The Louisiana Sugar Industry

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American Sugar Cane League

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Making Life Sweeter. Naturally

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FROM LOUISIANA SUGAR CANE FIELDS TO YOUR SUGAR BOWL

Sugar is pure, contains no man made chemicals or warning labels, is 100% natural, and contains less than 16 calories per teaspoon. Unlike artificial sweeteners, sugar has been declared safe by the Food & Drug Administration (GRAS list). Sugar, or sucrose, is produced mostly from sugarcane or sugar beets when the energy of sunlight along with chlorophyll in the leaves transforms water and nutrients into sugar. Sugarcane and/or sugar beets are produced in 16 states and provide over 9.0 million short tons of sugar to the USA.

Sugarcane is being produced on over 530,000 acres of land in 25 Louisiana Parishes. Production should exceed sixteen million tons of cane and has an economic impact of $2.3 billion to the cane growers and raw sugar factories of the state. Louisiana produces about 20% of the sugar grown in the United States (beets and cane). Approximately 16,000 employees are involved in this production and processing of sugar in Louisiana alone.

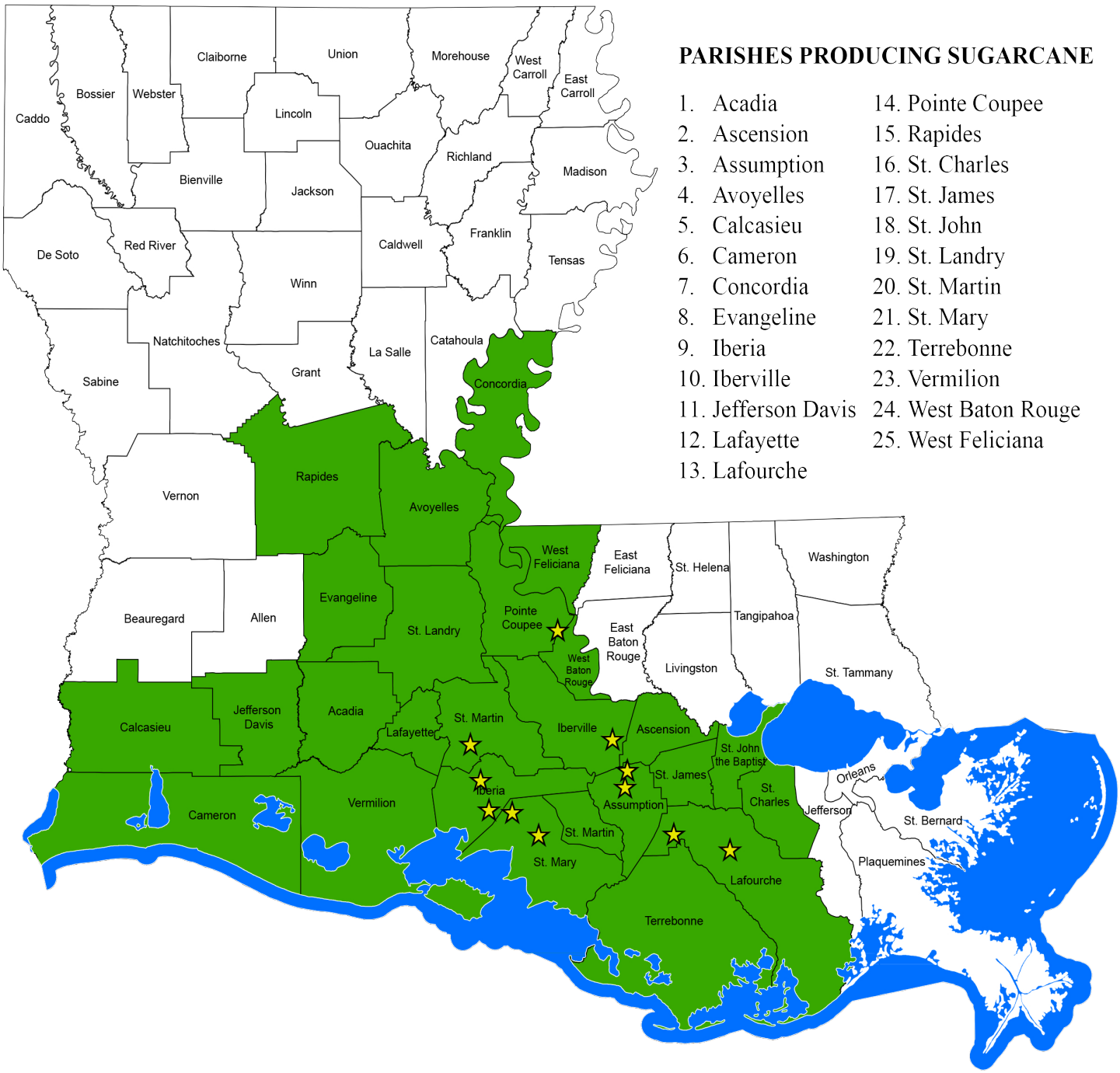
Of the U.S. sugar producing areas, Louisiana is the oldest and most historic. Sugarcane arrived in Louisiana with the Jesuit priests in 1751 who planted it near where their church now stands on Baronne Street in New Orleans. Several plantations were planted in what is now the city limits of New Orleans and in 1795, Etienne deBore, first granulated sugar on a commercial scale in Audubon Park. Except for disastrous production years during the Civil War, during a disease epidemic of the 1920's, and from 10-degree freezing temperatures affecting the 1990 crop, the Louisiana sugarcane industry has continued to increase in productivity, mainly due to improved varieties, cultural practices, pest control and sugar processing techniques. The Louisiana sugarcane industry is currently in its third century of sugar production.

Sugarcane is planted vegetatively, using whole stalks of cane rather than true seed. Each stalk consists of several joints which each have a bud. Cane stalks are planted in rows during the fall of each year and the buds produce shoots of cane the following spring. After maturing into stalks during the late summer, the cane crop is first harvested that fall and is called the plant cane crop. Sugarcane is a grass and more than one cutting can be harvested from each planting. In Louisiana, two to four additional annual cuttings (called ratoon crops) are made before the land has to be fallowed and replanted.

All Louisiana sugarcane is mechanically harvested using either soldier or combine type harvesters. Soldier harvesters cut off the cane tops, cut the stalks from their attachment to the row, and lay them on heaps behind the machine. After the cane heaps are burned to remove excess trash, cane loaders place the cane in large wagons for transport to the raw sugar factories. Combine harvesters cut the stalks into short pieces or billets, while extractor fans remove a portion of the leaf trash. Billets are then transported to the factories.

At the raw sugar factories, cane is washed and crushed, with the juice being boiled down to a thick syrup. The cane by product is bagasse which is used as a fuel to power the factories. The thick syrup is separated into sugar crystals ("raw sugar") and molasses (used in livestock feed). The raw sugar is sold to refiners who melt the raw sugar crystals, remove the remaining impurities and color, and produce white or "refined" sugar.

Prepared and distributed by the American Sugar Cane League of the USA, Inc.
The mission of the American Sugar Cane League is to sustain success through effective research, positive legislation, public relations/promotion, and education.



PARISHES PRODUCING SUGARCANE

1. Acadia
2. Ascension
3. Assumption
4. Avoyelles
5. Calcasieu
6. Cameron
7. Concordia
8. Evangeline
9. Iberia
10. Iberville
11. Jefferson Davis
12. Lafayette
13. Lafourche
14. Pointe Coupee
15. Rapides
16. St. Charles
17. St. James
18. St. John
19. St. Landry
20. St. Martin
21. St. Mary
22. Terrebonne
23. Vermilion
24. West Baton Rouge
25. West Feliciana

Legend

Parishes with Commerical Sugarcane

☆ Factories

LOUISIANA SUGARCANE INDUSTRY PRODUCTION DATA 1984 TO 2023

Crop Year	ACREAGE		SUGAR PRODUCTION			CANE PRODUCTION		YIELD	MOLASSES	INDUSTRY	
	Total Planted	Harvested For Sugar	Sugar raw Value	Sugar Per Acre	Per Gross Ton	Gross Cane Ground	Gross Cane Per Acre	Recover Per Gross Ton	80 Brix	Number of Farms	Number of Mills
	acres	acres	short tons	pounds	pounds	tons	tons	%	gallons	#	#
1984	230,000	205,000	451,581	4,406	179	5,036,976	24.6	8.97	23,905,000	749	21
1985	250,000	226,000	530,663	4,696	174	6,087,846	26.9	8.72	30,704,000	714	21
1986	270,000	246,500	656,786	5,329	174	7,521,177	30.6	8.72	36,383,395	715	21
1987	285,000	263,000	748,000	5,688	225	6,665,000	25.3	11.25	35,672,000	725	21
1988	305,000	279,000	814,000	5,835	210	7,763,000	27.8	10.50	41,403,158	725	21
1989	320,000	294,000	864,000	5,878	207	8,329,000	28.3	10.37	41,000,000	750	21
1990	337,000	192,000	443,000	4,615	191	4,648,281	24.2	9.53	25,781,000	800	19
1991	347,000	319,000	750,000	4,700	189	7,945,000	24.9	9.44	43,332,000	800	20
1992	381,000	350,000	880,271	1,933	192	8,984,906	25.7	9.80	42,552,000	800	20
1993	390,000	360,000	893,000	4,961	193	9,240,395	25.7	9.66	50,428,956	800	20
1994	380,000	350,000	1,018,000	5,820	211	9,651,715	27.6	10.55	45,850,000	800	20
1995	395,000	364,000	1,075,003	5,800	200	10,585,417	29.0	10.00	61,450,000	800	20
1996	370,000	335,000	1,051,000	6,273	200	10,488,105	31.3	10.00	56,680,000	800	19
1997	410,000	380,000	1,275,000	6,710	212	12,019,441	31.6	10.61	68,332,000	784	18
1998	425,000	395,000	1,263,400	6,397	189	13,358,869	33.8	9.43	75,935,000	804	18
1999	463,000	432,000	1,675,000	7,800	211	15,982,000	37.0	10.48	92,250,000	800	18
2000	496,000	460,000	1,565,848	6,800	202	15,497,457	33.7	10.10	92,911,811	800	18
2001	491,000	452,000	1,512,841	6,867	207	14,976,997	33.1	10.10	86,678,133	773	17
2002	485,000	446,000	1,335,534	5,989	179	14,879,247	33.3	8.98	73,710,000	760	16
2003	483,000	444,000	1,431,597	6,445	216	13,223,930	29.8	10.64	85,257,001	733	15
2004	462,000	425,000	1,190,997	5,607	207	11,484,111	27.0	10.37	72,181,048	718	15
2005	445,000	412,000	1,190,876	5,700	219	10,786,275	26.0	11.04	64,133,595	718	15
2006	430,000	406,000	1,288,408	6,464	206	12,434,451	31.3	10.35	70,597,512	694	12
2007	415,000	388,000	1,482,974	7,644	222	13,372,570	34.5	11.09	75,512,505	694	11
2008	417,000	388,000	1,397,501	7,202	229	12,228,193	31.5	11.45	66,257,987	526	12
2009	421,000	391,000	1,449,575	7,415	208	13,967,304	35.7	10.38	71,419,876	510	11
2010	420,000	390,000	1,401,145	7,184	231	12,111,932	31.1	11.56	68,051,613	503	11
2011	408,000	381,000	1,405,313	7,387	236	11,916,887	31.3	11.80	69,522,277	484	11
2012	427,000	397,000	1,706,687	8,629	232	14,722,225	37.2	11.59	79,220,681	475	11
2013	440,000	409,000	1,589,367	7,771	227	14,035,540	34.3	11.32	73,641,752	475	11
2014	413,000	380,000	1,509,768	7,963	237	12,760,857	33.6	11.83	70,292,829	444	11
2015	410,000	382,000	1,417,633	7,413	222	12,756,470	33.4	11.07	64,189,200	456	11
2016	431,000	403,000	1,614,116	7,982	251	12,822,249	31.8	12.56	68,711,185	438	11
2017	440,000	408,000	1,858,605	9,106	247	15,034,909	36.8	12.37	78,014,809	424	11
2018	461,600	423,000	1,882,400	8,882	223	16,868,517	39.8	11.17	89,783,209	416	11
2019	482,000	441,800	1,543,356	6,991	227	13,588,003	30.8	11.35	75,877,359	417	11
2020	496,000	463,000	1,970,124	8,568	238	16,600,000	36.0	11.85	84,474,728	417	11
2021	508,000	469,000	1,873,078	7,993	247	15,166,500	32.4	12.25	78,983,578	417	11
2022	512,000	473,000	2,058,652	8,704	241	17,094,218	36.1	12.07	104,930,696	384	11
2023	532,000	485,000	1,881,445	7,728	238	15,774,657	32.3	11.88	90,621,334	425	11

Prepared by: American Sugar Cane League, Thibodaux, LA 06/27/2024

Data source: ASCL, USDA/NASS, and La. Cooperative Extension Service

LOUISIANA SUGARCANE STATISTICS

	2022 CROP/ VALUE IN 2023
INDUSTRY FACTS	
Number of farms	425
Average farm size (acres planted)	1,250
Number of Parishes farming sugarcane	25
Total acres in sugarcane cultivation (including fallow)	652,000
Total acres planted in sugarcane	532,000
% of acreage which is lease land	>80
PRODUCTION	
Acreage harvested for sugar	485,000
Acreage grown for seed cane	47,000
Total gross tons ground	15,774,657
Total short tons sugar produced (raw value)	1,881,445
Total gallons 80^{o} brix molasses	90,621,334
CROP VALUE	
Value of crop in La.[1]	1,577,512,832
Total value to growers and landowner (60%)	931,235,438
Total value from factories (40%)	646,277,394
State ranking (plant, animal and fisheries commodities)[2]	second
State ranking (Plant commodities only)[2]	first
Direct economic value generated (x2.75)	4,338,160,288
EMPLOYMENT[3]	
Estimated number of farm workers	5,520
Estimated number of raw sugar factory workers	7,200
Estimated number of refinery workers	3,950
Total estimated number of industry workers (direct and indirect jobs)	16,670

[1] LSU Ag Center Ag Summary
[2] Excludes Forestry: Louisiana Summary 2023 Agriculture and Natural Resources, LSU Ag Center, www.2lsuagcenter.com/agsummary
[3] "Economic Importance of the Sugar Industry to the U.S. Economy - Jobs and Revenues" LMC International Ltd; Aug. 2011

Louisiana Sugarcane Production

Planting – Prior to planting, the fallow ground is disked and precision graded to insure good drainage. The fallow operation occurs from spring through summer and prepares the seedbed for good germination. Furrows are opened on six foot wide rows and cane stalks are planted and covered. Each stalk consists of numerous joints, each with a bud which germinates and produces cane shoots. The planting season is from August through September. During the winter, the cane shoots are frozen back to the ground. In the spring the cane resprouts and begins to grow and tiller. Sugarcane is a grass and does not need to be replanted after every cutting. In Louisiana, three or four annual crops are harvested from each planting.

Cultivation and fertilization – The practice of working or stirring the top soil with disks or hoes pulled by tractors occurs each spring. This helps to control weeds, prepares the soil for fertilization and loosens the soil for cane roots to reach air and moisture. Essential plant nutrients are added to the soil to provide the cane plant with its requirements for maximum cane growth and sugar content.

Summer growth – Cane grows most rapidly during the summer months. During this period, the farmer cannot cultivate the crop but does control insects (sugarcane borer). With adequate moisture and typical summer temperatures, sugarcane can grow more than one inch per day during June, July and August.

Harvesting and transport – The Louisiana harvest season normally occurs from late September through early January. All cane is harvested mechanically either by a combine harvester or a soldier harvester. The combine harvester (seen in the photo) cuts the standing cane stalks into pieces (billets), shreds the leaves from the top of the stalk, and loads them directly into transport wagons. The soldier harvester, which cuts the stalks even with the ground, cuts off the tops and piles the stalks across the rows. Normally cane has about 15% trash (leaves) which is removed by burning. This allows for more efficient transportation and cleaner cane delivered to the raw sugar factory. Cane that is cut with a soldier harvester burned the next day. Mechanical field loaders pick up the cane from the heaps and place the cane into transport wagons. These wagons deliver the cane directly to the factory or to a transloader station where the cane is transferred to highway trailers. After deliver to the sugar factory, the cane is weighed, sampled, and washed before being milled. In the factory, cane is crushed and the extracted juice boiled to produce raw sugar and molasses.

Louisiana Raw Sugar Factory Operation

Milling – Delivered cane is weighed for cane yield, sampled for cane quality and washed in the mill yard. Shredders then prepare the cane by producing a uniform mat of chopped cane on the carrier. A series of three-roller mills crush the cane and extract the raw juice. Water is sprayed on the cane to help wash the juice from the cane. The woody residue left after extraction of the juice is called bagasse and is used as a fuel in most factories but can also be used for paper, building boards, plastics, mulch and animal bedding or litter.

Clarification – The raw juice is strained and heated. Lime is added to cause impurities such as mud to settle. Clarifiers separate the juice into clarified juice and muddy juice. The muddy juice is sent to filters where any juice is removed leaving mud (filter cake) which is returned to the fields.

Evaporation – The clarified juice is then boiled in evaporators which remove most of the water leaving a thick syrup.

Crystallization and Centrifuging – The syrup is boiled under partial vacuum which causes the development and growth of sugar crystals. Massecuite (raw sugar crystals mixed with molasses) moves to centrifugals which separate the two. After all the commercially recoverable sugar is removed, the resulting molasses is sold as blackstrap molasses and is generally used as cattle food or can be used in production of alcohol, yeast, citric acid or vinegar. The raw sugar is then stored in warehouses until sold to refineries for further processing

Photos provided by Cora-Texas Mfg. Co.

Questions Most Frequently Asked About Sugar

1. What is sugar?

Sugar, or *sucrose*, is a carbohydrate that occurs naturally in every fruit and vegetable in the plant kingdom. It is a major product of *Photosynthesis*, the process by which plants transform the sun's energy into food. Sugar occurs in greatest quantities in sugarcane and sugar beets from which it is separated for commercial use.

2. Is there a difference between sugar produced from sugar beets and sugar produced from sugarcane?

There is no difference in the sugar produced from either cane or beet. Sugarcane, a giant grass, thrives in a warm, moist climate, storing sugar in its stalk. The sugar beet grows best in a temperate climate and stores its sugar in its white root. Sugar from both sources is produced by nature in the same fashion as all green plants produce sugar - as a means of storing the sun's energy.

3. How is sugar produced?

During the refining process, the natural sugar that is stored in the cane stalk or beet root is separated from the rest of the plant material. For sugarcane, this is accomplished by a) grinding the cane to extract the juice; b) boiling the juice until the syrup thickens and crystallizes; c) spinning the crystals in a centrifuge to produce raw sugar; d) shipping the raw sugar to a refinery where it is e) washed and filtered to remove impurities and color; and f) crystallized, dried and packaged. Beet sugar processing is accomplished in one continuous process without the raw sugar stage. The sugar beets are washed, sliced and soaked in hot water to remove the juice. The sugar-laden juice is purified, filtered, concentrated and dried in a series of steps similar to sugarcane processing.

4. What nutrients are present in sugar?

Sugar is pure carbohydrate, an important nutrient which supplies energy to the body. Vitamins and minerals are sometimes present, but in trace amounts. Sugar and other nutritive sweeteners play an important role in making other foods taste better and, through their many uses in cooking, increasing the variety of foods available.

5. Why is sugar found in many processed foods?

Sugar is prized for its sweet taste and has many other functions in cooking and baking. It contributes texture and color to baked goods. It is needed in the fermentation of yeast, which causes bread to rise. Sugar acts as a bulking agent (ice cream, baked goods) and preservative (jams, fruits), and it imparts a satisfying body of "mouth-feel" to beverages. In non-sweet foods - salad dressings, sauces, condiments - sugar enhances flavors and balances acid content in tomato and vinegar-based products.

6. What is honey?

Honey, is a mixture of sugars formed from nectar by an enzyme, invertase, present in the bodies of bees. Honey varies in composition and flavor, depending on the source of the nectar (clover, orange blossom, sage, etc.) A typical analysis of honey would show (exclusive of undetermined substances): 38% fructose, 31% glucose, 1% sucrose, 9% other sugars, 17% water and .017% ash.

7. Is honey more nutritious than granulated, powdered or brown sugar?

On an equal weight basis, there is very little nutritional difference between honey and sugar. Because it weighs more, a tablespoon of honey contains slightly more carbohydrates and calories than a tablespoon of sugar. Honey contains only insignificant amounts of some vitamins and minerals, and like sugar, should not be considered a source of these nutrients.