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U.S. Agriculture After Hurricane Katrina: Status and Issues

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Summary

On Aug. 29, 2005, Hurricane Katrina struck the Gulf Coast region leaving behind widespread devastation. This report examines Katrina's impact on three important factors affecting the U.S. agricultural sector: marketing infrastructure based on the Mississippi River waterway and Gulf ports; production losses for major crop and livestock producers in the affected region; and potential consequences for agricultural production as a result of high energy costs. It also discusses the federal government response.

Agricultural producers from the states directly impacted by Katrina have suffered economic losses, although this varies greatly by crop and locality. Preliminary estimates by USDA economists project that the greatest farm production losses caused by Hurricane Katrina are likely to be to the crops of sugar cane, cotton, corn and soybeans in Mississippi, Louisiana and Alabama, and nursery and greenhouse products in Florida. Dairy and poultry production appear to have suffered losses due to the power cut-off following the hurricane. Accurate estimates of crop and livestock losses will not be available until flood waters recede to the point that crop estimators and adjusters can enter the fields.

New Orleans is a major gateway for U.S. oil imports and agricultural exports, especially corn, soybeans, wheat, and rice. Hurricane damage brought a halt to the flow of agricultural trade through New Orleans which resulted in falling commodity prices in interior states that depend on the Mississippi River waterway to move exports through New Orleans to international markets. It is still unclear how much time will be required before barge and ship traffic resumes its normal flow, however, many grain export facilities have already resumed partial operations. Agricultural interests are concerned that, should major delays in barge traffic and shipping extend into October when harvesting occurs in the major corn and soybean growing regions, they could disrupt traditional marketing practices with deleterious affects on U.S. commodity prices, farm incomes, and rural economies.

Energy prices jumped substantially as a significant portion of U.S. petroleum and natural gas production, import, and refining facilities were damaged and shut down. There is considerable uncertainty surrounding the permanency of energy price rises and their potential impact on the U.S. economy in general, and U.S. agriculture in particular. By raising the overall price structure of production agriculture, sustained high energy prices could result in significantly lower farm and rural incomes in 2006.

Certain ongoing federal programs, primarily crop insurance and disaster loans, are available to eligible producers. The combination of Hurricane Katrina and a Midwestern drought might also cause Congress to consider supplemental crop and livestock disaster assistance. This report is intended as an overview of how Katrina has affected and is likely to continue to affect the agricultural sectors of both the impacted region and the U.S. It is not intended to provide a day-to-day update of events. It will, however, be updated as events warrant.

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Agricultural Marketing Infrastructure Issues

Overview

Hurricane Katrina damaged much of the nation's grain marketing infrastructure located in the New Orleans region including port facilities, river traffic infrastructure (buoys, moorings, channels, etc.), and grain elevators, as well as those barges and ships in the region at the time of landfall. Agricultural traffic on the Mississippi River came to a temporary standstill pressuring commodity prices in interior producing regions.

Agricultural producers are concerned about the rapid resumption of barge traffic on the Mississippi in advance of the peak harvest-time period, about repair of the marketing infrastructure, and about rising energy prices in part related to hurricane damage. In a competitive market, the price that producers receive for their agricultural commodities is derived from the price established in major markets such as Gulf port export terminals, less the transportation and handling costs required to move grain from the farm to those markets. When marketing costs rise, farm-gate prices usually fall and along with them so do farm and rural incomes.

Key components of the U.S. grain-handling network include on-farm storage, trucks, railroads, barges, and grain elevators (including county, sub-terminal, and export elevators). A complex web of local supply and demand conditions determines how and when grain moves through this network. Price changes at any point along the chain can result in shifts to alternate transport modes or routes as grain marketers search for the lowest-cost method of moving grain between buyer and seller.

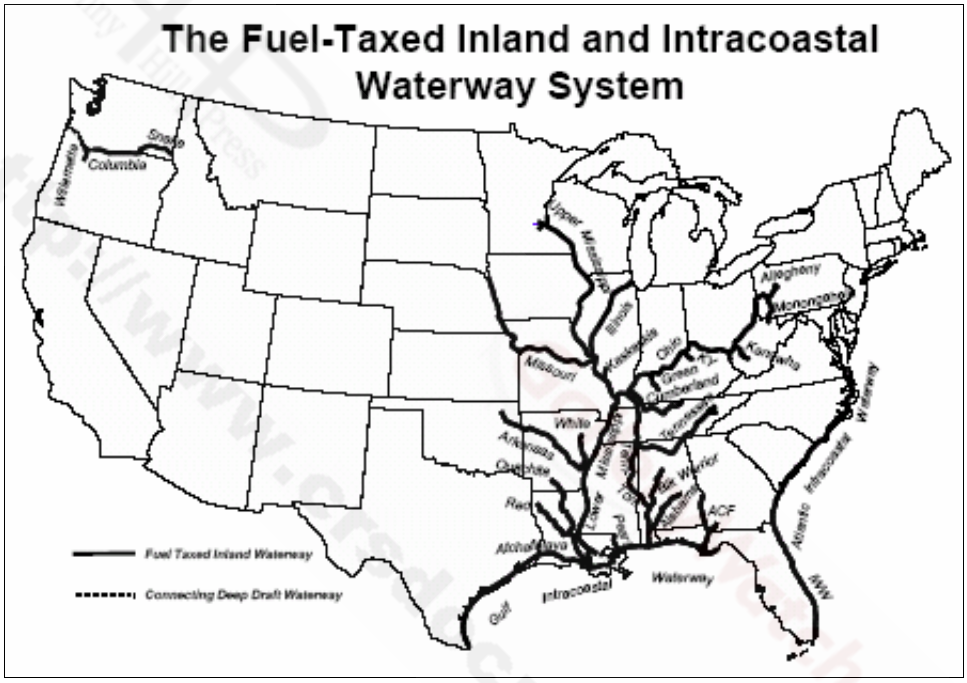
Port of New Orleans

When Hurricane Katrina struck the Gulf Coast region, the storm brought a halt to the flow of agricultural trade entering and exiting the United States through the Mississippi River System centered on New Orleans and surrounding Mississippi-River-based Gulf ports. Flooding and power outages stopped operations at most of

the port facilities within the affected region. Concerns for the United States' ability to export its surplus agricultural production were immediate.

New Orleans is among the world's busiest ports. It is served by 6 major railroads, 50 ocean carriers, 16 barge lines, and over 75 motor carriers.[1] More than 6,000 ocean vessels annually move through New Orleans on the Mississippi River. The port of New Orleans and its surrounding Gulf ports are the primary outlet that links a vast barge-based inland waterway system centered on the Mississippi River and its tributaries — the Missouri, Illinois, Ohio, and Arkansas Rivers — to international markets (Figure 1).

Figure 1 — Major U.S. Inland Waterway Systems



Every year a substantial share of the U.S. corn, soybean, and wheat crops are trucked from farms in interior states to grain elevators located along the Mississippi River and its major tributaries, then loaded onto barges for the trip down river to a Gulf port facility where grain shipments are aggregated before being loaded onto ocean-going vessels for the trip to foreign markets. The Port of New Orleans reportedly handles 2 billion bushels of grain each year.[2] Corn, soybeans, wheat, and rice are the primary agricultural products exported via the Mississippi River. During the 2002-04 period, nearly 64% and 67% of U.S. corn and soybean exports (by value), respectively, passed through Louisiana ports on their way to foreign markets. In addition, about 23% of wheat and 41% of rice exports passed through the mouth of the Mississippi during that same period (Table 1).

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[1] "Hurricane Damage Necessitates Ship-Cargo Diversions," *Truckline Express*, Sept. 7, 2005.

[2] *International Trade Reporter*, "Cost to U.S. Farmers from Hurricane Katrina Could Run to $500 Million in Lost Exports," Vol. 22, No. 35, Sept. 8, 2005.

Table 1 — Exports of Major Agricultural Commodities, U.S. Total versus District of New Orleans, average for 2002-04

Commodity	U.S. Total	District of New Orleans	District of New Orleans Share of U.S. Total
		$ Million	%
Total Exports	744,979	34,329	5
Agricultural Products	57,954	na	na
Corn	5,412	3,608	64
Soybeans	6,751	4,307	67
Wheat	4,257	933	22
Rice	992	410	41

na = not available.
Sources: U.S. Total from *World Trade Atlas*; District of New Orleans data are from U.S. Census Bureau, Foreign Trade Division.

The Port of New Orleans provides a major destination for international containers, rubber, steel, plywood and coffee, and is an important link to the inward movement of fertilizers, fuel, and other vital farm inputs. The Port of New Orleans is the nation's top port for imported natural rubber. In addition, New Orleans is the nation's premier coffee-handling port, with 14 warehouses, more than 5.5 million feet of storage space and six roasting facilities in a 20 mile radius. Two of the most modern bulk processing operations are located in New Orleans: Dupuy Storage and Forwarding Corp. (largest in the United States) and Silocaf of New Orleans, Inc. (the world's largest).[3]

The principal concerns regarding the Port of New Orleans are: first, how quickly can the channel be reopened for river traffic, and second, how quickly can port facilities for loading and unloading bulk grain resume operation? On Sept. 4, 2005, the communications manager for the Port of New Orleans announced that the Mississippi River was open in one direction to ships with a draft of 35 feet during daylight hours. That same day, the Port President and CEO, Gary LaGrange announced that the Port of New Orleans' river front terminals had survived Hurricane Katrina in relatively good shape and, although slightly damaged, they would be workable once electrical power and manpower were available.[4] Although the channel was usable, most of the port facilities were to be dedicated to military relief vessels through mid-September. Commercial vessels would be allowed to return to the Port of New Orleans once electrical power and manpower are re-established. The U.S. Dept. of Transportation's Maritime Administration has announced that it is

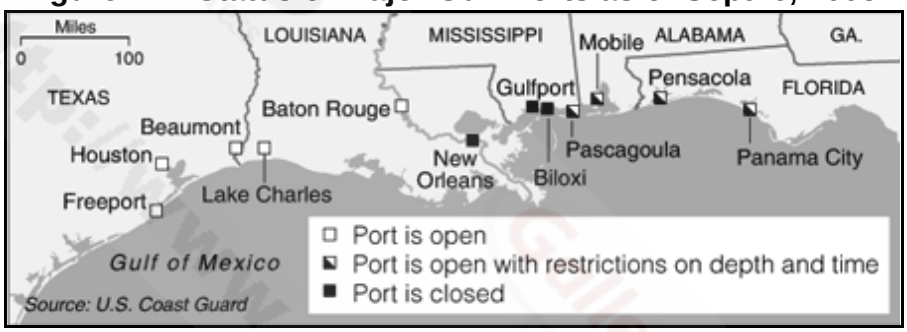
[3] The Port of New Orleans, [http://www.portno.com/facts.htm]

[4] *Seaports Industry Update*, September 5, 2005, "Special Announcement," [http://www.aapa-ports.org/pressroom/katrina_updates.htm].

providing several ships to the Port of New Orleans with the capacity to temporarily house 1,000 people who will operate the port.

Secretary of Agriculture Mike Johanns reported on Sept. 7, 2005, that substantial existing infrastructure was available on the Mississippi River in the New Orleans area for facilitating port activities.[5] In particular, he mentioned three floating rigs with a loading capability of 30,000 to 60,000 bushels per hour from river barges directly on to ocean-going vessels or barges, and 10 export elevators with a storage capacity of 526 million bushels and a loading capability of 970,000 bushels per hour when fully operational. Secretary Johanns estimated that the operational capacity of the 3 rigs and 10 elevators was a combined 63% of normal (as of Sept. 7, 2005) and that slower barge movements and limited staff prevented full utilization of their loading capacity.

Figure 2 — Status of Major Gulf Ports as of Sept. 6, 2005.



In addition to the revival of Mississippi River traffic and port operations, a significant share of shipping activity has been distributed to alternate Gulf ports to facilitate the resumption of trade and economic activity in the region. During the first week in September, most of the 86 ships that were reportedly queued at the Mississippi River's entrance just prior to Katrina's arrival were diverted to ports in Texas and elsewhere.[6]

Barge-based Inland Waterway Transportation

Barge transportation represents the lowest-cost transport mode for moving a high volume of bulk commodities long distances (Table 2). Because barge rates are generally significantly lower than either rail or truck, the Mississippi River navigation system provides considerable transportation cost savings to the regional and national economy.[7] Most economists and market analysts agree that inexpensive

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[5] USDA news release, "Mississippi River Export Grain Industry Recovering from Hurricane Katrina," Sept. 7, 2005.

[6] *New York Times*, "Ad-Libbing Many Routes, Ships Return to Mississippi," Sept. 7, 2005.

[7] For a discussion of agricultural transportation issues and the cost advantages of barge versus truck or rail, see CRS Report RL32470, *Upper Mississippi River-Illinois Waterway Navigation Expansion: An Agricultural Transportation and Environmental Context*, pp. 27-

barge transportation helps check rates charged by the rail and truck transportation industries. In addition, low internal transport costs relative to export competitors such as Argentina and Brazil have helped U.S. products compete in international corn and soybean markets.[8]

Table 2 — Barge Transport Moves Large Volumes Relative to Truck or Rail

Type of Transport	Capacity		Truck Equivalents
	Bushels	Metric tons	
Truck (large semi)	910	26	1
Jumbo Hopper Car	3,500	100	4
Barge[1]	52,000	1,500	58
100-car unit train	350,000	10,000	385
15-barge tow	787,500	22,500	865
Panamax vessel[2]	2,362,074	60,000	2,596

Source: U.S. Tugboat & Towboat Industry.
[1]Assumes a 9-foot channel as is maintained on the Upper Mississippi River by the U.S. Army Corps of Engineers. Barge capacity increases with channel depth.
[2]Panamax vessels are restricted to 60,000 metric tons due to maximum draft requirements. Bushels are corn-equivalent (1 metric ton = 39.3679 bushels).

A hurricane such as Katrina or any similar weather or catastrophic event that dramatically slows or severely limits barge traffic will usually have the effect of raising barge freight rates as the demand for barge services exceeds their supply. Higher barge freight rates for corn and soybeans will in turn shift these commodities to alternate uses (feed, food, industrial, or storage), to alternate transport modes (rail or truck), or to alternate trade routes (e.g., to the Atlantic via the St. Lawrence Seaway, or overland to Canada, Mexico, or alternate ports along the Gulf coast or as far away as the Pacific Northwest). Because truck and rail are significantly more costly than barge transport, shifting bulk commodities to truck- or rail-based routes can substantially raise the cost of moving grain.

It is still unclear how much time will be required before barge and ship traffic resumes its normal flow. Preliminary reports suggest that most export facilities did not sustain major structural damage. The bigger problem is getting power restored, the channel cleared, and work crews back into the region. The U.S. Coast Guard reported that about 70% of the navigation aids (such as buoys marking the river

[7] (...continued)
34.

[8] Randall D. Schnepf, Erik N. Dohlman, and Christine Bolling, *Agriculture in Brazil and Argentina: Developments and Prospects for Major Field Crops*, USDA, Economic Research Service, Agriculture and Trade Report No. WRS013, (Washington: Dec. 2001), pp. 53-60.

channel) along the Mississippi River were damaged or missing.[9] The river channel itself must be surveyed to guard against possible shoals or other obstructions that might have been left in the hurricane's wake. In the early period following the hurricane, the U.S. Coast Guard focused its full resources on search and rescue operations in the areas affected by the hurricane. But gradually, they have begun the process of damage assessment and repair of the navigation infrastructure.

Commodity Prices

The immediate effect of the slowdown of barge traffic on the Mississippi River was a reported sharp decline in grain elevator bid prices for corn and soybeans in interior grain markets. Many grain elevators serving barge traffic were already near their maximum storage capacity, and felt compelled to reduce their bid prices to avoid buying grain that they could not store. The problem was made more acute by the approaching harvest when producers will need all of their on-farm storage capacity to store their new crop harvests. As a result, many producers are looking to sell the remaining supplies from last year's harvest to clear space.

It is expected that this situation will be remedied and elevator bids will strengthen when barge traffic returns to more normal levels. Near-by futures market prices for September corn and soybean contracts have held fairly steady in the $2.02-$2.07 and $5.90-$6.00 per bushel range, respectively, since late August suggesting that the market anticipates a reprise of normal shipping patterns within a couple of weeks (**Figure 3**). The last trading day for the September 2005 contract is Sept. 14.

Figure 3 — September Futures Contract for Corn, Chicago Board of Trade, Sept. 9, 2005

Source: Chicago Board of Trade, Sept. 9, 2005.

Harvest time generally signals the busiest period of export movement for agricultural products for several reasons. First, supplies are generally most abundant at harvest time and can often exceed on-farm or local storage capacity. As a result,

[9] *New York Times*, "Ad-Libbing Many Routes, Ships Return to Mississippi," Sept. 7, 2005.

both producers and marketers are eager to move surplus production through the marketing channels. Second, the more northerly inland waterways — the Upper Mississippi River waterway and the St. Lawrence Seaway — shut down during the winter months due to freezing conditions. This limits export opportunities and increases the urgency for moving excess production into marketing channels ahead of the winter. Third, the arrival of surplus agricultural production into marketing channels at harvest time tends to pressure commodity market prices to their season lows and frequently offers the best purchasing opportunities for foreign buyers.

Table 3 — Harvest Period for Major U.S. Crops

Crop	Major U.S. Growing Zone	Southern-Tier States	Central-Tier States	Northern-Tier States
Winter Wheat	June-July	May-June	July	
Spring Wheat	Aug-Sept	—	July	Aug-Sept
Corn	Oct-Nov	Sept-Oct	Oct	Oct-Nov
Soybeans	Oct-Nov	Sept-Oct	Oct	Oct-Nov

Source: *Major World Crop Areas and Climatic Profiles*, Agr Handbook No. 664, World Agricultural Outlook Board and Joint Agricultural Weather Facility, USDA, Sept. 1994.

Farm Production Losses

From a national perspective, the region's agriculture is dominated by Louisiana's sugar cane crop which accounts for nearly one-third of the value of U.S. annual sugar cane production (Table 4). Poultry in Alabama and Mississippi, rice in Louisiana, and cotton in Mississippi also have national significance. However, several crops play a much bigger role at the state level. Broilers and eggs accounted for over 62% of Alabama's agricultural output value in 2003, while broilers represented a 42% share of Mississippi's agricultural economy. Cotton's share of state agricultural output value in 2003 was 15% in Mississippi, 12% in Louisiana, and 5% in Alabama.

Preliminary estimates by USDA economists project that the greatest farm production losses caused by Hurricane Katrina are likely to be to the crops of sugar cane, cotton, corn and soybeans in Mississippi, Louisiana and Alabama, and nursery and greenhouse products in Florida. Accurate estimates of crop losses will not be available until flood waters recede to the point that crop estimators and adjusters can enter the fields. The Farm Bureau, an independent, national farmer association, projects that the direct farm production losses caused by the hurricane could be $1 billion. They project an additional $1 billion in indirect costs to agriculture, primarily caused by waterway transportation problems and rising fuels costs.[10] Other estimates have been significantly lower.

For some crops, particularly sugar cane, the extent of losses will not be known until harvest. Damage to the region's sugar cane crop initially appeared to be extensive because the high winds flattened the crop. Some analysts report that much of the crop that was downed by the storm was not destroyed and can still be harvested. The hurricane caused two Louisiana refineries to temporarily halt operations, which exacerbated what was already a tight supply of sugar. In response, USDA increased available sugar supplies by increasing the quantity of domestic sugar that may enter the market under the sugar price support program.[11]

According to USDA, the largest cotton production areas (east and west of the storm track) were spared significant crop losses. Mississippi and Alabama, which account for 10% and 3% of expected U.S. cotton production, respectively, experienced some damage. Some of the damage to the crop might contribute to quality losses rather than production losses. Similarly, some rice losses were experienced, but the storm track was east of the major rice growing areas.

The region's corn and soybean crops were also affected by the hurricane, but the region normally accounts for less than 3% of national production of these two crops. The most serious market effects attributable to corn and soybeans are more transportation related (as discussed above). USDA also reports that Hurricane Katrina did extensive damage to southern Florida's nursery and greenhouse industry

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[10] [http://www.fb.org/news/nr/nr2005/nr0901b.html]

[11] [http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1RD?printable=true&contentidonly=true&contentid=2005/08/0338.xml]

when it passed through southern Florida several days before making a second landfall in the Gulf states. A Florida trade association projects losses of $370 million in structural damage and greenhouse and nursery crop losses.[12]

Industry analysts also report that the Gulf region's dairy industry has experienced production and processing losses. The region's dairy industry has been hampered by the loss of production caused by power outages in milking facilities, and the inability to transport milk because of damaged roads and bridges, as well as the loss of refrigeration and metropolitan retail dairy markets. Alabama, Louisiana, and Mississippi combined account for less than 1% of U.S. milk production; hence, market effects should be limited to the region.

USDA also reports losses to cattle operations and broiler production in the three-state region. The region accounts for about 4% of national beef production, so national market effects are expected to be minimal. Poultry is a significant enterprise in the region: Alabama and Mississippi rank third and fifth, respectively, among all states in broiler production. Most of the broiler losses were concentrated in Mississippi where facilities were either damaged or without power for an extended period. Some analysts estimate that large area broiler losses could cause an increase in market broiler prices in the short term (1-2 months). However, increased production elsewhere would eventually fill the gap so that market effects would be minimized by the end of the year.[13]

[12] [http://www.fngla.org/articles/viewArticle.asp?articleID=504]

[13] Global Insight's *Agri-View*, September 8, 2005

Table 4 — Top 5 Agricultural Commodities: Alabama, Louisiana, and Mississippi, 2003

	Total Cash Receipts	Share of State's Total Farm Receipts	Share of U.S. Farm Value
	$ Millions	%	%
Alabama			
1. Broilers	1,837.7	53.8	12.1
2. Cattle and Calves	425.2	12.5	0.9
3. Chicken Eggs	295.7	8.7	5.6
4. Greenhouse & Nursery	256.9	7.5	1.7
5. Cotton	160.5	4.7	3.2
All Alabama Farm Commodities	3,415.3		1.6
Louisiana			
1. Sugar cane	329.2	16.5	32.8
2. Cotton	238.0	11.9	4.7
3. Cattle and calves	178.3	8.9	0.4
4. Rice	165.6	8.3	13.6
5. Soybeans	163.4	8.2	1.0
All Louisiana Farm Commodities	1,993.4		0.9
Mississippi			
1. Broilers	1,424.1	41.8	9.4
2. Cotton	517.4	15.2	10.3
3. Soybeans	309.4	9.1	1.9
4. Aquaculture	244.7	7.2	31.3
5. Cattle and Calves	208.1	6.1	0.5
All Mississippi Farm	3,411.0		1.6

Source: U.S. Department of Agriculture's Economic Research Service

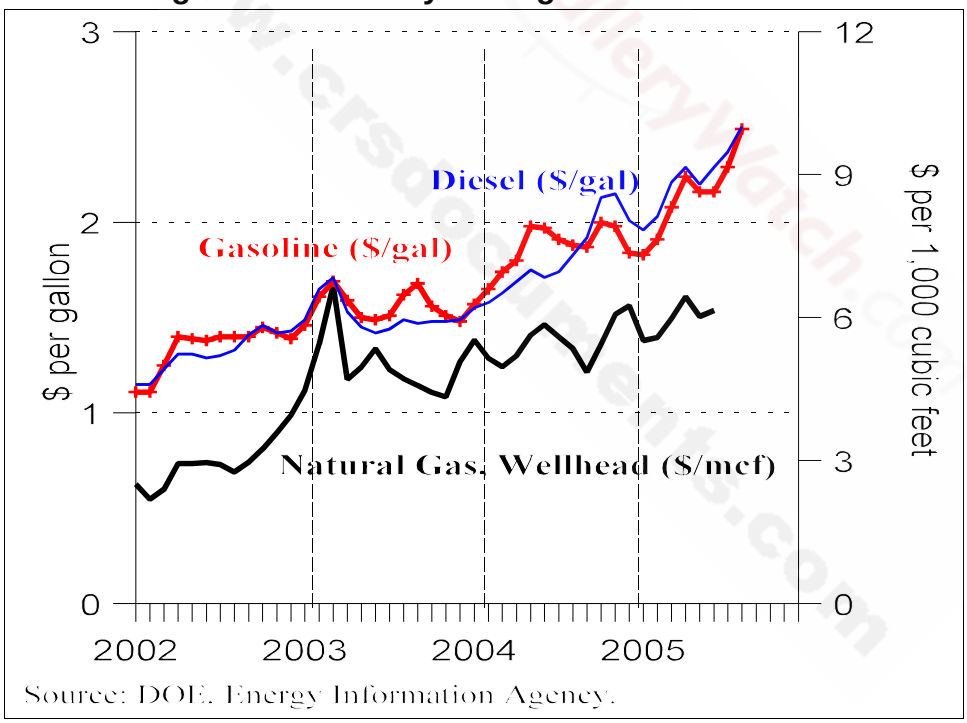
Energy Costs and Agriculture

Following the damage inflicted by Hurricane Katrina on the Gulf region's oil and natural gas production, refining, and importing capability, energy prices — gasoline, diesel fuel, and natural gas — have risen sharply.[14] Considerable uncertainty surrounds the longevity of recent energy price rises, and the implications for U.S. agriculture hinge on their permanency. Fuel prices have been trending higher over each of the past three years, and farmers were already likely to see record high fuel costs before the post-Katrina runup in prices struck (**Figure 3**). In the near-term, it is likely that such strong energy price rises will significantly increase energy's share of total production expenses and could significantly alter the farm income outlook for affected farm households and rural economies.

Energy Prices Already Trending Higher, Jump After Katrina

The national average annual retail price for No. 2 diesel fuel has been rising steadily from $1.32 per gallon in 2002 to $1.51 per gallon in 2003, and $1.81 per gallon in 2004. In August, 2005, it hit a record $2.50 per gallon. Gasoline prices followed a very similar pattern. In September 2005, post-Katrina concerns have spiked both diesel and gasoline prices well above $3.00 per gallon.

Figure 4 — Monthly Average U.S. Fuel Prices



[14] For a discussion of energy supply issues See CRS Report RS22233, *Oil and Gas: Supply Issues After Katrina*, at [http://www.congress.gov/erp/rs/pdf/RS22233.pdf]. For information on energy prices see the U.S. Dept of Energy's Energy Information Administration's web site at [http://www.eia.doe.gov/].

Natural gas prices have also experienced substantial demand-driven price rises over the past 3½ years. After hovering just below $2.00 per 1,000 cubic feet (mcf) through most of the 1990s, natural gas (wholesale or wellhead) prices moved upwards to average $2.95 per mcf in 2002, then surged to a $4.98 per mcf average in 2003. Wellhead prices continued rising in 2004, averaging $5.49 per mcf. Since April 2005, natural gas prices have been above $6.00. During the final week of August (Aug. 24-31), Henry Hub spot market prices (Henry Hub is a primary wholesale market location for natural gas) sky rocketed in anticipation of Katrina's disruption to an average of $12.70 per mcf. During the first week in September 2005, after Katrina had moved through the Gulf Coast region and analysts had a chance to better assess the damage to production facilities, natural gas prices retreated slightly to average $11.05 per mcf.

Evaluating the potential effect of such volatile energy price movements on U.S. agriculture hinges greatly on their permanency.[15] The relative importance of energy costs as a share of total agricultural production expenses varies greatly by both activity and region. Although there are many kinds of operations performed by the different farm types, nearly all mechanized field work, as well as marketing and management activities involve machinery, trucks, and cars that are dependent on petroleum fuels. Dryers and irrigation equipment are often more versatile in that they can be powered by petroleum fuels, natural gas, or electricity, while electricity is the primary source of power for lighting, heating, and cooling in homes, barns, and other farm buildings. Some activities such as dairy and poultry production, that require a constant supply of energy for refrigeration or cooling are particularly vulnerable to a cut-off of energy supply as evidenced by the damage sustained in the hurricane-affected region.

In the immediate term, the first priority is to restore power to all affected regions so that normal operations may resume. Looking further out, higher diesel fuel and gasoline prices will raise the cost of harvesting and post-harvest treatment (e.g., drying, moving, and storing) of crops still in the field. For those farms that have been indirectly impacted by Katrina's damage to the region's marketing infrastructure, higher fuel prices will make the overall cost of marketing products more expensive, while making rail and truck more costly options relative to barge transport. Such higher marketing costs inevitably result in a widening farm-to-market basis and lower prices received at the farm gate. This, in turn, would alter the farm income outlook for affected farm households and rural economies.

In the longer term, sustained high energy prices through the winter could lead to significant regional shifts in agricultural activities as early as 2006. High natural gas prices are particularly troublesome because of their relationship with nitrogenous fertilizer production. Natural gas accounts for a substantial portion (75% to 90%) of nitrogen fertilizer production costs, either directly as a feedstock or indirectly as a fuel to generate the electricity needed in production. Because U.S. fertilizer manufacturers are at a competitive disadvantage with foreign producers when U.S. natural gas prices rise, the high prices of recent years has contributed to a substantial

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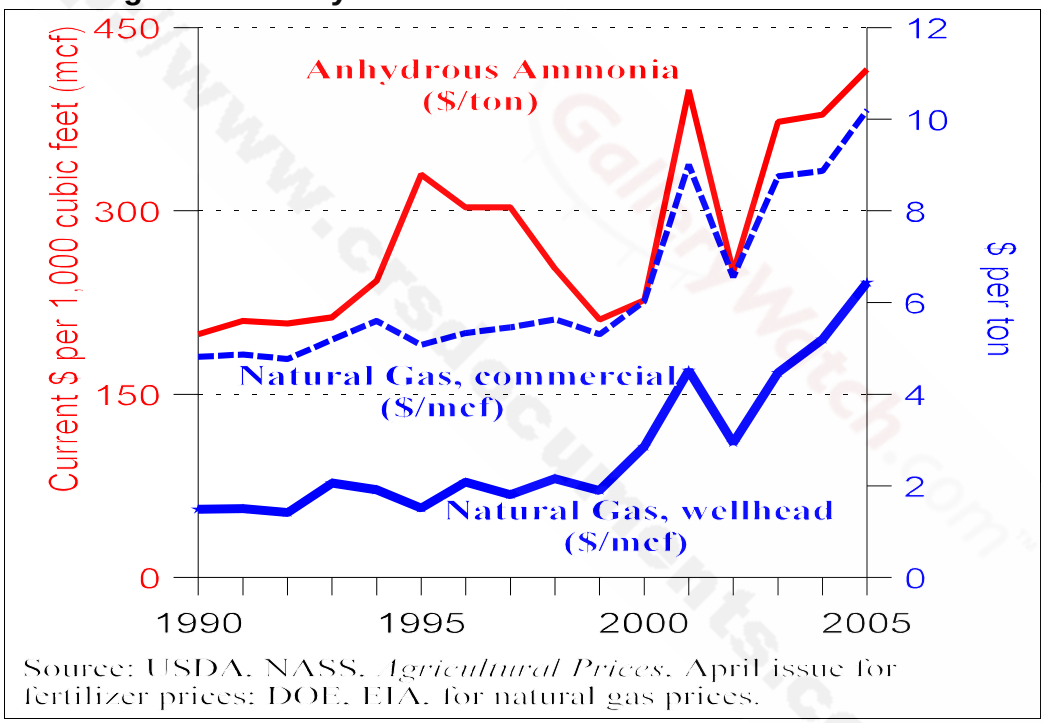
[15] For a broad discussion of energy use and U.S. agriculture see CRS Report RL32677, *Energy Use in Agriculture: Background and Issues*.

reduction in its U.S. nitrogen fertilizer production capacity — over a 23% decline from 1998 to 2003. In addition, higher natural gas prices have contributed to significantly higher nitrogen fertilizer prices (**Figure 5**).

The post-Katrina jump in U.S. natural gas prices casts a cloud of uncertainty over the future of the U.S. nitrogen fertilizer industry as well as raising concerns about the potential supply and price of nitrogen fertilizer for crops in 2006. Producers are undoubtedly eyeing fuel and fertilizer price developments and will consider shifting away from crops that rely heavily on fuel-dependent field work or fertilizer applications and towards those crops and activities that are less energy dependent. Corn is perhaps the most vulnerable crop due to its high per-acre energy usage rates.[16]

In the longer term, a sustained rise in energy prices may have serious consequences on energy-intensive industries like agriculture by reducing profitability and driving resources away from the sector.

Figure 5 — Anhydrous Ammonia and Natural Gas Prices



Source: USDA, NASS, *Agricultural Prices*, April issue for fertilizer prices; DOE, EIA, for natural gas prices.

[16] For more information on energy use variations by region and crop, see CRS Report RL32677, *Energy Use in Agriculture: Background and Issues*.

Government Response

Current Authorities and Programs

USDA has at its disposal three major ongoing programs designed to help crop producers recover from the financial effects of any natural disaster:

- federal crop insurance,
- non-insured assistance program (NAP) payments, and
- emergency disaster loans.

All three of these programs have permanent authorization and available funding. For background information on these and other farm disaster programs, see CRS Report RS21212, *Agricultural Disaster Assistance*

For the 2005 crop year, Alabama, Mississippi, and Louisiana crop producers purchased just over $1 billion in crop insurance coverage, with nearly 70% of the value of coverage being for cotton, soybeans, and rice. According to preliminary reports from USDA, the three-state region has relatively high participation rates in the crop insurance program (in some cases 80% of eligible acreage). However, much of that coverage is at the catastrophic level, which provides an indemnity payment only on losses in excess of 50% of normal production. For those producers who grow a crop that is not eligible for crop insurance coverage, USDA makes NAP payments available for catastrophic losses, as long as the producer signed up for coverage and paid an administrative fee in advance.

Agricultural producers in a county that has been declared a disaster area may be eligible for low-interest emergency disaster (EM) loans available through USDA's Farm Service Agency. USDA currently has authority to provide just over $150 million in EM loans. An eligible producer must be a family-sized farmer who suffered a minimum crop loss of 30%, and is unable to qualify for a loan from a commercial lender. EM loan funds may be used to help eligible farmers, ranchers, and aquaculture producers recover from production losses (when the producer suffers a significant loss of an annual crop) or from physical losses (such as repairing or replacing damaged or destroyed structures or equipment, or for the replanting of permanent crops such as orchards). A qualified applicant can then borrow up to 100% of actual production or physical losses (not to exceed $500,000) at a below-market interest rate.

USDA announced on September 8, 2005, that $20 million in Emergency Conservation Program funding will be given to Louisiana ($12.45 million), Mississippi ($7.1 million), Alabama ($855,0000) and Tennessee ($25,000) to help these states clean up debris, and restore fences and conservation structures. Eligible participants can receive cost-share assistance of up to 75% of the cost to implement these practices.

On-Farm Storage. On Sept. 7, 2005, USDA announced changes to its Marketing Assistance Loan Program to help alleviate the urgency of marketing grain at distress-level prices. USDA's Commodity Credit Corporation (CCC) is

implementing changes to allow producers to obtain loans for "on-farm" storage on grain stored on the ground in addition to grain bins and other normally approved structures. This action is designed to alleviate short-term logistical problems and support local cash prices above the distressed levels that have resulted from the slowdown of barge traffic on the Mississippi River.

Congressional Response

Since 1988, Congress frequently has supplemented the regularly funded disaster assistance programs with additional emergency aid. Funding for these programs generally are provided in emergency supplemental appropriations bills. Among these major ad-hoc farm disaster programs are (1) direct disaster payments, (2) livestock assistance, (3) tree assistance, and (4) emergency conservation assistance. Most recently, the FY2005 Military Construction Appropriations Act (P.L. 108-324) contained supplemental funding to provide an estimated $3.5 billion in assistance for 2003 and 2004 crop, livestock, and tree losses, primarily in response to ongoing drought in the West and a series of 2004 hurricanes that damaged or destroyed agricultural production in the Southeast. (For more information on the ad-hoc agricultural assistance that was provided in response to the 2004 hurricanes, see CRS Report RS21212, *Agricultural Disaster Assistance*.)

Prior to Hurricane Katrina, portions of the Midwest were experiencing significant 2005 crop losses caused by a prolonged drought. The combination of the Midwest drought and losses caused by Hurricane Katrina is expected to provide momentum for Congress to consider emergency crop and livestock assistance for 2005 production losses.