



**Assessment of Damage to Louisiana Agricultural, Forestry, and Fisheries Sectors By
Hurricane Katrina¹
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On August 29, 2005, Hurricane Katrina hit the eastern Gulf Coast region of Louisiana and then made its way north affecting the entire Southeastern portion of Louisiana. The areas affected the greatest by Hurricane Katrina represent a large portion of Louisiana's fisheries, dairy, sugarcane, forestry, wildlife, vegetable, nursery, and citrus industries. In many cases, these industries were completely devastated due to high wind and flood waters. In addition, other agronomic crops such as cotton and rice were also marginally affected due to lodging caused by excessive winds.

Shortly after the storm, the LSU AgCenter began to develop assessments of the potential damage caused to the agricultural, fisheries, and forestry industries in the state. Due to communication limitations and access difficulties to many of the hardest hit areas of the state, assessments have been difficult. In addition, for many of these commodities, the economic impact of this storm will continue to grow as delays in re-establishing infrastructure and communications exist. Therefore, current estimates will likely grow until some type of normalcy is returned to production. However, based on the information known at this time and given the historical value of these industries to the state, the LSU AgCenter was able to begin to provide preliminary estimates on losses of revenue due to production losses.

When natural disasters of this nature occur, the impact to agricultural can originate from several different sources. Obviously, the most direct economic impact to any industry is that of loss revenue from loss production. Another source of economic impact is the potential for lowered prices due to either quality issues, alterations in supply and demand conditions, or the disruption in marketing and distribution channels. A third source of economic impact is the potential for increased production costs. A final source of economic impact, related to increased costs, is the physical damage caused to agricultural infrastructure. While all sources of economic impact are important and all play a role in the total affects felt by an industry, some are considerably more difficult to assess.

Given that assessments on production losses were the most attainable at this time, the estimates provided in Table 1 provide projections of direct revenue loss for each commodity. In certain instances, these estimates may also include estimates for increased production costs or estimates for reduced revenue due to impacts on prices. Given the short time since Hurricane Katrina hit and the limitations in conducting detailed assessments at this time, the estimates do not include impacts of potential infrastructure damages.

These estimates should be viewed as preliminary. For many commodities the exact nature of the losses are still being assessed and for some commodities the exact nature of the losses will continue to increase depending upon the time required to repair infrastructure and for marketing and distribution channels to return to some resemblance of normalcy. The LSU AgCenter will continue to update and gather new information in an effort to refine these estimates.

In addition, these estimates only provide a partial glimpse of the total impact. As mentioned, as more information is gathered and as a more detailed assessment of the damage is made, losses due to infrastructure damage could raise these estimates several million dollars (\$200 to \$500 million). In addition, other indirect impacts could be felt. If fuel and energy prices increases persist due to the disruption of production and distribution in the oil industry, these could have devastating affects on production, processing, and input sectors of the agricultural industry. With many commodities just beginning to harvest, well over 1 million acres of row crops are estimated to yet be harvested statewide. Sharp increases in fuel costs could lead to several million dollars in increased costs faced by producers and loggers. A final issue of concern is the disruption of marketing and distribution channels down the Mississippi river and through the

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Port of New Orleans. With an estimated 60% of the U.S. grain exported through the Port, an inability to move grain impacts the supply and demand situation for many of our commodities and could have a downward affect on prices. In addition, as the inability to move grain persists, storage difficulties are expected to increase which could lead to further pressures on prices and could lead to quality loss issues.

Table 1. Preliminary Estimates of Losses in Revenue due to Production Losses Caused by Hurricane Katrina, September 5, 2005

Commodity	Estimated Loss In Revenue
Forestry	\$610,821,639.17
Sugarcane	\$63,051,106.30
Cotton	\$10,400,000.00
Rice	\$483,899.86
Dairy	\$1,046,397.60
Vegetables	\$2,380,000.00
Wholesale Nurseries	\$19,018,350.00
Citrus	\$9,699,800.00
Cattle	\$3,889,410.40
Fisheries	
Turtles	\$5,355,000.00
Alligators	\$3,797,090.51
Oysters	\$25,163,024.86
Menhaden	\$17,208,447.20
Shrimp	\$72,115,066.55
Commercial Finfish	\$12,552,495.85
Crabs	\$15,150,697.90
Total Fisheries	\$151,341,822.86
Hunting Leases	\$3,829,656.50
Charter Fishing	\$985,599.00
Total	\$876,947,681.70

The following gives a brief description of the methodology and assumptions used in developing estimates for each of the listed commodities.

Forestry

Estimates for damage caused to the forestry industry were based on a general assessment as to the percentage of the area affected and the likely impacts these damages would have. Estimates of the total volume of timber were obtained for each parish in the affected region from the Southern Forestry Inventory Assessment database. Using historical percentages of softwood and hardwood timber along with percentages of pulp wood and sawtimber in each parish, volumes of types and growth stages of timber were developed. Economic impacts were developed assuming a 30 percent salvage in areas with downed trees. This salvaged timber was assumed to have a salvage value at a discounted pulpwood price. Estimates of pre and post storm values of the existing timber were developed with the difference being the expected loss in revenue.

At this point in time, there are several processing plants that not operating due to insufficient labor. The plans are largely sound but the work force is absent tending to family matters. Some plans are without electricity also. The paper mill (Gaylord) and saw mill (Myles Brothers) in Bogalusa are both down and not operating. The Hunt plywood plant in Natalbany, LA and GP Mill in McComb, Mississippi (the later of which receives timber from Louisiana) are down and the Weyerhaeuser saw mill in Holden is down. Several plywood and pole treating plans in Wiggins and Haddysburg, MS are down too. Most plants will be down until power is restored. At this time, it is unknown as to the extent of the physical damage to these plants. An accurate assessment of the physical damage to these facilities may not be possible until they restart. Another complicating issue is that these facilities are, to some extent, dependent on each other. For example, the pulp wood plant depends on byproducts from other plants to generate energy to heat boilers. Unless that other plant is operational, the pulp wood plant's ability to get back online is severely hindered. This dependency may prolong the time required to get this industry back operational. Finally, in regard to plants, there is concern the impact of rising natural gas prices on profitability.

Sugarcane

Estimates for loss revenue to the sugarcane industry were developed based on AgCenter personnel's assessment of the crop. Based on reported acres affected, estimates were developed assuming loss harvest efficiency, percentage of the crop with broken stalks, and increases in the amount of trash. Each of these was assumed to reduce the amount of recoverable sugar and, therefore, impact revenues. In addition, with a percentage of the intended acreage yet to be planted, increased planting costs caused by lodged cane were also estimated.

With rising fuel costs and the potential for decreased harvest efficiency, this will likely cause producers to seriously consider the marginal benefit of harvesting some of this lodged cane. Producers will have to compare the costs of harvesting to the expected revenue from harvested cane. It is conceivable that some acreage will not provide enough potential revenue to justify harvesting. In addition, rising energy prices will likely have negative impacts on the financial situation on most of the sugarcane mills.

Cotton

The estimated impact on the cotton industry was developed based on AgCenter personnel's assessment of damage. Estimates on acres impacted and expected yield losses formed the basis of estimated revenue loss. One issue that is not included but will have an impact on cotton producers is the potential of mills assessing a fee to mill cotton. With high fuel prices, revenue from sale of cotton seed will likely not cover milling costs.

Rice

Damage estimates for rice stem from lodged rice in certain areas in Northeast Louisiana. Estimates on the number of acres lodged were obtained from AgCenter personnel. An assumed yield loss due to decreases in harvest efficiency formed the basis of estimated revenue losses.

Dairy

Estimates for loss revenue to the dairy industry are based on milk that had to be dumped due to disruptions in infrastructure and distribution channels. Average milk production per day in affected areas was determined using historical production values. Days of loss production was estimated for each affected area to determine the total amount of milk loss to date. This estimate will likely continue to grow until infrastructure and distribution channels return to some form of normalcy.

While it is unknown at this time as to the exact nature of damage, there are reports of damage to infrastructure and possibly the loss of cattle.

Vegetables

Estimates for loss revenue are based on 2004 farm gate values and assumed percentage losses. There is also likely damage to infrastructure and potential for loss future revenue in areas in which flooding of salt water occurred.

Horticulture

Estimates for loss revenue are based on 2004 farm gate values and assumed percentage losses. There is also likely damage to infrastructure and potential for loss future revenue in areas in which flooding of salt water occurred.

Citrus

Estimates for loss revenue are based on 2004 farm gate values and assumed percentage losses. Estimates also include value of trees loss in groves as well as in nurseries. There is also likely damage to infrastructure and potential for loss future revenue in areas in which flooding of salt water occurred.

Cattle

Estimates for loss revenue are based on 2004 farm gate values and assumed percentage losses. There is also likely damage to infrastructure and potential for loss grazing and hay in areas in which flooding of salt water occurred.

Fisheries

Estimates for loss revenue are based on 2004 farm gate values and assumed percentage losses. There is also likely damage to infrastructure.

Hunting Leases

Estimates for loss revenue are based on 2004 farm gate values and assumed percentage losses.

Charter Fishing

Estimates for loss revenue are based on number of licensed guides in the state, the estimated average revenue per fishing trip per day and the estimated number of loss fishing days. There is also likely damage to infrastructure.

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