. As a result sugar prices rose to unbearable heights. That year the French government offered a bounty on domestic sugar production and in 1811 the first French commercial factory was built near Lille. Napoleon saw the possibility of the industry and took immediate and characteristically vigorous steps to foster it. He arranged for selected students from technical schools to be sent to specially provided beet sugar schools and set aside large tracts of land to be devoted to beet-raising. A government grant of 1,000,000 francs was used for research work in de-

veloping beets to higher sugar content and the extraction processes to greater efficiency. These measures were so effective that by 1813, 334 small sugar factories were operating in France. With the fall of Napoleon and the end of the wars, European ports were thrown open to cheap cane sugar competition and the infant industry was nearly killed.

The work carried on, however, Pezouze developed better plant breeding information and better methods of manufacture were discovered. Governmental aid in the form of subsidies and bounties was forthcoming in France, Germany, Austria-Hungary, Belgium and the Netherlands. Germany in particular formulated consistent protective legislation and the growth of the industry there was more rapid than in France. Considerable attention was given in Germany to the improvement of the beet and to the processes of manufacture. The success of that work was so thorough that at the outbreak of the World War Europe had 1200 factories refining 9,000,000 tons of sugar annually; nearly one-half the world's supply. Beet sugar had displaced cane almost completely in the European markets. The sugar beets, which in the beginning carried only 4 per cent of sugar had been built to more than 15 per cent; the crude, inefficient methods of refining had been brought to high degree of perfection and the factories could make pure sugar at competitive costs.

The pioneering process in the United States has been nearly as arduous. Beets were first grown successfully, for experimental purposes, near Philadelphia in 1835. Two years later the first factory was built at Northampton, Mass. This plant succeeded in making 1300 lbs. of sugar, but the venture was a financial failure. During the period from 1838 to 1870 numerous attempts were made to establish factories but all resulted in failures. The Mormons of Utah in 1852 made an attempt to found the industry there. Machinery and seed were purchased in France and a study made of the methods in use. The machinery was carried by boat to New Orleans and up the Mississippi to Fort Leavenworth, Kan. From there, 52 ox teams were used to carry it more than 1000 miles overland to Salt Lake City, where it was set up. Difficulty was encountered in getting the sugar to crystallize; only syrup was produced and the factory was abandoned in 1855.

Other factories were built in Illinois, Wisconsin, Delaware, Maine, Massachusetts and California. They were small and the costs high. Imperfect machinery, low quality beets, lack of governmental and other interest, all militated against their success and all was given up. It remained for E. H. Dyer, in 1879, after four complete financial failures to place a factory at Alvarado, California, on a paying basis. Claus Spreckle built a plant at Watsonville, California, in 1888, which operated at a profit.

In 1890 the Oxnard brothers, after a careful study of European methods built a factory at Grand Island, Nebraska, and followed it, in 1891, with plants at Norfolk, Nebraska, and Chino, California. The same year saw Utah re-entering the field with a successful venture at Lehi, Utah.

At this point governmental interest gave impetus to the movement. The Sugar Bounty Act of 1890 paid two cents per pound to the producer. In 1894 the act was repealed and replaced by the less favorable Wilson act. The Dingley act of 1897 gave the first effective tariff protection and stimulated development. During the same period technical schools were being drawn on for scientific minds to instruct the grower and the manufacturer. The business was successfully launched.

Its growth since 1897 has been fairly constant. Adverse legislation has threatened it at times and retarded its growth, but the trend has been regular. The Underwood-Simmons tariff act of 1913 reduced the tariff and proposed to place sugar on the free list in 1916; but the effect of the act was nullified by the outbreak of the World War and the resultant sugar shortage. In 1917 14 factories were built in the United States, with combined daily slicing capacity of 11,000 tons of beets.

Thus the period from 1790 to 1933 has watched the growth of the beet sugar industry in the United States from an experimental stage to a vastly important affair; from an infant, struggling against adverse conditions arising from ignorance, faulty tools of trade, and lack of appreciation and understanding of its potentialities, to a well-established and highly organized commercial and agricultural enterprise. In 1933 beet sugar factories refined 1,629,000 tons of sugar from beets grown on 984,663 acres of land. The recovery of sugar from each ton of beets rose from 5 per cent in 1891 to 15.23 per cent in 1932. In the wake of increased sugar

production in the United States has followed more efficient farming, higher yields of other crops as they have followed beets, increased land values, expansion of irrigation, sound banks and shorter delinquent tax lists.

MERCHANTS OF CITY WARNED AGAINST TWO

A letter has been received by Lynn Larson, secretary of the chamber of commerce warning merchants of all towns in Oregon to be on the lookout for Fred Hart whose last known address was 1606 X avenue, La Grande and A. A. Breeze, 628 E. Benton st., Pocatello, Idaho. These two men are alleged to have been working confidence game and swindling merchants

out of hundreds of dollars in several western states. It is reported. They claim to be representing the different periodicals, including the Brotherhood's publications.

Eastern Oregon Lambs Bring Top Price Here

Hart is known here, having made his home in La Grande for several years. The association is now preparing for shipment a double deck car of hogs which will be shipped from Elgin tomorrow. In 1933 Easter fell on April 21.1

MRS. L. KIDDLE ON TRIP EAST

Mrs. Lyle Kiddle accompanied by her son, Robert, has left on an extended trip east. They will first go to Henrietta, Okla., where she will visit a sister, Mrs. William Seymour, then to Mt. Vernon, Ill. to visit her parents, Judge and Mrs. Robert M. Farthing, and during her stay will spend several days at the World's Fair in Chicago. They expect to be gone most of the summer. Livestock experts say immature grass in the spring of the year is about 90 per cent water and therefore it is impossible for grading cattle to maintain their weight without other feed.

Schilling

Pepper
The luxury of good pepper is anyone's. It costs no more.

DO YOU GET GOOD RADIO RECEPTION ?

In most cases poor tubes are responsible for many of the noises and other distracting effects in your radio. We have been appointed by the RCA Victor Co. to handle the famous

RCA RADIOTRON TUBES

Call us if your radio reception is not good. A new tube may be all that you need. Bring in your tubes—we will test them free.

We also have the most complete Radio Service Department in Eastern Oregon. Guaranteed Radio Service Work. ("No guess work.")

RADIO & MUSIC SUPPLY CO.
First National Bank Building Phone Main 805

veloping beets to higher sugar content and the extraction processes to greater efficiency. These measures were so effective that by 1813, 334 small sugar factories were operating in France. With the fall of Napoleon and the end of the wars, European ports were thrown open to cheap cane sugar competition and the infant industry was nearly killed.

First Quality Tires! Backed By Wards Famous Guarantee! No Stronger Written

Montgomery Ward

TIRE GUARANTEE

(Not Transferable)

The Riverside tires described below are guaranteed, without limit as to time or mileage against any injury to the tire caused by blowouts, cuts, bruises, wheels out of alignment, faulty brakes, rim cuts, or any other road hazard (except as limited herein) that may render the tire unfit for further service.

If, at any time, any of such tires fail for any reason except punctures, Montgomery Ward, will, at its option, repair them free of charge or replace them with new tires and charge only for the actual service the old tire has rendered.

New tires delivered as replacements under the terms of this guarantee are fully covered by the same guarantee except that Montgomery Ward will not be liable for a repetition of failure due to wheels out of alignment, faulty brakes, overloading, or improper mounting if not mounted at one of Wards Service Stations.

This guarantee does not cover punctures, fire, or theft, damage of any kind to persons or property, or passenger car tires used in truck or bus service.

Date _____ 19____ Name _____

Site _____ City _____ Street and No. _____ Route _____ Box _____

Type _____ Serial Numbers _____ Post Office _____ State _____

Montgomery Ward & Co.

STORE _____

The FOOD FILE



one of the NEW FEATURES which make the 20th ANNIVERSARY KELVINATOR . . . the finest in electric refrigeration



Dairy products—butter, eggs, cheese are neatly stored and easy to get at. Fresh vegetables and leafy greens kept crisp and tender in the Kelvin Crisper. Left-overs from your table saved until they can be used, by placing them in the three separate covered receptacles of the Thrift Tray. Convenience and saving are twin virtues of the Food File—a Kelvinator ideal! By all means see the Kelvinator before you buy any electric refrigerator.

17 Models—A Type and size for Every Home and Every Purpose **119.50** & up

FITZGERALD'S
FURNITURE COMPANY

New RIVERSIDES WITH New Precision-Built FEATURES Yet Priced to Save You More Than Ever!

The NEW Riversides take their place with the finest first quality tires made in America! Precision-built and precision-tested to the highest standards. ALL the important quality features necessary to give outstanding wear, absolute safety, thorough satisfaction . . . It's this extra quality in the new Riversides that enables us to back them with the strongest guarantee ever written . . . a guarantee so strong that complete tire satisfaction is a certainty when you buy a Riverside!

CHECK THESE LOW PRICES!

NEW RIVERSIDES	4-PLY plus 2 cord breakers	6-PLY plus 2 cord breakers
4.40-21	\$5.20	\$7.20
4.50-21	5.70	7.30
4.75-19	6.10	7.45
5.00-19	6.50	8.20
5.25-18	7.20	9.05
5.50-17	7.90	9.40
6.00-18	8.90	10.90
6.50-19	9.90	12.95

PRICED AS LOW AS **\$5.20**

SIZE 29x4.40-21

RIVERSIDE MATE TRUCK TIRES	SATISFACTORY SERVICE GUARANTEED
30x5 (8 Ply plus 2 cord breakers)	\$16.00
32x6 (10 Ply plus 2 cord breakers)	27.30
6.00x20 (6 Ply plus 2 cord breakers)	12.80



MONTGOMERY WARD

1101-3 Washington La Grande Phone Main 18