Updated Estimates of the Impact to Agriculture From Excessive Rains In September and October 2009[1]

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Introduction

The 2009 production year was another challenging one for many agricultural producers in Louisiana. After experiencing early season drought conditions, excessive and persistent rains during the height of the harvest season only added to the difficulty of the 2009 production year for many producers. The weather related impacts to yield and quality and the resulting financial difficulties caused for agricultural producers comes after the 2008 production year which was characterized by two major hurricanes.

The difficulty of any weather related production shortfall is the financial stress placed on the farming operation as a result of lower crop revenues and/or increased production costs. With increasing production costs and volatile commodity prices, the nature of production agriculture is that it takes most producers several years of above average yields and prices to compensate for one below average year. Unfortunately, the 2009 provided no assistance after the hurricane impacted 2008 production year.

Given the type and extent of damage that was being experienced throughout most of the state, the LSU AgCenter developed preliminary damage estimates in early November 2009. At that time, a significant percentage of some impacted crops still remained to be harvested. Also, additional rains at and after the period the initial assessment was conducted was believed to provide some potential for increased damage. As such, the LSU AgCenter has re-assessed the damage now that harvest is complete for nearly all crops.

Methodology

On November 24, 2009, LSU AgCenter personnel in each of the 64 parishes were sent damage estimate surveys. Agents were asked to update information that they had provided in the preliminary survey. Again, information on acres impacted, acres that would not likely be harvested, and yield and quality damage was requested. For certain commodities, information on prevented plantings and commodities lost in storage was also provided.

To supplement information provided by County Agents, historical production and price data was obtained from the National Agricultural Statistics Service, the Agricultural Marketing Service, the USDA's World Supply and Demand Estimates report, and the LSU AgCenter Summary of Agriculture publication. Estimates for losses in revenue due to quality and quantity damage were determined by factoring in estimates for impacted acres, pre-storm estimates of yield, and projections for commodity prices. Quality damages were estimated as a percent discount from commodity price projections.

The prices used in estimating revenue losses were also updated to reflect current projections. USDA World Supply and Demand estimates for projected marketing year prices formed the basis for estimating both pre-storm values and reductions in expected revenue for most commodities. For those commodities which World Supply and Demand estimates do not exist, current market data from the Agricultural Marketing Service or 5 year average of values from the LSU AgCenter Summary of Agriculture publication were used.

[1] Special thanks to LSU AgCenter County Agents and Production Specialists who contributed to the development of these estimates.

Results

Table 1 provides the prices used in determining pre-storm value as well as estimated revenue reductions. For major row crop commodities, the prices were set at the mid-point of the December 2009 projection found in the USDA World Supply and Demand Estimates report. For other commodities, the prices were set at price levels experienced during 2009 as reported by the Economic Research Service and the Agricultural Marketing Service.

Table 1. Price Assumptions Used In Estimating Economic Damage[A]

	Unit	Estimated Price
Cotton Lint	Pound	$0.60
Cotton Seed	Pound	$0.10
Rice	Cwt	$14.40
Soybeans	Bushel	$9.50
Sorghum	Bushel	$3.15
Corn	Bushel	$3.55
Sweet Potato - No 1	Bushel	$14.00
Sweet Potato - Jumbo	Bushel	$10.00
Sweet Potato - Canner	Bushel	$8.00
Sugarcane – Sugar	Pound	$0.26
Sugarcane - Molasses	Gallon	$0.90
Hay	Ton	$90.00

[A] Prices were set at the mid-point of the USDA World Supply and Demand estimates for December 2009 for cotton, rice, soybeans, sorghum, and corn. For sugar and molasses, prices were set at average prices experienced in 2009 as reported by the Economic Research Service. For sweet potato prices were set at estimated current prices. For hay, prices were set at average prices in 2009 as reported by the Agricultural Marketing Service.

Using the price assumptions defined above and estimates of yield reductions and pre-storm yield expectations provided from the County Agent survey, estimates of reductions in revenue from both quantity and quality impacts were developed. Table 2 provides a summary of the estimated reductions in revenue. Total impacts were estimated at $363 million, over 17 percent of the pre-storm value of the impacted commodities. The updated estimate is an $88 million increase over the preliminary estimate of $275 million. The increase in the updated estimate is a function of both increased damage observed and changes in price expectations. Of the $88 million increase, $75 million was attributable to increased damage observed by County Agents while $13 million was attributable to changes in the price expectations for the commodities.

Large increases in estimated damage were experienced for cotton, soybeans, and sweet potatoes. Continued weather delays and the resulting deterioration of the quantity and quality of the crop was observed from the initial assessment. Cotton damages were estimated at nearly $90 million or 63 percent of the pre-storm estimated value. Soybean damage was estimated at over $119 million or 33 percent of pre-storm value. Finally, sweet potatoes were estimated to have a total impact of $31 million which represents over half of the pre-storm estimated value. While harvest is complete for these commodities, additional damage could be observed for sweet potatoes harvested at the end of November depending on the level of breakdown those potatoes experience in storage given the high water content and associated damage suffered due to the wet harvest conditions.

The other commodity that experienced significant increases in estimated damage from the preliminary estimate was rice. While rice production in the Southern part of the state was only minimally impacted, additional rains at the beginning of November continued to add to the quantity and quality impacts being experienced in the Northern part of the state. Total rice damage is now estimated at roughly $35 million or about 8 percent of pre-storm estimated value. With only 15-20 percent of the rice produced in the state grown in the Northern region and with the vast majority of the damage occurring in the Northern part of the state, an 8 percent reduction represents a large impact to the rice industry in North Louisiana.

For other commodities, changes from the preliminary estimate were relatively minor. Two commodities that did have large changes were sugarcane and hay. However, unlike cotton and soybeans, the changes for sugarcane and hay were a reduction in estimated damage. Following the rains during the beginning of November, weather conditions for most of the state turned nearly ideal for harvest. This improvement in weather helped to improve harvest conditions for sugarcane which was only beginning at the time of the preliminary assessment. The improved weather conditions also allowed many cattle and hay producers to make that final cutting of hay that was delayed at the point of the preliminary estimates. It should be noted, however, that rains in early December have started to once again impact sugarcane harvest. As of December 6, the National Agricultural Statistics Service reported that there was still 34 percent of the sugarcane crop to be harvested. With heavy rains that have been common for much of December, the sugarcane currently being harvested is likely to be being harvested under very wet conditions. With wet harvest conditions, sugar recovery tends to be reduced. Continued rains for the remainder of the harvest season could result in fairly significant yield loss due to reduced sugar recovery.

Table 2. Updated Estimates of Economic Damage To Agriculture From Excessive Rains in September and October, 2009 – Prices Updated to December USDA Estimates[A,B]

	- USDA ESTIMATES - OCTOBER 2009 -						
Commodity	Planted Acres	Yield	Total Estimated Pre-Storm Value	Reported Impacted Acres	Reported Acres That Will Not Be Harvested	Estimated Reduction in Revenue	Reduced Revenue Percent of Pre-Storm Value
Cotton	230,000	811	$141,762,800	179,230	9,418	$89,416,743	63.07%
Rice	475,000	6400	$437,760,000	93,336	11,202	$35,067,217	8.01%
Soybeans	1,020,000	37	$358,530,000	386,096	81,947	$119,700,131	33.39%
Sorghum	70,000	77	$16,978,500	3,132	2,180	$708,895	4.18%
Corn	630,000	132	$295,218,000	64,592	4,172	$11,253,598	3.81%
Sweet Potato[C]	15,000	342.2	$61,698,660	9,497	2,380	$31,454,822	50.98%
Sugarcane[D]	400,000	28	$675,024,000	134,923	7,146	$53,012,269	7.85%
Hay	450,000	2.674	$108,297,000	99,635	N/A	$21,455,595	19.81%
Other[E]	N/A	N/A	N/A	N/A	N/A	$1,016,043	
Total			$2,095,268,960	970,441	118,444	$363,085,314	17.33%

[A] A total of 15,000 acres of winter wheat were reported to be prevented from planting. While not included in these estimates, the estimated impact is set at the estimated net returns forgone from not planting the wheat. Across 15,000 acres this has an estimated impact of $234,450.

[B] Estimates are based on assessments conducted by County Agents over a two week period from November 24 thru December 4, 2009.

[C] While harvest is complete, additional damage could experienced with additional storage loss on potatoes harvested at the end of November.

[D] Sugarcane losses represent both producer and mill's share of production. Sugarcane losses could increase if wet conditions persist as the last 1/3 of the crop is harvested.

[E] Other losses include losses in revenue from vegetable production and losses associated from reduced grazing from delayed planting of winter forage.

Summary

The 2009 production year has been another challenging one for Louisiana agricultural producers. The impact of two consecutive years of less than normal production and revenue will likely leave many producers in significant financial stress as they head into the new crop year. Without significant financial assistance being provided through established and new disaster assistance programs, many producers may have increased difficulty in securing the operating capital needed for the 2010 production year.