

ECONOMIC IMPORTANCE OF
LOUISIANA SUGARCANE PRODUCTION:
2007 Agricultural Summary

Staff Report No. 2008-02 January 2008

Michael E. Salassi¹ and Benjamin L. Legendre²
Louisiana State University Agricultural Center

Overview

Louisiana is a major sugar producing state, representing approximately 40 percent of the total cane sugar produced in the United States. In 2007, Louisiana produced 1.456 million tons of raw sugar from 13.372 million tons of sugarcane processed. The total farm value of this production to growers and landowners is estimated at \$387,159,584 for both raw sugar and molasses. The total value of the 2007 sugarcane crop to Louisiana growers, processors and landlords at the first processing level was \$645,265,960. Using an economic multiplier in the range of 2.5-3.0, the sugarcane industry in 2007 had a total estimated impact on the state's economy of \$1.6 to \$1.9 billion.

Louisiana's Rank is Total U.S. Sugar Production

Refined white sugar in the United States is produced from two sources. Sugarbeets are processed directly into refined sugar, while sugarcane is first processed into raw sugar before being refined into white sugar. In 2007, 56.6 percent of total U.S. sugar production came from sugarbeets and 43.4 percent came from sugarcane. Louisiana is one of the leading sugar producing states in the United States. For the 2007/08 fiscal year, Louisiana accounted for 40.3 percent of total U.S. cane sugar production and 17.5 percent of total U.S. sugar production.

U.S. Sugar Production

	2006/07	2007/08
	(1,000 short tons, raw value)	(1,000 short tons, raw value)
Total production	8,446	8,516
Beet sugar	5,008	4,819
Cane sugar	3,438	3,697
Florida	1,719	1,771
Hawaii	222	238
Louisiana	1,320	1,490
Texas	177	198

Source: World Agricultural Outlook Board, U.S. Department of Agriculture, WASDE-454, January 2008.

¹ Dr. Michael E. Salassi, Nelson Fairbanks Endowed Professor, Department of Agricultural Economics and Agribusiness, LSU Agricultural Center, Baton Rouge, LA.

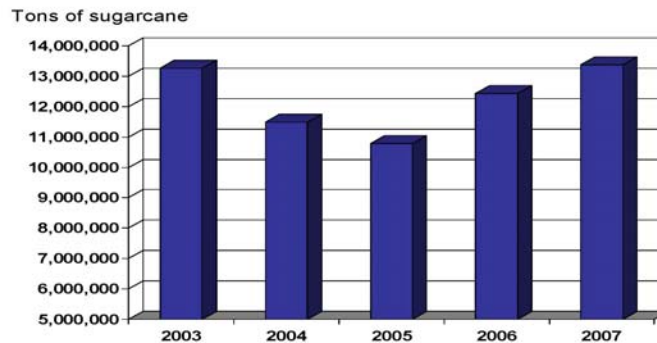
² Dr. Benjamin L. Legendre, Interim Director, Audubon Sugar Institute, Sugarcane Specialist and Denver T. Loupe/American Society of Sugarcane Technologists Sugar Heritage Professor, Sugar Research Station, LSU Agricultural Center, St. Gabriel, LA.

Summary of 2007 Louisiana Crop Year

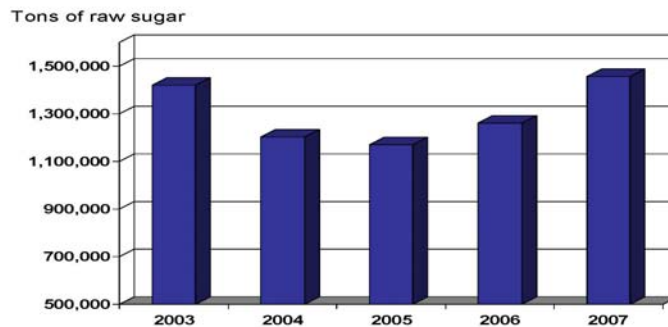
In 2007, sugarcane was grown on 418,933 acres (a decrease of 14,644 acres or 3.4% when compared to the 2006 crop) by 609 producers (a decrease of 52 producers or 7.9%) in 24 Louisiana parishes (counties). An estimated 391,702 acres (a decrease of 11,700 acres or 2.9%) were available for harvest for sugar, assuming 6.5% of the total acres were used for seed cane purposes. Unlike in the previous year, there were no acres abandoned or cane left standing in the field at the end of the harvest season because of the inability to process the cane due to poor quality caused by an early December freeze that occurred in 2006.

The 12 factories (11 raw sugar factories and 1 syrup factory) processed 13,372,571 tons of cane (an increase of 938,119 tons or 7.5% when compared to 2006). The sugar produced from the Lacassine syrup factory was crystallized at the Enterprise factory at Patoutville near Jeanerette, Louisiana. All total, the 11 raw sugar factories produced 1,456,355 short tons of sugar (96 pol) (an increase of 195,369 short tons or 15.5%). Accordingly, the average yield of cane produced per total acre was 31.9 tons (an increase of 3.2 tons or 11.1%). The average yield of cane produced from each harvested acre amounted to 34.1 tons (an increase of 3.0 tons or 9.6%). The average sugar recovery at the 11 factories was 10.89% or 218 pounds of sugar (96 pol) per ton of cane; this was an increase of 15 pounds of sugar per ton of cane or an increase of 7.4% when compared to the 2006 crop. The yield of commercially recoverable sugar produced per total acre averaged 6,954 pounds (an increase of 1,137 pounds or 19.5%). And sugar produced per harvested acre was approximately 7,434 pounds (an increase of 1,134 pounds or 18.0%).

Louisiana Sugarcane Production, 2003-2007



Louisiana Sugar Production, 2003-2007

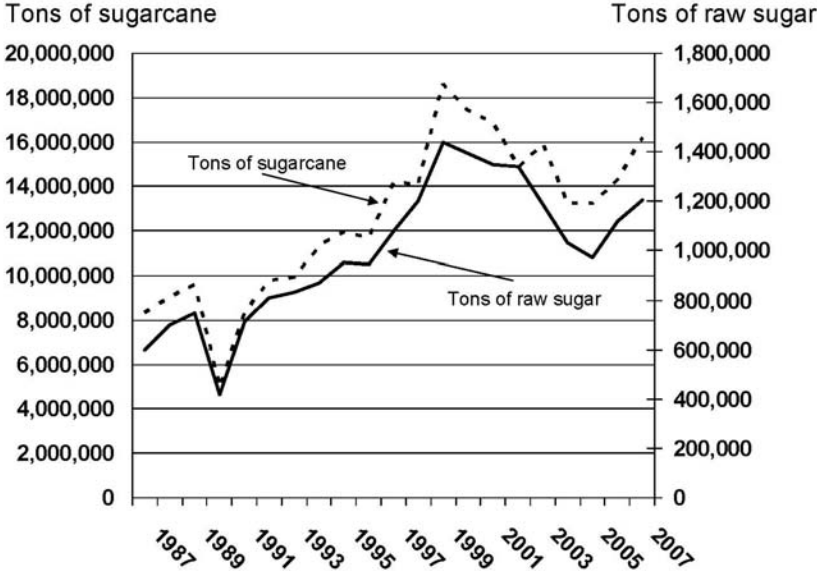


The gross farm value of the 2007 sugarcane crop was \$387,159,584 for sugar and molasses (an increase of \$118,242,414 or 44.0% from the 2006 crop). The gross farm value reported above represents 60% of the value of the sugar and molasses produced, with the remaining percentage going to processing and marketing. The total value of the sugarcane crop to Louisiana producers, processors and landlords at the first processing level was actually \$645,265,960. Sugarcane still ranks first in value amongst the State's row crops. The higher gross value of the crop in 2007 was the result of increased yield of tons of cane per acre and increased yield of recoverable sugar per ton of cane; however, sugar prices remained low. The 2007 crop was the second best crop in the history of Louisiana sugar production in terms of the yield of tons of cane and sugar per acre, being only surpassed by the 1999 crop. The total tons of cane produced were the fifth largest in the State's history while the total sugar produced was the fourth largest. There has been a gradual trend towards fewer acres planted to sugarcane since 2000 when there were approximately 496,000 acres. Accordingly, there were 77,000 less acres grown to sugarcane in 2007 when compared to 2000, a decrease of approximately 15.5%. The fewer acres can be attributed to urban encroachment and switch to other crops, especially grain in the Northern region of the sugarcane belt.

Trends in Louisiana Sugar Production

Louisiana sugarcane production has doubled over the past twenty years. In 1987, 6.7 million tons of sugarcane was processed in the state from 263,000 acres harvested for sugar, producing 748,000 tons of raw sugar (American Sugar Cane League). Sugarcane production increased steadily over the following years reaching a high in 1999 with 15.9 million tons of sugarcane processed in the state, producing 1.67 million tons of raw sugar. Production in the years following 1999 were impacted by adverse weather conditions, including tropical storm Isidore and hurricane Lili in 2002 and hurricanes Katrina and Rita in 2005, as well as by varietal changes. Over the 2005-2007 period, sugarcane growers in the state have expanded production of newly released varieties of sugarcane which have shown positive yield benefits in both tons of cane and sugar per acre.

Louisiana Sugarcane/Sugar Production, 1987-2007



2007 Louisiana Agricultural Summary Data for Sugarcane

Parish	Sugarcane Products	Total Producers	Units of Production (Yield per acre)	Total Production	Total Acres	Gross Farm Value
Acadia	Raw sugar (lbs)	7	5,200	7,956,000	1,530	\$994,500
	Molasses (gal)		156	238,680		\$47,736
Ascension	Raw sugar (lbs)	20	7,140	104,001,240	14,566	\$13,000,155
	Molasses (gal)		214	3,117,124		\$623,425
Assumption	Raw sugar (lbs)	54	7,322	287,105,870	39,211	\$35,888,234
	Molasses (gal)		220	8,626,508		\$1,725,302
Avoyelles	Raw sugar (lbs)	32	6,440	76,584,480	11,892	\$9,573,060
	Molasses (gal)		193	2,295,156		\$459,031
Calcasieu	Raw sugar (lbs)	6	5,590	18,748,860	3,354	\$2,343,608
	Molasses (gal)		168	563,472		\$112,694
Cameron	Raw sugar (lbs)	*	4,800	2,016,000	420	\$252,000
	Molasses (gal)		144	60,480		\$12,096
Evangeline	Raw sugar (lbs)	*	6,660	5,301,360	796	\$662,670
	Molasses (gal)		200	159,200		\$31,840
Iberia	Raw sugar (lbs)	98	6,400	356,307,200	55,673	\$44,538,400
	Molasses (gal)		192	10,689,216		\$2,137,843
Iberville	Raw sugar (lbs)	35	8,200	265,097,800	32,329	\$33,137,225
	Molasses (gal)		246	7,952,934		\$1,590,587
Jefferson Davis	Raw sugar (lbs)	4	5,600	16,772,000	2,995	\$2,096,500
	Molasses (gal)		168	503,160		\$100,632
Lafayette	Raw sugar (lbs)	26	7,000	92,680,000	13,240	\$11,585,000
	Molasses (gal)		210	2,780,400		\$556,080
Lafourche	Raw sugar (lbs)	47	6,705	181,551,285	27,077	\$22,693,911
	Molasses (gal)		201	5,442,477		\$1,088,495
Pointe Coupee	Raw sugar (lbs)	34	8,050	259,781,550	32,271	\$32,472,694
	Molasses (gal)		242	7,809,582		\$1,561,916
Rapides	Raw sugar (lbs)	21	6,935	83,511,270	12,042	\$10,438,909
	Molasses (gal)		208	2,504,736		\$500,947
St. Charles	Raw sugar (lbs)	*	7,140	11,523,960	1,614	\$1,440,495
	Molasses (gal)		214	345,396		\$69,079
St. James	Raw sugar (lbs)	35	7,140	182,469,840	25,556	\$22,808,730
	Molasses (gal)		214	5,468,984		\$1,093,797
St. John	Raw sugar (lbs)	15	7,440	59,936,640	8,056	\$7,492,080
	Molasses (gal)		223	1,796,488		\$359,298
St. Landry	Raw sugar (lbs)	6	5,700	54,132,900	9,497	\$6,766,613
	Molasses (gal)		171	1,623,987		\$324,797
St. Martin	Raw sugar (lbs)	58	7,100	206,599,350	29,099	\$25,824,919
	Molasses (gal)		213	6,197,980		\$1,239,596
St. Mary	Raw sugar (lbs)	48	7,300	316,367,400	43,338	\$39,545,925
	Molasses (gal)		219	9,491,022		\$1,898,204
Terrebonne	Raw sugar (lbs)	14	6,898	71,777,139	10,406	\$8,972,142
	Molasses (gal)		207	2,153,938		\$430,788
Vermilion	Raw sugar (lbs)	27	5,995	175,863,325	29,335	\$21,982,916
	Molasses (gal)		180	5,280,300		\$1,056,060
West Baton Rouge	Raw sugar (lbs)	17	8,150	119,291,550	14,637	\$14,911,444
	Molasses (gal)		245	3,586,065		\$717,213
Total Gross Farm Value						\$387,159,584

Sugarcane Summary for Crop Year 2007

Benjamin L. Legendre
Sugar Research Station

In 2007, sugarcane was grown on 418,933 acres (a decrease of 14,644 acres or 3% when compared to the 2006 crop) by 609 producers (a decrease of 52 producers or 8%) in 24 Louisiana parishes. An estimated 391,702 acres (a decrease of 11,700 acres or 3%) were available for harvest for sugar, assuming 6.5% of the total acres were used for seed cane purposes. Unlike in the previous year, no acres were abandoned or cane left standing in the field at the end of the harvest season because of the inability to process the cane because of poor quality caused by an early December freeze that occurred in 2006.

The 12 factories (11 raw sugar factories and 1 syrup factory) processed 13.4 million tons of cane (an increase of 0.9 million tons or nearly 8% when compared to 2006). The sugar produced from the Lacassine syrup factory was crystallized at the Enterprise factory at Patoutville near Jeanerette, Louisiana. In total, the 11 raw sugar factories produced 1.5 million short tons of sugar (96 pol) (an increase of 0.2 million short tons or nearly 16%). Accordingly, the average yield of cane produced per total acre was 31.9 tons (an increase of 3.2 tons or 11%). The average yield of cane produced from each harvested acre amounted to 34.1 tons (an increase of 3.0 tons or nearly 10%). The average sugar recovery at the 11 factories was 11% or 218 pounds of sugar (96° pol) per ton of cane; this was an increase of 15 pounds of sugar per ton of cane or an increase of 7.4% when compared to the 2006 crop. The yield of commercially recoverable sugar produced per total acre averaged 6,954 pounds (an increase of 1,137 pounds or 20%). And sugar produced per harvested acre was approximately 7,434 pounds (an increase of 1,134 pounds or 18%).

The gross farm value of the 2007 sugarcane crop was \$396.4 million for sugar and molasses (an increase of \$76.7 million or 240% from the 2006 crop). The gross farm value reported above represents 60% of the value of the sugar and molasses produced, with the remaining percentage going to processing and marketing. The total value of the sugarcane crop to Louisiana producers, processors and landlords at the first processing level was actually \$666.9 million.

Sugarcane still ranks first in value amongst the state's row crops when both the processor and producer's portion of the crop are combined. The higher gross value of the crop in 2007 was the result of increased yield of tons of cane per acre and increased yield of recoverable sugar per ton of cane. The 2007 crop was the second best crop in the history of Louisiana sugar production in terms of the yield of tons of cane and sugar per acre, being only surpassed by the 1999 crop. The total tons of cane produced were the fifth largest in the state's history while the total sugar produced was the fourth largest. There has been a gradual trend towards fewer acres planted to sugarcane since 2000 when there were approximately 496,000 acres. Accordingly, 77,000 fewer acres were grown to sugarcane in 2007 when compared to 2000, a decrease of approximately 16%. The fewer acres can be attributed to urban encroachment and switch to other crops, especially grain in the northern region of the sugarcane belt. During the past several years,

plantings of new varieties have increased, especially HoCP 96-540 and L 97-128. For the 2007 crop, approximately 50% of the plant-cane crop was of these two varieties. Reports from producers indicated that the yield in the plant-cane crop for these two varieties generally exceeded 40 tons of cane per acre with some reports of yields exceeding 50 tons of cane per acre. Further, fewer acres were kept of older stubble, especially for LCP 85-384, which was grown on under 50% of the total area, the lowest percentage for this variety since the 2000 crop. However, yield reports for the acres that were kept in this variety were mixed with many producers reporting yields of less than 25 tons cane per acre. It was reported that many fields of LCP 85-384 were infected with common brown rust which is known to have a significant impact on lowering yield of tons cane and sugar per acre. Serious rust infection was also found in one of the newer varieties, Ho 95-988; however, the total acreage in this variety remains low. Rust was also reported in HoCP 96-540 although the incidence of disease was low. There also were reports that field yields were disappointingly low in those areas that experienced the saltwater tidal surge as a result of Hurricane Rita in 2005.

Although rainfall was generally well-distributed in the growing season, several areas of the state experienced brief periods of drought during the summer that may have adversely affected cane and sugar yields in those areas. For the most part, rainfall was below normal during the harvest season, which helped improve the quality of harvested cane. Approximately 50% of the total acres harvested were treated with the chemical ripener glyphosate, which improved the yield of recoverable sugar per ton of cane by approximately 20 pounds. It appeared, however, that fields with very high tonnage of the two new varieties, HoCP 96-540 and L 97-128, did not respond as expected to glyphosate.

Although cane and sugar yields were generally good throughout much of the sugarcane belt, producers reported lower-than-anticipated profits because of the low price of sugar and the high prices paid for fuel and fertilizer. In an effort to reduce fuel costs, many producers parked their combines and operated their whole-stalk or “soldier” harvesters.

Sugar prices for 2007 are even lower than received in 2006 (less than \$20 per hundredweight). Although field yields were much improved in 2007, profits for both producers and processors will be lower than expected because of the lower sugar price. On a brighter note, molasses price averaged more than \$0.45 per gallon.

Daily Precipitation (Sugar Research Station) – Data provided by Dr. Richard Bengston.

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1:	0.00	0.15	0.00	0.00	0.00	0.00	0.44	0.06	0.47	0.00	0.00	0.00
2:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
3:	0.00	0.00	0.00	0.15	0.45	0.00	0.15	0.00	0.00	0.00	0.00	0.00
4:	2.20	0.00	0.00	0.25	1.55	0.70	0.00	0.00	0.12	0.08	0.00	0.00
5:	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.21	0.00	0.03	0.00	0.00
6:	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00	0.00
7:	0.30	0.00	0.00	0.20	0.00	0.08	0.03	0.00	0.00	0.00	0.00	0.00
8:	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.80	0.25	0.00	0.00
9:	0.00	0.00	0.00	0.00	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.25
10:	0.00	0.00	0.00	1.30	0.00	0.00	0.03	0.00	0.37	0.00	0.25	0.00
11:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00
12:	0.40	0.35	0.65	0.00	0.00	0.11	0.21	0.00	0.00	0.00	0.04	0.06
13:	0.10	0.00	1.15	0.00	0.00	0.04	0.16	0.00	1.05	0.00	0.00	0.00
14:	0.00	0.00	1.35	0.15	0.11	0.00	0.32	0.00	0.00	0.00	0.00	0.00
15:	0.24	0.00	0.00	0.00	0.10	0.00	0.48	0.00	0.00	0.30	0.05	0.23
16:	0.12	0.00	0.00	0.00	0.45	0.25	0.00	1.85	0.00	0.45	0.00	0.00
17:	0.00	0.15	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.65	0.00	0.00
18:	0.00	0.00	0.00	0.10	0.00	1.17	0.00	0.00	0.00	0.17	0.00	0.00
19:	0.15	0.00	0.00	0.00	0.00	2.12	0.00	0.00	0.00	0.00	0.00	0.00
20:	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.66
21:	0.90	0.70	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.17	0.00
22:	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	3.00	0.24	0.44
23:	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00
24:	0.05	0.11	0.00	0.00	0.20	0.00	0.00	0.00	1.88	0.00	0.34	0.00
25:	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.26	0.00	0.64	0.00
26:	0.00	0.00	0.00	0.95	0.09	0.00	0.69	0.38	0.00	0.00	0.00	0.19
27:	1.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
28:	0.00	0.15	0.00	0.00	0.06	0.00	0.00	0.67	0.00	0.00	0.00	0.10
29:	0.00	--	0.00	0.00	0.24	0.04	0.11	0.05	0.00	0.00	0.00	0.28
30:	0.10	--	0.00	0.00	0.11	0.13	0.37	0.00	0.00	0.00	0.00	0.00
31:	0.05	--	0.40	0.00	1.41	--	0.20	0.55	0.00	0.00	--	0.00
Monthly Total:	5.92	1.61	3.55	3.45	4.77	5.98	3.99	3.77	5.82	4.93	1.73	2.26
Monthly Normal:	5.58	5.17	4.89	4.35	4.56	6.06	5.49	5.08	4.52	4.09	4.43	5.14
Monthly DFN:	+0.34	-3.56	-1.34	-0.90	+0.21	-0.08	-1.50	-1.31	+1.30	+0.84	-2.70	-2.88
Annual Total:		47.78										
Annual DFN:		-11.58										

SUGAR RESEARCH STATION / ST. GABRIEL 2007 CLIMATE REVIEW

John M. ('Jay') Grymes III
LSU AgCenter Climatologist

2007 was a "warm and dry" year for St. Gabriel and the East Iberville Parish area, with an annual average temperature of 68.6°F (30-year normal: 67.1°F) and rainfall totaling just 50.0" (30-year normal: 59.4"). "Warm-and-dry" continues to be the recent year-to-year pattern for this area: 2007 is the fourth consecutive year with an annual temperature more than 1°F above the norm and the third consecutive year with below-average annual rainfall.

This run of "warm" years follows a statewide trend. The 2007 annual temperature for St. Gabriel (see *Notes*) ranks as the third "warmest" year on record (behind 1998 and 2006), and continues an extended trend of warm years. Since 2000, every year has averaged above-normal, with 2005, 2006 and 2007 all ranking among the five "warmest" years of record for the Sugar Research Station. This trend appears highly supportive of a "global warming" signal at the local level, but growth of the greater Baton Rouge metro area and the resultant expansion of the urban "heat island" effect must also be considered. Indeed, it is likely that both factors have contributed to the "warming" of St. Gabriel in recent years.

While temperature is clearly an important climatic factor, annual and seasonal variability of rainfall is generally the primary driver when defining weather and climate impacts on agriculture and the environment of south Louisiana. For St. Gabriel, 2007 was the third straight year -- and fourth year in the past five -- with below-average annual rainfall. Indeed, 2007 ranks as the third "driest" year since 1985 (first full year of daily rainfall records from St. Gabriel). Rainfall was more than two inches below the norm for five months during the year, with rain totals for February, March and November all less than two inches. Monthly totals for both February and March ranked as the second "driest" over the 23 years of record-keeping, with the combined two-month total ranking as the "driest" February-March on record for that location.

What comes as some surprise is the lack of significant drought during 2007 based on the weekly analyses presented in the *U.S. Drought Monitor*. Although the weekly assessments do indicate a prolonged run of "abnormally dry" conditions ('D0') from early April through mid-June, the products never indicate a state of "moderate to severe drought" at any time during the year. In hindsight, one might argue that at least "moderate drought" briefly developed during August in the St. Gabriel area, but these conditions would likely have been very localized and at a scale too small for *Drought Monitor* methodology. What the *Drought Monitor* does remind us is that even a prolonged run of "drier than normal" weather does not necessarily generate drought conditions as long as sufficient rains are distributed over the course of the dry spell to mitigate the impacts of developing moisture deficits. While the spring period of "abnormally dry" conditions did end in June, 2007 closed with a return of "abnormally dry" conditions for St. Gabriel, with 'D0' posted for the final three weeks of 2007 and extending into early 2008.

While generally dry for much of the calendar year, 2007 opened with a wetter-than-

normal January. A weak-to-moderate *El Niño* event (warmer-than-normal sea-surface temperatures in the eastern equatorial Pacific, one of three ENSO phases) had developed during the late summer and fall of 2006. Historically, *El Niños* produce wetter-than-normal winters and springs for south Louisiana, and January's rains held true to form. But the *El Niño* faded rapidly, and had dissipated (by most measures) by early February. Most of 2007 was marked by the neutral ENSO phase (often referred to as *La Nada*, the intermediate of the three ENSO phases). But an ENSO "see-saw" cycle was completed by the fall of 2007, with a moderate *La Niña* (cooler-than-normal sea-surface temperatures in the eastern equatorial Pacific) developing by October. As the climatic alter-ego of *El Niño*, *La Niñas* tend to produce dry winters and springs for south Louisiana, and undoubtedly the year-ending *La Niña* played a role in the drier-than-normal weather of November and December 2007.

While a wetter-than-normal month, January temperatures were quite mild, with only two freezes reported. February saw near-record low rainfall, with generally mild temperatures as well. The year's longest "cool snap" occurred between Feb 15-19, with light to moderate freezes each morning, but temperatures warmed significantly each day, minimizing freeze effects. Indeed, there were no bitterly cold spells at any time in 2007.

The last freeze of the winter-spring occurred on March 5, but the month actually proved much warmer-than-normal, including a run of days from March 21 to month's end where afternoon highs reach 80° or more each day. The early-spring warmth, coupled with the record dryness of February and March set the stage for 'D0' conditions by the beginning of April. Fortunately, April temperatures and rainfall were both near-normal, so the dry spell did not progress into full-blown drought during the month. The same was true during May: near-normal monthly temperatures and near-normal rainfall kept soil moisture conditions from rapidly deteriorating and stayed any drought designations.

June rains were also near-normal, although half the month's rain fell over the two-day period of June 18-19. But rain was well-distributed through the remainder of the month, with a total of 19 raindays. July was St. Gabriel's wettest month of 2007 in terms of rainfall, with rain recorded on more than half the days during the month. More importantly, these rains effectively ended any serious drought threat for the summer.

Extreme summer-season heat set-in during late July and extended into September. Afternoon highs reached or exceeded 90°F on all but one day over a 46-day period, including four consecutive days with highs at or above 100°F! The "heat wave" also included a 42-day run of 90° highs, the second-longest spell of 90° days on record (topped only by a 43-day run in 1999). August's average temperature of 84.5°F ranks as the second "warmest" August on record (again, behind 1999). The spell of persistent heat, coupled with August rains that were only 66% of normal, would almost certainly have led to substantial moisture deficits, at least on the short-term, in spite of the *Drought Monitor* assessment for the month. Fortunately, a wet spell during early September (3.5" of rain in the first two weeks of the month) abated the onset of significant drought conditions.

September was also notable for tropical weather along the Gulf Coast. Hurricane *Humberto* made landfall along the upper Texas coast and slipped into southwestern Louisiana on

the 13th, effectively ending the heat wave and delivering roughly 1" of rain to St. Gabriel. The Category 1 hurricane was a benign storm by recent tropical-weather standards; although *Humberto* did produce some storm surge along the southwestern coast, rains across the state were generally less than 4" for all but a few areas, and damage due to the storm was relatively light.

Tropical Depression #10 also posed a modest threat to Louisiana later in the month, but the system failed to intensify and made landfall near the Alabama/Florida line. Remnants of the system did drift towards Louisiana, but produced only light rains.

October opened with dry and very warm weather, including a number of 90° highs during the first ten days of the month. But the temperatures eased and rains returned by mid-month, highlighted by St. Gabriel's "wettest day" of the year: October 22nd, with 3" of rain falling in a period of about 12 hours.

2007 closed with "warm and dry" conditions during November and December, prompting a return to 'D0' conditions by the end of the year. December was especially mild, averaging more than 5°F above the monthly norm and posting only four light, brief freezes during the month (compared to a normal of 7 days).

Notes:

Rainfall data for St. Gabriel/LSU-Sugar Research Station are collected as part of the National Weather Service (NWS) Cooperative Observation program. Temperature data for St. Gabriel were derived from the daily NWS Cooperative record from nearby LSU-Ben Hur Farm (approx. 8 miles NNW). Supplemental observations from the LSU AgCenter's *Louisiana Agronomic Information System* (LAIS) station at the LSU-Sugar Research Station were incorporated where appropriate.

Data Sources and Acknowledgements:

Louisiana Agronomic Information System: www.lsuagcenter.com/weather.

Louisiana Office of State Climatology: www.losc.lsu.edu

LSU Southern Regional Climate Center: www.srcc.lsu.edu

U.S. Drought Monitor: www.drought.unl.edu/DM/index.html

Figure 1: 2007 daily cumulative rainfall (NWS St. Gabriel/Sugar Research Station) and 2007 daily maximum/minimum temperatures (NWS LSU Ben Hur Farm) plotted against daily normals. Daily series are derived from National Weather Service (NWS) Cooperative observations, which are recorded at approximately 8:00 AM local time, for both locations. For temperatures, vertical bars represent the range between the daily high and low, with the solid line depicting daily average temperatures.

Figure 1 provided by NOAA Southern Regional Climate Center, LSU.

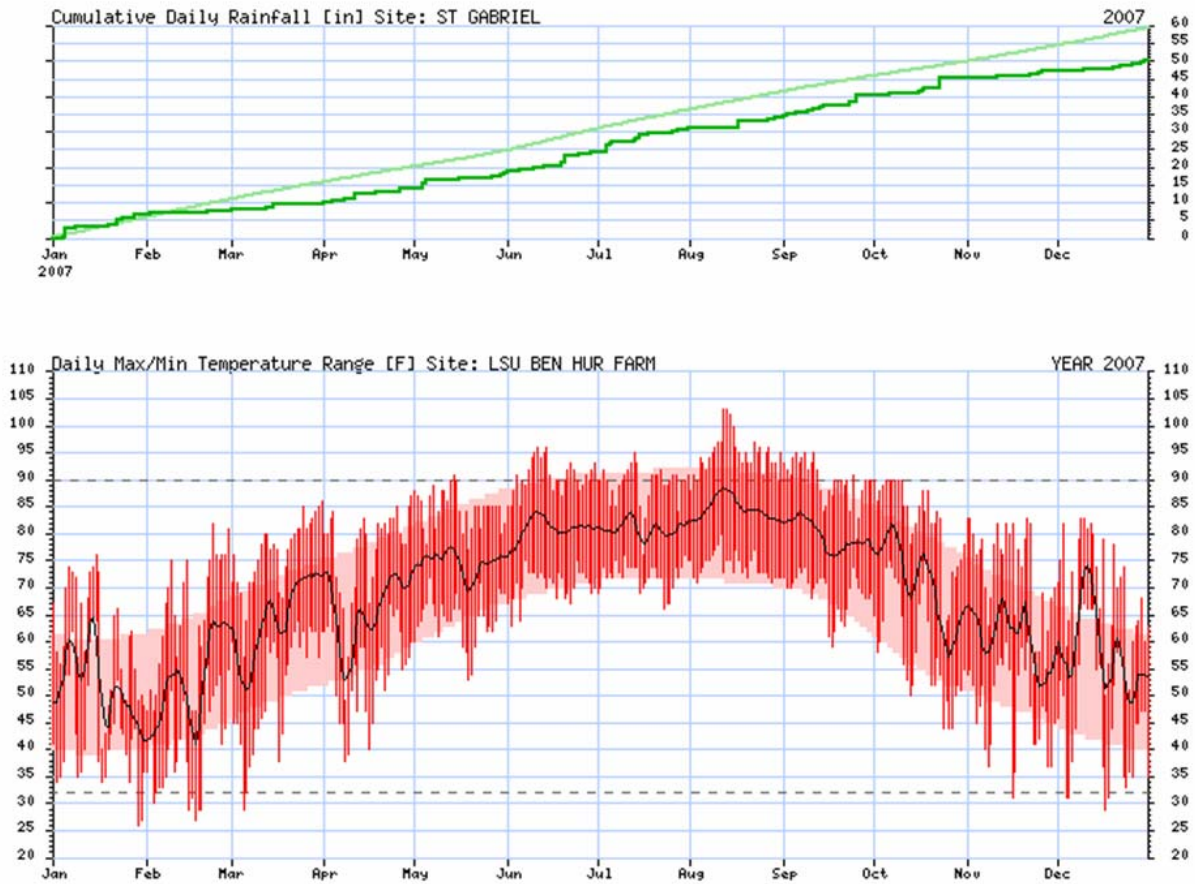


Table 1. Daily Temperatures (from the LSU-Ben Hur Farm NWS Cooperative Station temperatures).

Year: 2007

Observation Time: 0800

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
1	67	41	47	36	71	60	80	62	88	60	85	67	90	69	88	75	93	72	90	65	83	54	71	46
2	58	34	51	42	76	45	80	63	87	63	85	63	90	70	91	72	92	70	86	58	83	55	75	53
3	56	35	47	30	71	45	83	67	86	64	88	68	92	74	90	71	91	70	88	60	80	52	82	50
4	59	38	50	32	69	41	84	62	81	66	91	71	90	72	94	73	94	71	89	64	76	45	59	31
5	70	54	56	33	57	29	72	50	78	67	85	64	85	73	93	74	95	72	90	74	77	48	64	31
6	74	54	61	33	64	32	69	45	87	72	90	70	88	72	92	75	93	74	90	75	79	52	73	38
7	73	62	67	35	71	37	66	45	89	67	89	75	85	75	94	75	94	73	90	74	70	40	59	44
8	72	43	70	40	71	39	49	38	81	65	92	73	89	73	95	76	95	74	90	72	63	37	79	56
9	57	35	75	51	73	44	57	39	84	61	94	73	90	72	96	77	92	71	90	71	68	41	83	66
10	67	36	65	36	75	44	67	51	88	67	95	73	91	76	97	78	93	68	90	65	78	52	83	67
11	58	40	57	38	78	46	70	56	88	65	96	72	92	74	97	80	95	70	85	56	82	56	81	66
12	68	52	63	42	80	47	79	47	86	64	94	73	93	74	103	73	92	71	85	53	77	57	82	66
13	73	60	71	49	80	61	81	59	90	64	95	72	95	74	103	75	88	72	78	50	76	56	80	66
14	74	65	75	38	77	58	83	59	91	66	96	70	93	74	102	75	84	72	80	52	82	60	74	55
15	76	64	48	29	78	60	80	47	90	69	91	72	85	69	100	73	85	71	82	58	80	55	66	56
16	73	38	47	31	77	57	67	40	84	66	88	71	76	70	96	77	88	61	85	67	82	31	79	37
17	40	34	47	27	69	38	72	45	80	59	90	68	83	71	95	75	87	59	88	71	65	36	50	29
18	43	35	63	29	68	43	77	53	84	58	90	73	87	72	93	73	90	62	84	75	77	54	56	31
19	48	40	59	29	74	54	82	55	77	53	87	72	91	74	95	74	90	66	88	64	74	59	63	44
20	51	43	64	45	77	56	81	59	81	54	90	68	91	74	93	72	90	64	82	52	79	55	78	52
21	65	45	72	56	79	59	82	51	85	59	92	69	91	72	93	75	89	63	82	52	83	60	70	58
22	66	53	75	47	80	62	80	54	85	65	93	67	92	72	97	77	90	66	84	57	82	48	72	58
23	55	44	82	50	81	64	83	67	81	71	92	70	89	66	95	73	84	70	83	54	54	41	74	35
24	49	43	76	52	81	59	83	65	85	65	90	75	89	67	96	73	91	74	61	44	58	41	52	33
25	49	39	75	54	85	62	85	66	85	62	88	73	90	67	91	73	79	72	64	49	58	42	51	36
26	61	34	76	41	81	57	80	62	85	63	89	73	91	70	95	73	83	70	65	44	69	48	60	35
27	62	42	76	44	82	63	78	55	85	62	91	72	91	74	96	72	88	69	73	44	55	47	63	45
28	55	44	81	55	83	62	78	56	85	64	90	71	84	72	93	71	90	68	72	50	62	37	64	45
29	49	26	---	---	84	62	85	57	85	70	92	69	90	74	93	72	90	68	74	52	68	37	68	47
30	50	27	---	---	85	57	87	60	80	69	93	70	90	76	90	72	90	69	75	51	70	45	60	47
31	48	36	---	---	86	62	---	---	82	69	---	---	91	75	95	72	---	78	55	---	---	63	35	---
Max Temperature																								
Avg Max:																								
60.2													64.1 76.2 76.7 84.6 90.7 89.2 94.9 89.8 82.0 73.0 68.8											
DFN:																								
-0.2													0.0 +4.9 -1.0 -0.1 +1.0 -2.2 +3.4 +1.8 +1.8 +2.2 +5.4											
Min Temperature																								
Avg Min:																								
43.1													40.1 51.8 54.5 64.2 70.6 72.2 74.1 69.1 59.0 48.0 47.0											
DFN:																								
+3.4													-2.4 +2.5 -0.8 +0.4 +1.1 +0.2 +2.8 +2.0 +3.4 +0.1 +5.2											
Daily Means																								
Avg Mean:																								
51.6													52.1 64.0 65.6 74.4 80.6 80.7 84.5 79.5 70.5 60.5 57.9											
DFN:																								
+1.5													-1.2 +3.7 -0.9 +0.1 +1.0 -1.0 +3.1 +1.8 +2.6 +1.1 +5.3											

Data provided by the LSU Southern Regional Climate Center

Table 2. Daily Precipitation (from the St. Gabriel NWS Cooperative Station records).

Year: 2007

Observation Time: 0800

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.09	0.02	0.50	0.00	0.63	0.00	0.16	0.47	0.00	0.00	0.00
2	0.00	0.22	0.11	0.00	0.00	0.00	0.07	0.05	0.46	0.00	0.00	0.05
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00
4	0.01	0.00	0.00	0.18	1.48	0.09	2.12	0.00	0.00	0.00	0.00	0.00
5	2.49	0.00	0.00	0.26	0.97	0.37	0.20	0.00	0.12	0.08	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.21	0.01	0.03	0.00	0.00
7	0.24	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
8	0.30	0.00	0.00	0.24	0.00	0.07	0.08	0.00	0.01	0.00	0.00	0.01
9	0.00	0.00	0.00	0.00	0.00	0.12	0.27	0.00	0.79	0.25	0.00	0.23
10	0.00	0.00	0.00	0.23	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.01
11	0.00	0.00	0.00	1.49	0.00	0.00	0.02	0.00	0.37	0.00	0.25	0.00
12	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.16	0.00	0.00	0.05
13	0.00	0.23	0.48	0.00	0.00	0.14	0.40	0.00	0.13	0.00	0.04	0.01
14	0.00	0.00	T	0.00	T	0.06	0.23	0.00	0.93	0.00	0.00	0.00
15	0.00	0.00	1.22	0.14	0.12	0.02	1.03	0.00	0.00	0.02	0.05	0.23
16	0.22	0.00	0.00	0.00	0.26	0.01	0.31	0.00	0.00	0.28	0.00	0.00
17	0.13	0.00	0.00	0.00	0.24	0.23	0.00	1.81	0.00	0.45	0.00	0.00
18	0.00	0.00	0.00	0.13	0.00	0.00	0.32	0.00	0.00	0.65	0.00	0.00
19	0.29	0.00	0.00	0.00	0.00	0.82	0.00	0.01	0.00	0.17	0.00	0.00
20	0.09	0.00	0.00	0.00	0.00	2.11	0.16	0.00	0.00	0.00	0.00	0.66
21	0.00	0.49	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.01
22	1.38	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.43
23	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	3.00	0.00	0.00
24	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.10	0.00
25	0.17	0.12	0.00	0.00	0.23	0.26	0.00	0.00	1.74	0.00	0.25	0.01
26	0.00	0.00	0.00	1.02	0.00	0.24	0.10	0.00	0.26	0.00	0.65	0.18
27	0.04	0.00	0.00	0.00	0.27	0.00	0.33	0.38	0.00	0.00	0.00	0.00
28	0.87	0.00	0.00	0.00	0.00	0.00	0.33	0.01	0.00	0.00	0.00	0.10
29	0.00	--	0.00	0.00	0.09	0.08	0.00	0.66	0.00	0.00	0.00	0.28
30	0.06	--	0.00	0.00	0.48	0.19	0.08	0.05	0.00	0.00	0.00	0.52
31	0.02	--	0.00	--	0.22	--	0.17	0.02	--	0.00	--	0.01
Monthly Total:	6.57	1.25	1.83	4.19	4.36	6.01	6.67	3.37	6.30	4.93	1.74	2.79
Monthly Normal:	5.58	5.17	4.89	4.35	4.56	6.06	5.49	5.08	4.52	4.09	4.43	5.14
Monthly DFN:	+0.99	-3.92	-3.06	-0.16	-0.20	-0.05	+1.18	-1.71	+1.78	+0.84	-2.69	-2.35
Annual Total:	50.01											
Annual DFN:	-9.35											

(T) - indicates 'trace' of rain (less than 0.01")

Data provided by the NOAA Southern Regional Climate Center, LSU