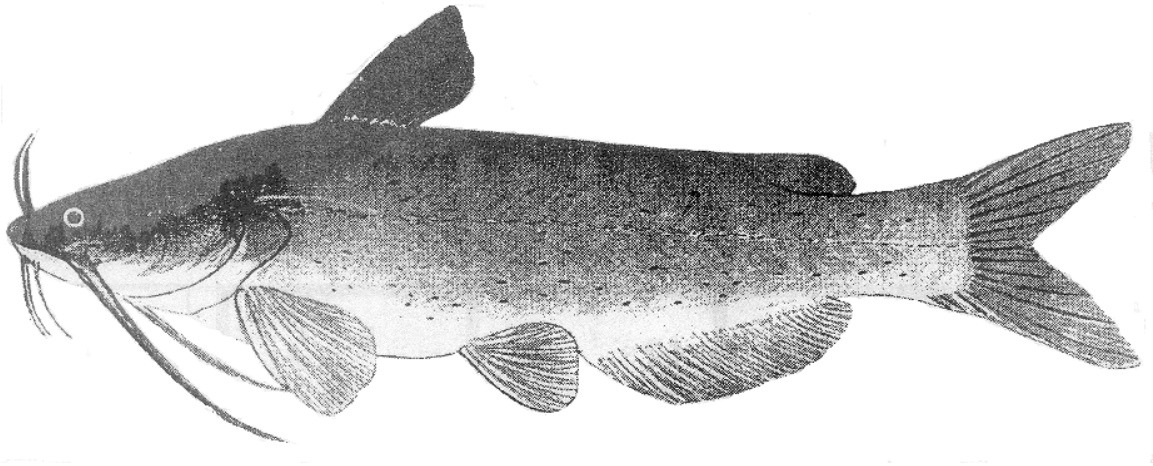
2013 U. S. Catfish Database



By
Dr. Terry Hanson
Auburn University, Department of Fisheries and Allied Aquacultures

and

Mr. Dave Sites
Mississippi State University, Department of Agricultural Economics

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Auburn University
Auburn, Alabama

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2013 U.S. Catfish Database

Table of Contents

U.S. Farm-Raised Catfish Industry
2013 Review and 2014 Outlook

Highlights

► U.S. farm-raised catfish was ninth in the 2012 "Top 10" fish and seafood consumption list for Americans, who consumed 14.6 pounds of fish and seafood per year in total and 0.50 pound per year of catfish.

► The U.S. catfish industry has been on a contracting course since a high mark in 2003 when 662 million pounds of round weight catfish were processed. In 2013, 334 million pounds were processed, up 33.4 million pounds (+11%) from 300 million pounds processed in 2012; and a 50% decrease since the 2003 peak.

► Imports of frozen catfish fillets increased by 44 million pounds (+18%) to 281 million pounds in 2013; and imports now account for 75% of all U.S. sales of frozen catfish fillet product.

► There were 71,725 acres of water in U.S. catfish production in January 2014, down 14% from 2013. Current production acreage for the top three catfish producing states, Alabama, Arkansas and Mississippi was down 10,925 acres (-15%) to 64075 acres.

► The average price received by producers was $0.974 per pound in 2013, down $0.002 per pound from the 2012 average price of $0.976 per pound. In 2013 there was a $0.294 per pound difference between high (November, $1.113 per pound) and low (January, $0.819 per pound) pond bank prices received during the year.

► Total producer income in 2013 was $325 million, 2012 was $292 million, a $32 million increase (+11%) from the 2012 total producer income of $293 million. This was due to the increase in processing volume, + 33.4 million pounds.

► In-pond inventories of foodsize fish in January 2014 were down 10% from January 2013 levels. Stocker inventory was down 14% from January 2013 levels. Fingerling weight (and number) inventory was up 4% (and down 21%) from January 2013 levels. Broodfish pounds were up 5%.

► Catfish feed prices (32% protein) in 2013 averaged $483/ton, up $14/ton (+3%) over the 2012 average feed price of $469/ton. Note: 2013 feed prices peaked in July ($494/ton) while the lowest feed price in 2013 occurred in November ($425/ton).

U.S. Farm-Raised Catfish Industry
2013 Review and 2014 Outlook

By
Dr. Terry Hanson
Auburn University, School of Fisheries, Aquaculture and Aquatic Sciences
and
Mr. Dave Sites
Mississippi State University, Department of Agricultural Economics

This 2013 review and the 2014 outlook reports on recent trends in the U.S. catfish industry were derived primarily from NASS reports; Catfish Production, Catfish Processing, and Catfish Feed Deliveries reports. However, due to sequestration NASS stopped doing the latter two reports in March 2013. The Catfish Institute asked Dr. Terry Hanson, Auburn University School of Fisheries, Aquaculture and Aquatic Sciences to continue those two reports, and those data are reported here.

Complete data for the contents of this introduction are contained in the catfish database tables and figures which follow this section of the database. Sections in this introduction provide information on American's fish and seafood consumption patterns, imports of "catfish-like" products, U.S. catfish industry statistics on processing, inventory of fresh/frozen products, U.S. farm-raised catfish production statistics on water acreage, live fish price, inventories, feed price, and an outlook for 2014.

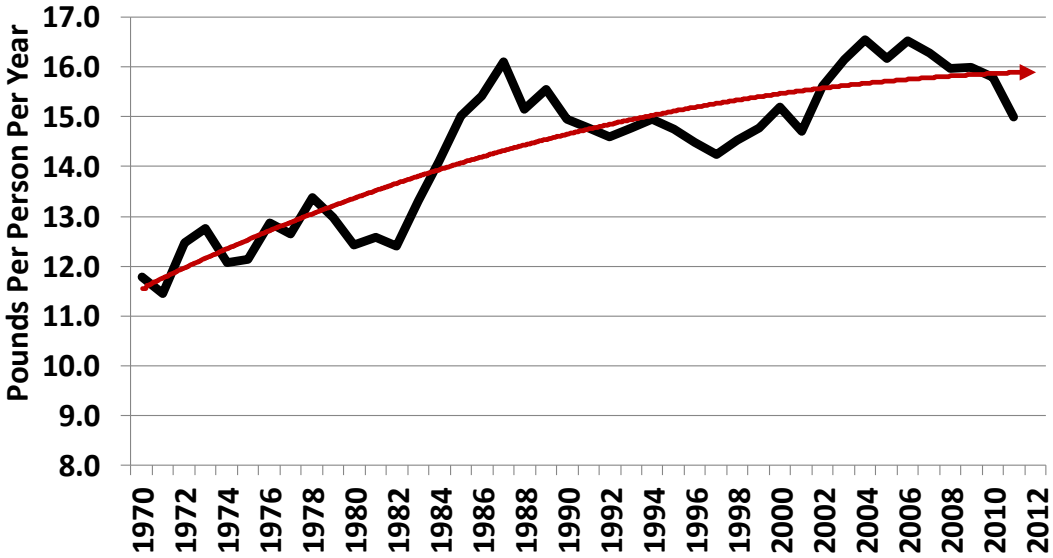
1. U.S. Fish and Seafood Consumption

Consumers ultimately decide what food products they will purchase based on their likes and dislikes. Consumers have many fish/seafood choices and elect to purchase these products based on product attributes they prefer, such as price, taste, flavor, texture, enjoyment, other protein options, etc. Thus, it is important to understand American fish and seafood consumption patterns and where domestically produced farm-raised catfish fits among consumed fish and shellfish species, and to understand how consumer trends may influence 2014 purchases of domestically produced channel catfish.

"U.S. per capita consumption of fish and shellfish was 14.4 pounds (edible meat) in 2012. This total was 0.6 pounds less than the 15.0 pounds consumed in 2011, Figure 1. Primarily this decrease resulted from a decrease in the domestic landings utilized for food (as opposed to industrial purposes) and a 0.7 percent increase in the U.S. population from 2011. While domestic production of canned tuna was largely unchanged from 2011, per capita consumption of canned tuna decreased from 2.6 pounds in 2011 to 2.4 pounds in 2012 due to a decrease in imports and an increase in exports. Per capita consumption of fresh and frozen products was 10.5 pounds, a decrease of 0.4 pounds from 2011. Fresh and frozen finfish accounted for 5.6 pounds, while fresh and frozen shellfish consumption was 4.9 pounds per capita. Consumption of canned fishery products was 3.6 pounds per capita in 2012, down 0.2 pounds from 2011. Cured fish accounted for 0.3 pound per

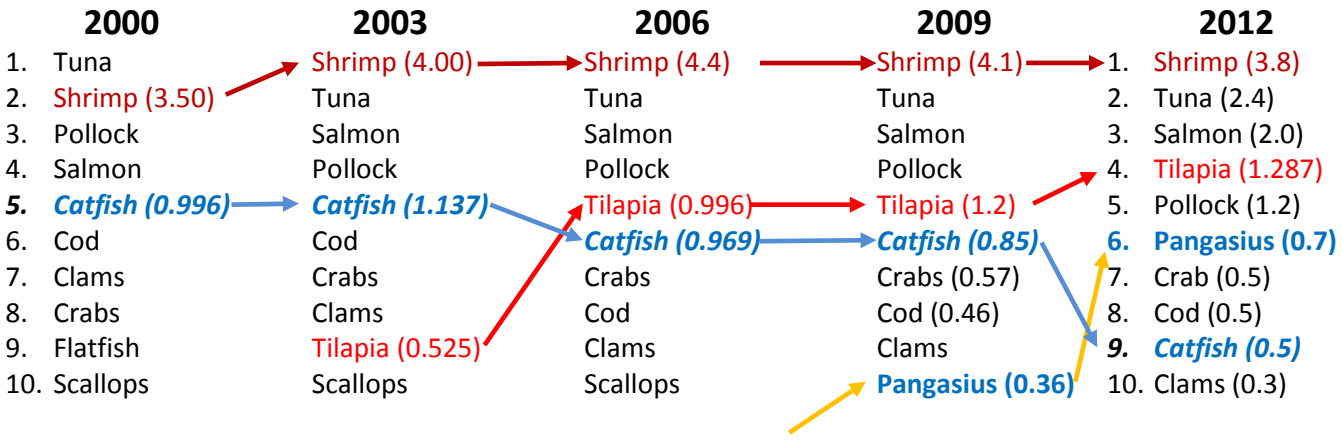
capita, the same as in previous years." (Fisheries of the United States, 2012, NOAA Office of Science and Technology, http://www.st.nmfs.noaa.gov/commercial-fisheries/fus/fus12/index)

Figure 1. U.S. Per Capita Consumption of Fish and Shellfish Products.



There have been changes in American's fish/seafood species' preferences over time, Figure 2. Shrimp became the number one consumed seafood product in the U.S. in 2002 and has stayed in this position ever since. Tuna, primarily canned tuna, dropped to second place and has stayed at this position. Salmon replaced pollock as the number three preferred product in 2003 and has remained there. Tilapia surpassed Pollock in 2012 and is number four in popularity. Pangasius rose to sixth place in 2012. U.S. farm-raised catfish dropped to ninth in the 2012 with American consuming just over 0.5 pounds per person per year.

Figure 2. U.S. Top Ten Seafood Consumed, per capita consumption.



2. Imports

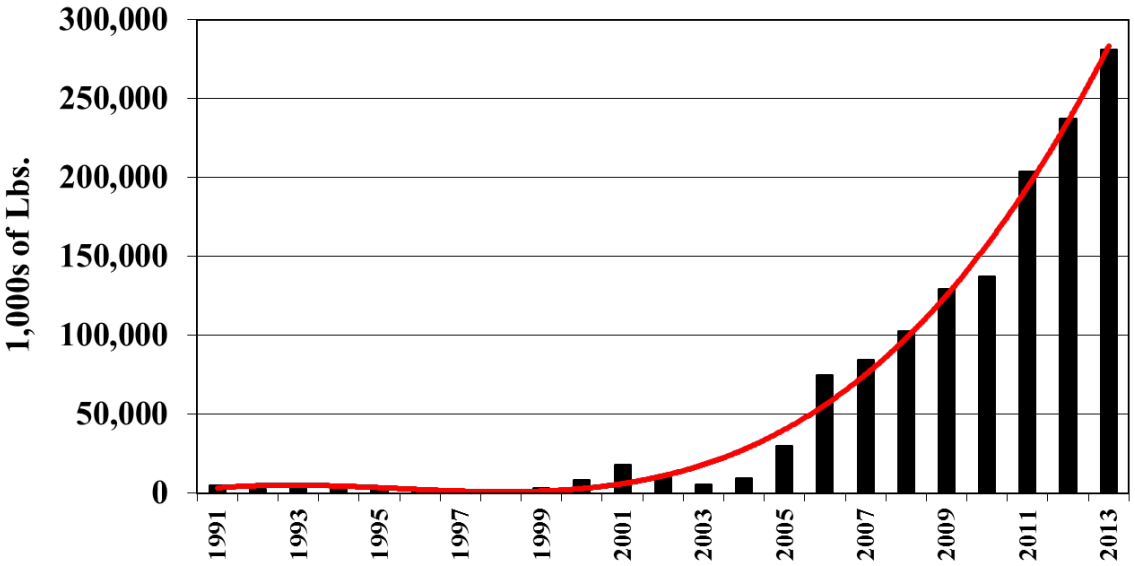
► Imports of frozen catfish fillets increased by 44 million pounds (+18%) to 281 million pounds in 2013; and imports now account for 78% of all U.S. sales of frozen catfish fillet product.

Figure 3 shows the dramatic increase in imports of frozen, boneless catfish fillet products (Ictalurus, Pangasius and Siluriformes), and:

- in 2005 the import quantity was 30 million pounds of frozen fillets;
- in 2006 the import quantity increased to 75 million pounds (+ 149 %);
- in 2007 the import quantity increased to 85 million pounds (+ 13 %);
- in 2008 the import quantity increased to 102 million pounds (+ 21 %);
- in 2009 the import quantity increased to 129 million pounds (+ 26 %);
- in 2010 the import quantity increased to 138 million pounds (+ 6 %);
- in 2011 the import quantity increased to 204 million pounds (+ 48 %);
- in 2012 the import quantity increased to 237 million pounds (+ 14%); and
- in 2013 the import quantity increased to 281 million pounds (+ 18%).

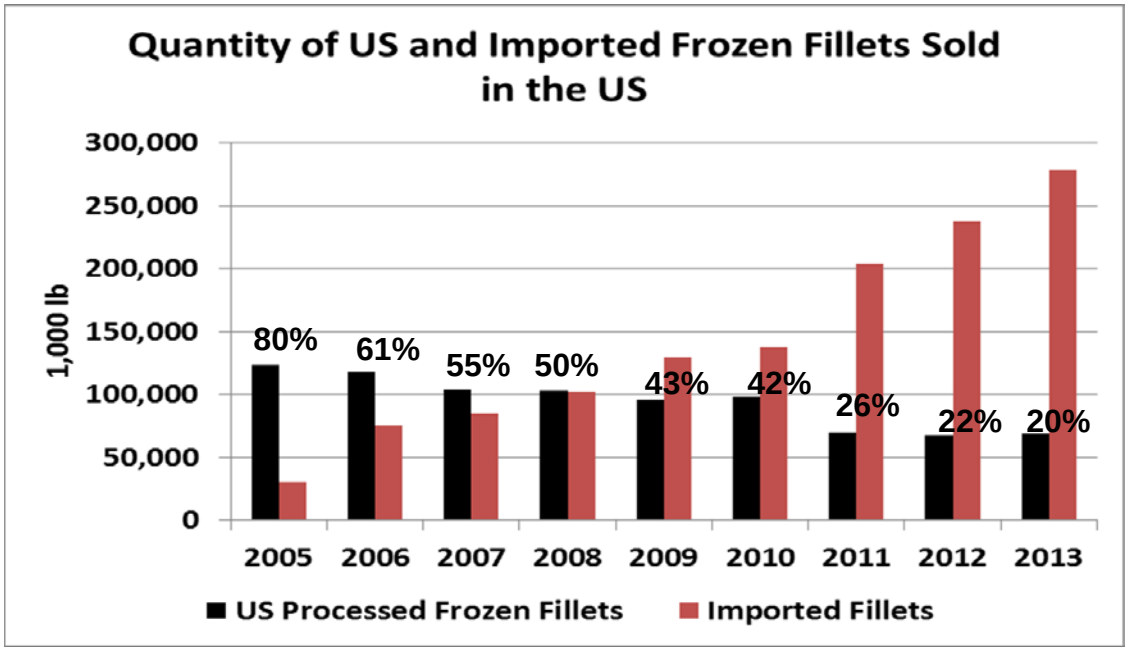
In total, the U.S. catfish industry processed and sold 124 million pounds of **frozen catfish fillets** in 2005, 118 million pounds in 2006, 104 million pounds in 2007, 103 million pounds in 2008, 96 million pounds in 2009, 98 million pounds in 2010, 70 million pounds in 2011, 68 million pounds in 2012, and 69 million pounds of frozen fillet product in 2013, Figure 4.

Figure 3. Imported Catfish, 1991 – 2012.



The quantity of imported frozen catfish fillets sold in the U.S. was equal to the quantity of U.S. processed frozen catfish-like fillet products sold as recently as 2008. Since then, the sales percentage of this product form from the U.S. processing industry has continued to decline. Domestically produced frozen catfish fillet products made up 20% of the entire quantity sold in the U.S. in 2013 (80% was imported), Figure 4. This is remarkable, given that in 2005 there were 124 million pounds of U.S. processed frozen catfish fillet product sold in U.S. and only 30 million pounds of imported catfish-like frozen fillet product sold in the U.S. From 2005 to 2013, imported frozen catfish-like fillet product has increased from 20% to 80% of the market share for frozen catfish and catfish-like fillet products in the U.S. (U.S. percentage of sales have declined from 80% to 20% during this same period). Much of this decline relates to the higher domestic catfish fillet price, and to catfish feed prices that increase the cost of producing domestic farm-raised catfish. The feed ingredient prices have been increasing over the last eight years.

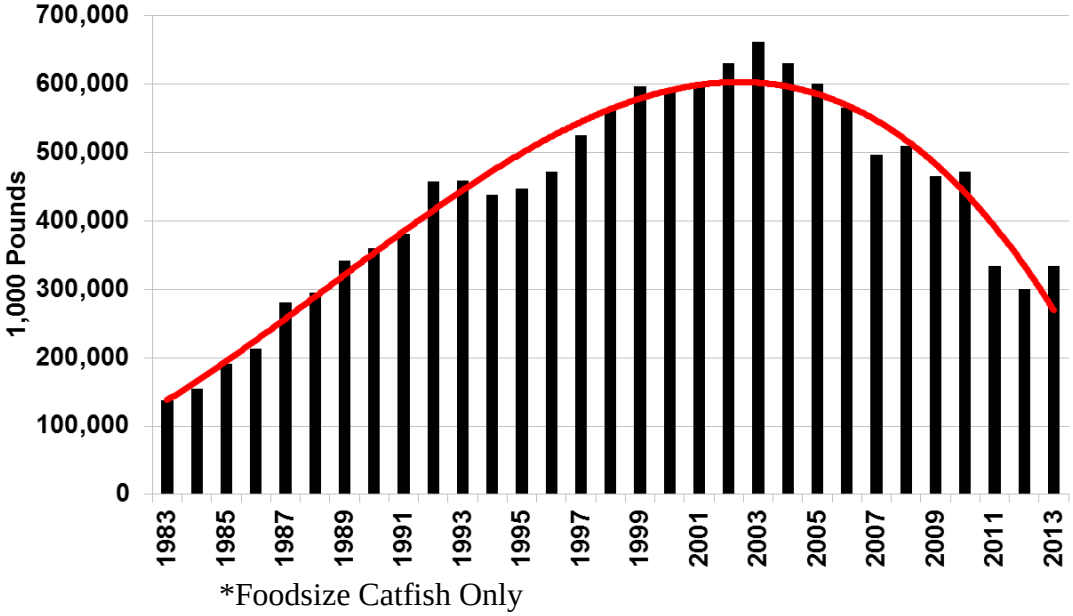
Figure 4. Quantity of U.S. Catfish and Imported Catfish-like Frozen Fillets Sold in the U.S. (U.S. percentages of frozen fillets sold are in boxes), 2005-2013.



3. U.S. Catfish Processing and Frozen/Fresh Inventory

U.S. catfish processed and inventoried fresh and frozen fish (and in-pond inventories discussed later) provide a view of what was in demand and supplied to the U.S. market place. The U.S. catfish industry has been in decline since a high mark in 2003 when 662 million pounds of round weight catfish were processed. In 2013, 334 million pounds were processed, up 34 million pounds (+11%) from 300 million in 2012. From 2003's high to the 2013 level, there has been a 328 million pound decrease (-50%) in U.S. farm-raised round weight catfish processed, Figure 5.

Figure 5. Round Weight Processed by U.S. Processors*, 1977 – 2013.



*Foodsize Catfish Only

During the 2000 to 2013 period frozen catfish fillet product sales have declined by 62 million pounds (-47%), while frozen "Other" product sales have declined by 20 million pounds (-42%) and frozen whole catfish product sales have declined by 9 million pounds (-60%), Figure 6.

During the same 2000 to 2013 period fresh catfish fillet product sales have declined by 30 million pounds (-52%), while fresh "Other" product sales have declined by 11 million pounds (-65%) and fresh whole catfish product sales have declined by 13 million pounds (-31%), Figure 7.

Figure 6. U.S. Processed Weight of Frozen Catfish Products, 2000-2013.

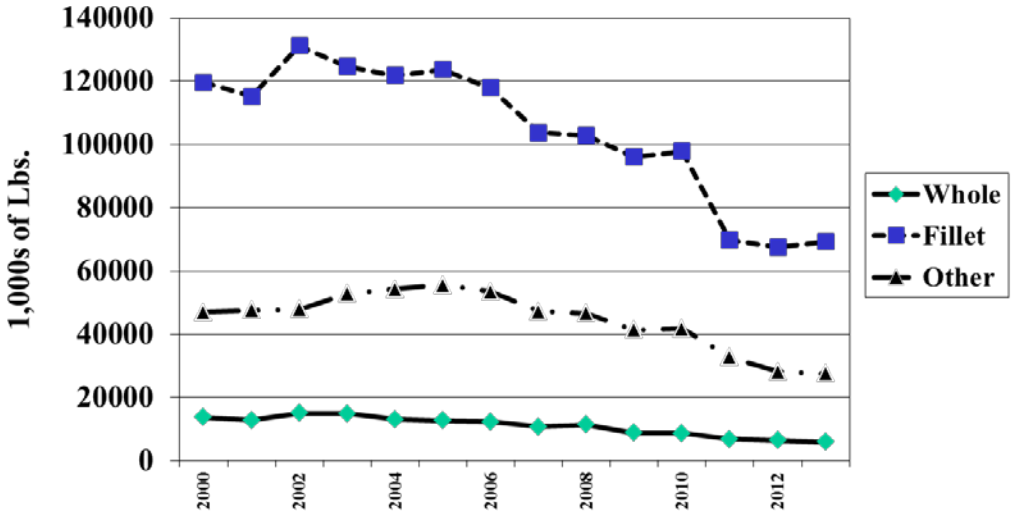
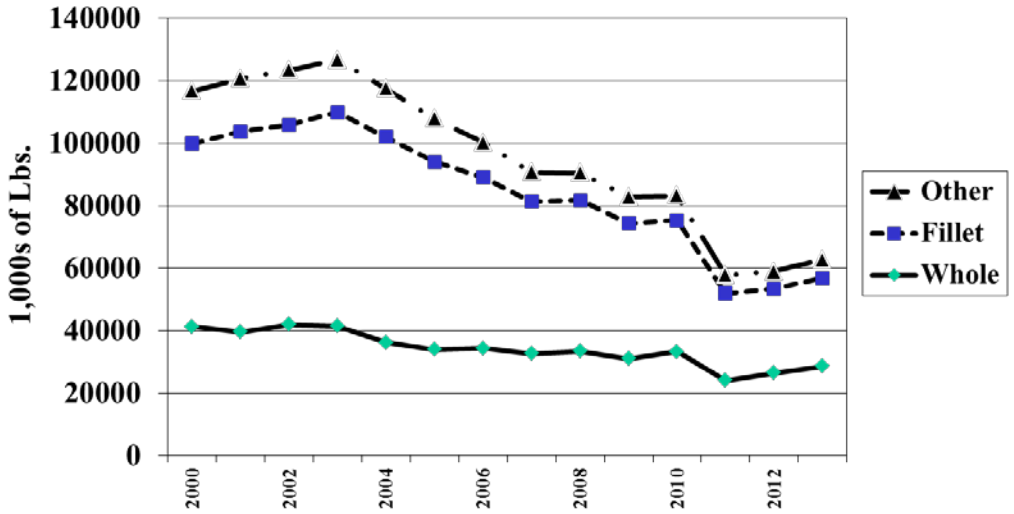


Figure 7. U.S. Processed Weight of Fresh Catfish Products, 2000-2013.



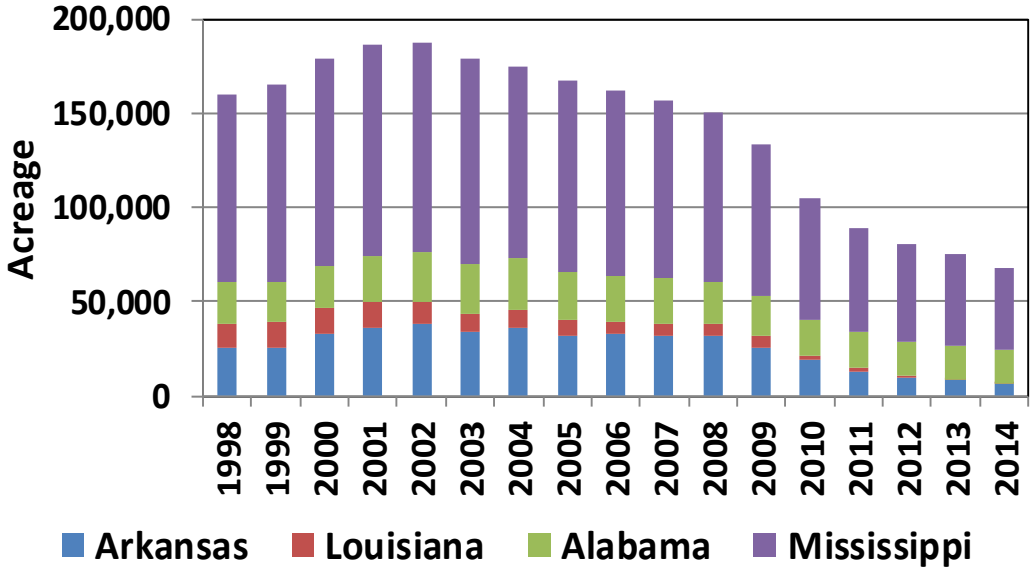
4. U.S Farm-raised Catfish Production

Sales of domestic catfish products (foodfish, broodfish, stockers, fry, and fingerlings) in 2013 were approximately $342 million, up 0.5% from 2012 ($341 million) sales. Production acreage was less in 2013 than 20012, but the rate of decrease is less, indicating that there may be a levelling off of total production acreage, Figure 8. U.S. farm-raised catfish production acres have declined to 75,625 acres (projected use from January 2014 NASS Catfish Production report) from a 2002 high of 196,760 acres. This is a 121,135 acre decrease (62%) in 12 years, Figure 8. Since 2002, Mississippi catfish production acreage has declined 70,700 acres (-63%), Arkansas acreage has declined

31,915 acres (-84%), Louisiana acreage has declined 11,475 acres (-95%), and Alabama acreage has declined 8,710 acres (-34%).

Escalating catfish feed and fuel costs combined with volatile annual prices to the producers, weakened demand, and lost market share for final products have made profits very difficult in the U.S. catfish industry during the 2002 to 2013 period. This has caused many producers in Arkansas, Louisiana and Mississippi delta regions to convert their pond acreage to corn and soybean. There was an 11,295 acre reduction (-14%) in production acreage from January 2013 to January 2014. Producers' income, that is the average annual price received across the whole industry by producers multiplied by total round weight processed, was $32 million (+11%) more in 2013 ($325 million) than in 2012 ($292 million).

Figure 8. Water Acreage Used in U.S. Catfish Production, Jan 1998- Jan 2014.



5. Fish Price and In-pond Fish Inventory

The pond bank price paid to catfish producers averaged:
$0.767 per pound in 2007,
$0.780 per pound in 2008,
$0.771 per pound in 2009,
$0.802 per pound in 2010,
$1.177 per pound in 2011,
$0.976 per pound in 2012; and
$0.974 per pound in 2013.

It is noteworthy that 2011 prices to producers were the highest they have ever been paid and were reflecting a severe shortage of fish inventory in the ponds at that time, Figures 9 and 10. The 2013 price level began low, at $0.819 per pound, reached a high of $1.113 per pound in November.

Figure 9. Nominal Prices Paid to Producers by Month, 2007-2013.

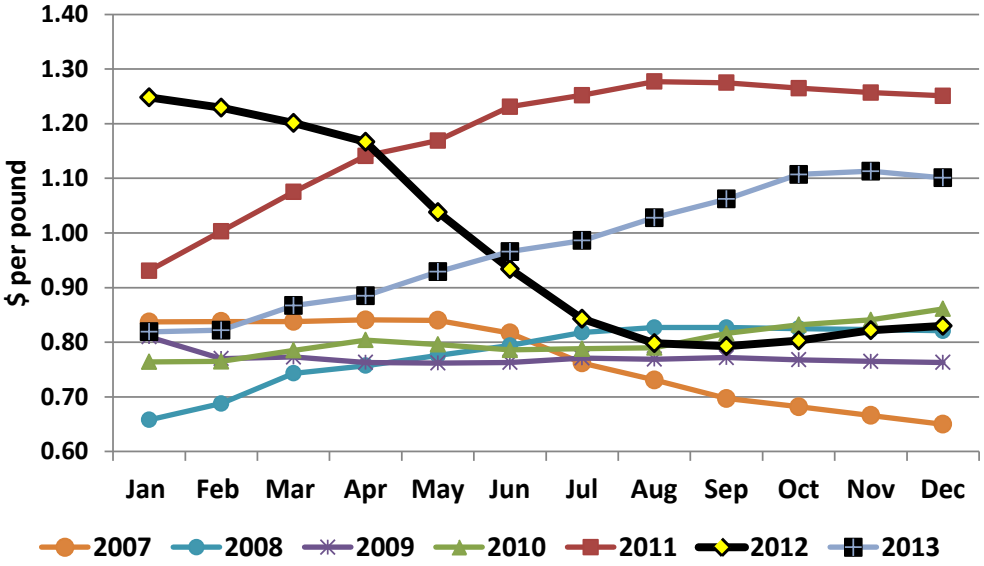
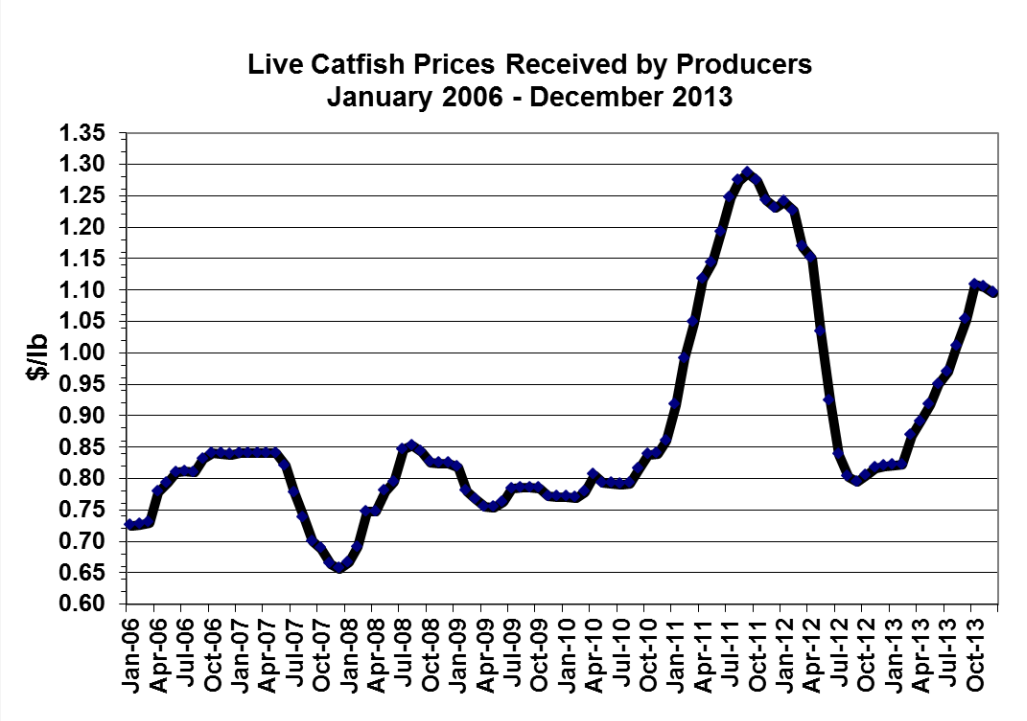


Figure 10. Nominal Prices Paid to U.S. Catfish Producers by month, January 2006 to December 2013.

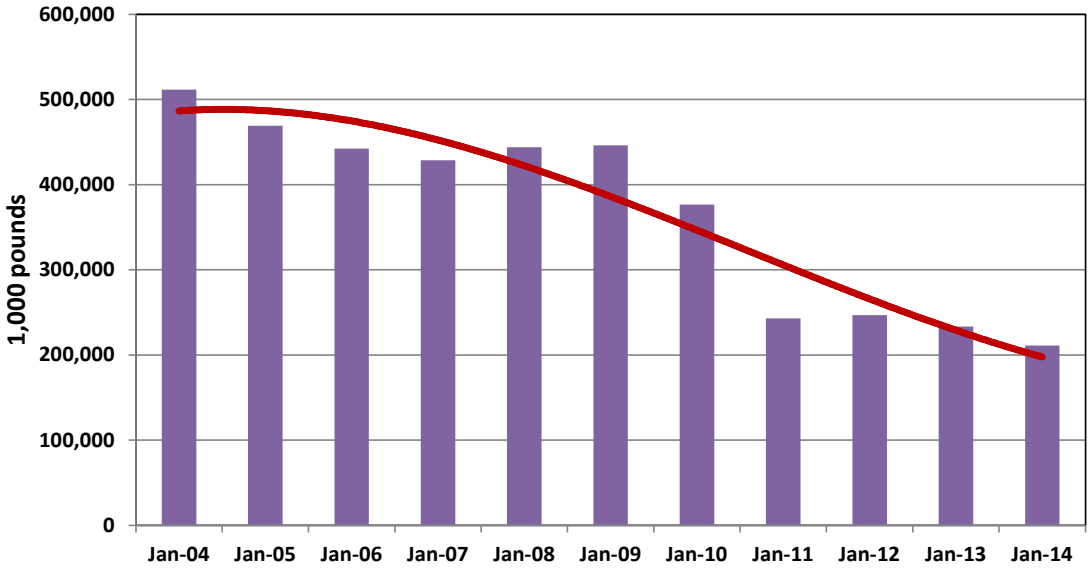


In-pond fish inventory

Round weight processed catfish was 333.5 million pounds in 2013, up 33.4 million pounds from the 2012 level (330.2 million). If the 2013 quantity is to be processed in 2014, the fish will have to come from foodsize in-pond inventories for the immediate term (and from processor's frozen stored product discussed earlier), from stockers to supply demand in late 2014 and into early to mid-2015, and from fingerling inventory to supply demand in late 2015 and early to mid-2016.

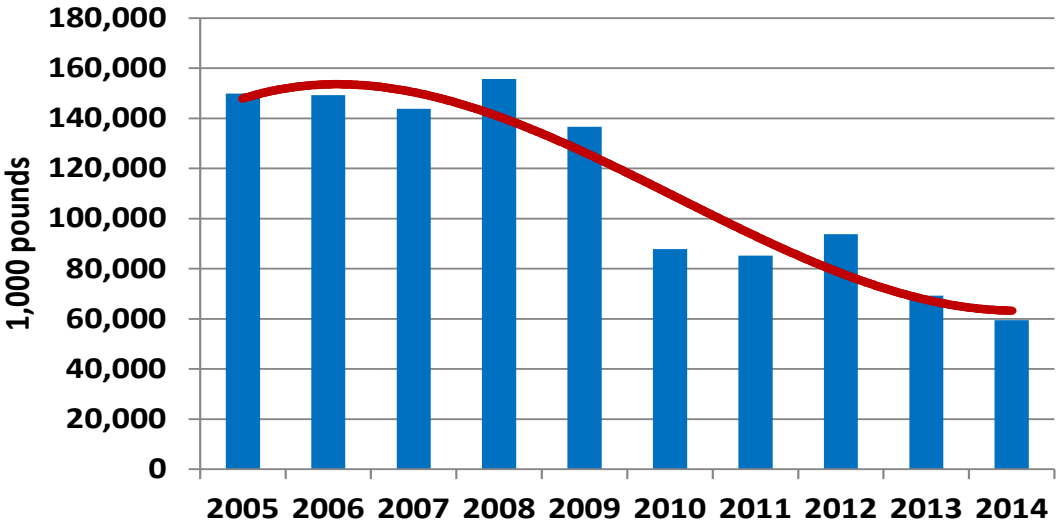
The January 2014 foodsize in-pond inventories (small, medium and large sizes) were reported at 211 million pounds, down 10% from January 2013, Figure 11.

Figure 11. U.S. Catfish Foodsize In-pond Inventory, pounds.



The "stocker" size catfish will be harvestable in mid- to late-2014. The inventory of stocker sized fish in January 2014 was approximately 59.5 million pounds, Figure 12, down 14% from January 2013 levels.

Figure 12. U.S. Catfish Stockers In-pond Inventory, pounds.



The reported 2014 fingerling quantity, in pounds, was up 4% from the January 2013 report while the fingerling numbers decreased by 21% from a year ago, indicating a much smaller fingerling size being available, Figures 13 and 14.

Figure 13. U.S. Catfish Fingerlings in Inventory, January of each year, pounds.

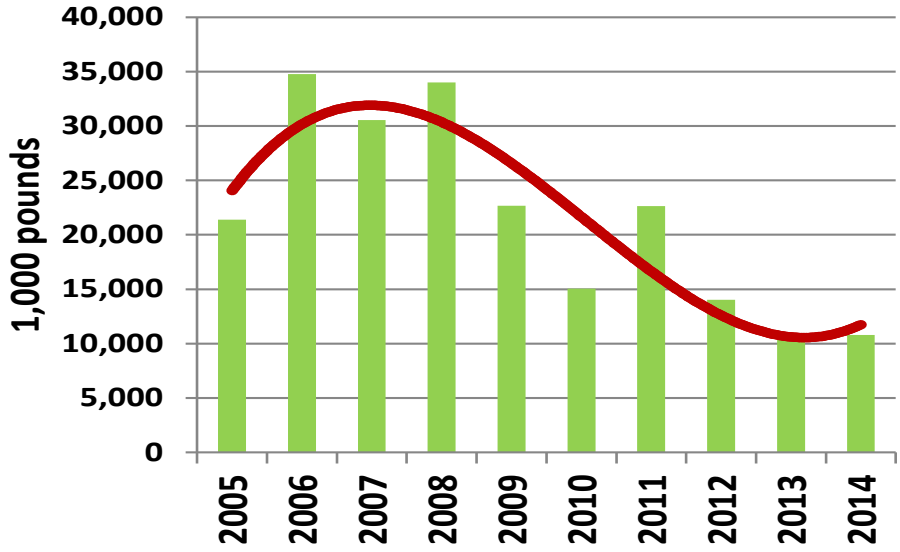
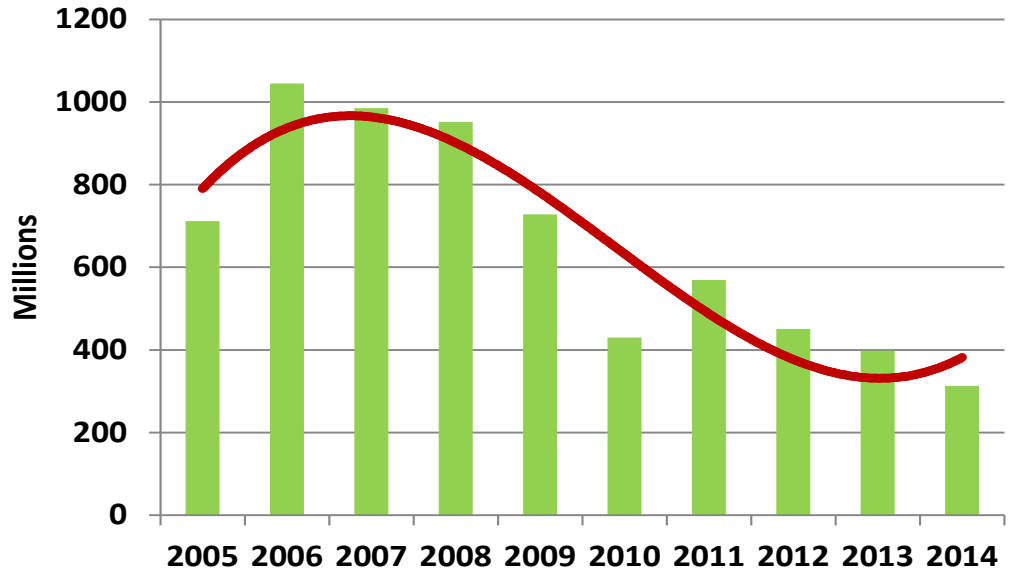
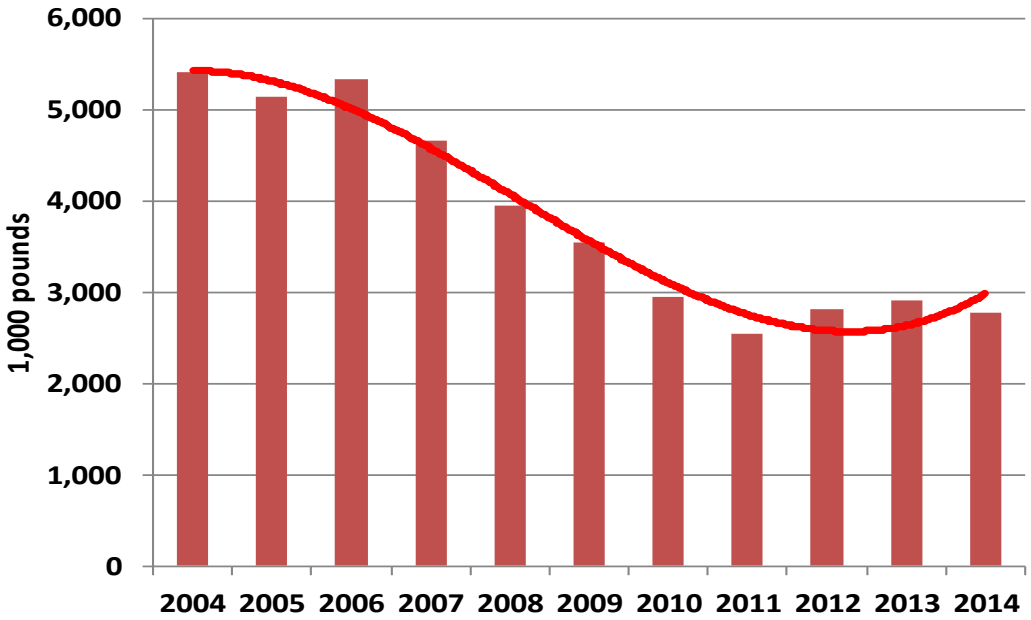


Figure 14. U.S. Catfish Fingerlings in Inventory, January of each year, number.



Many catfish production operations have gone out of business. There were 624 producers reported by NASS in January 2013, but they no longer provide this figure annually, so we do not know how many operations are in business now. Low prices and prior years of reduced production and processing have led to hatchery operators reducing their number of fingerlings and broodstock in stock. Broodstock pounds in inventory in January 2014 were down 5% from January 2013 levels (Figure 15), though number of brooders was up 4% (meaning smaller, younger brooders on average) and indicates a long term potential for more fingerling supplies if/when the industry demands them.

Figure 15. U.S. Catfish Broodfish In-pond Inventory, pounds.



Thus, from an "in-pond" inventories perspective, there will be a shortage of foodsize fish and a shortage of stockers in 2014 for processing quantities to equal the 2013 round weight processing quantity. For the future, the increase in broodstock on hand increases the potential for more fingerlings in mid-2014 to increase foodsize fish availability for very late 2015 and early 2016. The fish shortage of 2011 was unfortunate as seafood buyers turned to imported white fish as substitutes to meet their needs. It looks like there will again be a shortage of fish in 2014. In 2011 the US catfish industry lost market share as a result of the fish shortage and this may occur again if 2014 US catfish supply is short again.

6. Feed Price

The increasing feed price trend seems to have hit its high price mark of $562 per ton of 32% crude protein feed in August 2012 and has since decreased and remained in the $480 to $515 per ton range in 2013 (Figure 16 from 2006 through 2012). In 2013 32% protein catfish feed price peaked at $516 per ton in July. The 2013 average annual 32% protein feed price was $483 per ton, up $14 per ton (+3%) from the 2012 average annual price of $469 per ton. Note that this increase is in addition to a feed price increase of $67 per ton (+19%) in 2011. Though the average price was $483 per ton for 2013, the price was greater than $500 per ton during only one month of the year compared to being over this mark three times in 2012, Figure 17. High catfish feed component prices for corn and soybean meal have pushed the catfish feed price high, and there is no expected change in corn and soybean prices in 2014, so catfish feed price ranges seen in 2013 are expected to continue in 2014.

Figure 16. Prices for 28% and 32% Crude Protein, Floating Catfish Feed, January 2006 through December 2013.

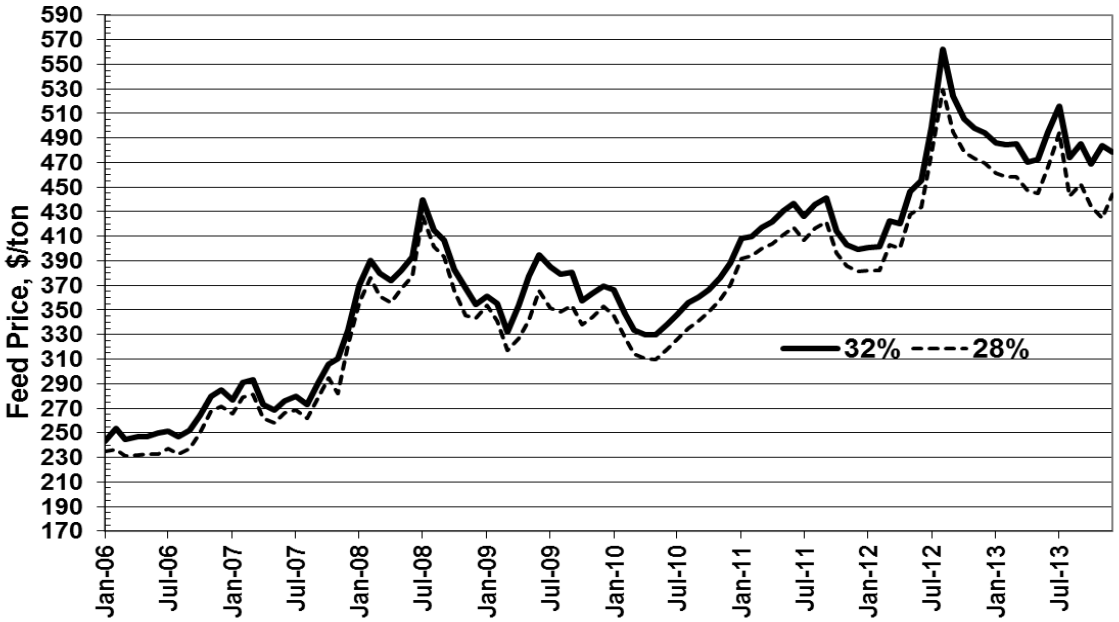
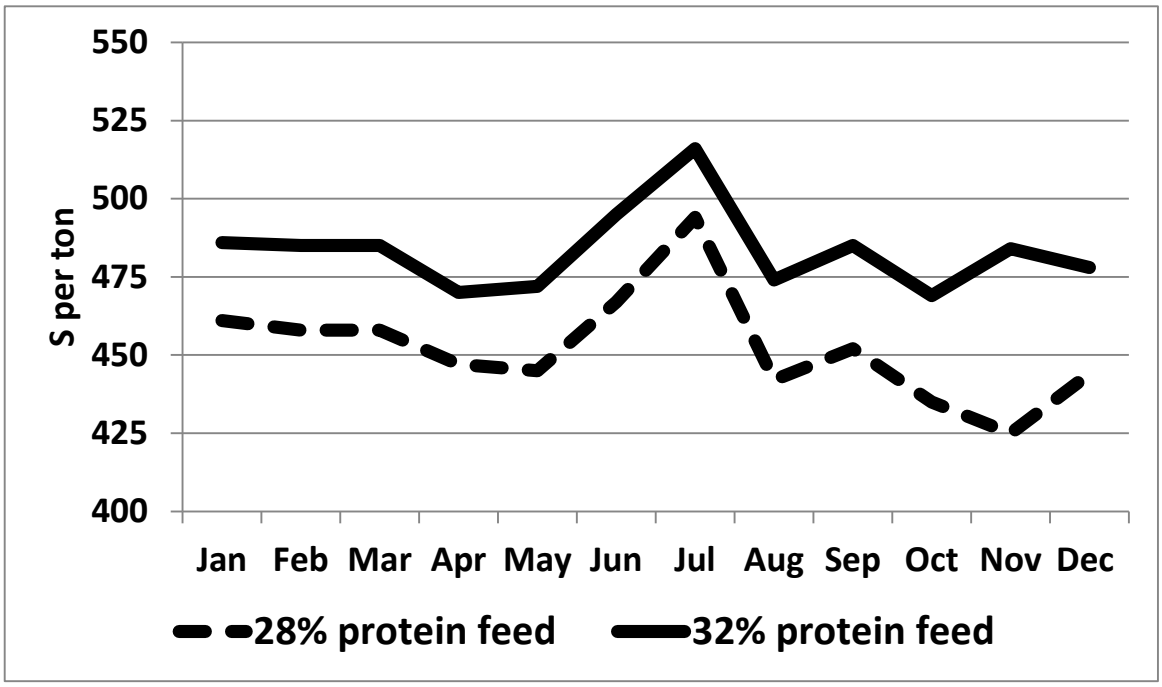


Figure 17. Monthly Prices for 28% and 32% Crude Protein, Floating Catfish Feed in 2013.



The Feed Delivered report from USDA/NASS was suspended due to sequestration in March 2013. The Catfish Institute contacted Dr. Terry Hanson, aquacultural economist at Auburn University's School of Fisheries, Aquaculture and Aquatic Sciences to continue the Catfish Feed Deliveries monthly report. Figure 18, graphically depicts and compares the monthly tons of feed delivered to the U.S. catfish industry in 2007, 2009, 2011 and 2012. From this figure, it is clear the total feed being fed in the U.S. farm-raised catfish industry is declining, and a clear indicator of overall catfish production declining in the U.S. Additionally, when graphed by state where the feed was delivered, the sharp declines in production occurring in individual states is seen, Figure 19. It is clear that Mississippi and Arkansas had the greatest reduction in feed purchases in 2007 through 2013 compared to the relatively stable, though declining feed delivery quantities in Alabama for the same period. Note that the Alabama feed fed dropped by 21% in 2013 compared to 2012 levels.

In 2013, Mississippi fed 206 thousand tons of catfish feed, which is down 42% from 2004 levels (353 thousand tons); while Alabama fed over 120 thousand tons in 2013 which is down 84 thousand tons from 2004 levels (-41%), Figure 19. Arkansas fed 28 thousand tons of feed in 2013, which is down 77% from 2004 levels (117 thousand tons). Meanwhile, Louisiana catfish production has nearly disappeared, with feed fed in 2013 at just over 1.6 thousand tons, down 96% from 2004 levels (39 thousand tons). There have been some increases and decreases in catfish production in other states west and east of the Mississippi River respectively, and combined these states fed 36 thousand tons in 2013, Figure 19, representing 9% of all feed fed in the U.S. catfish industry.

Figure 18. Comparison of Total U.S. Catfish Foodsize Feed Delivery by Month between 2007, 2009, 2011 and 2013.

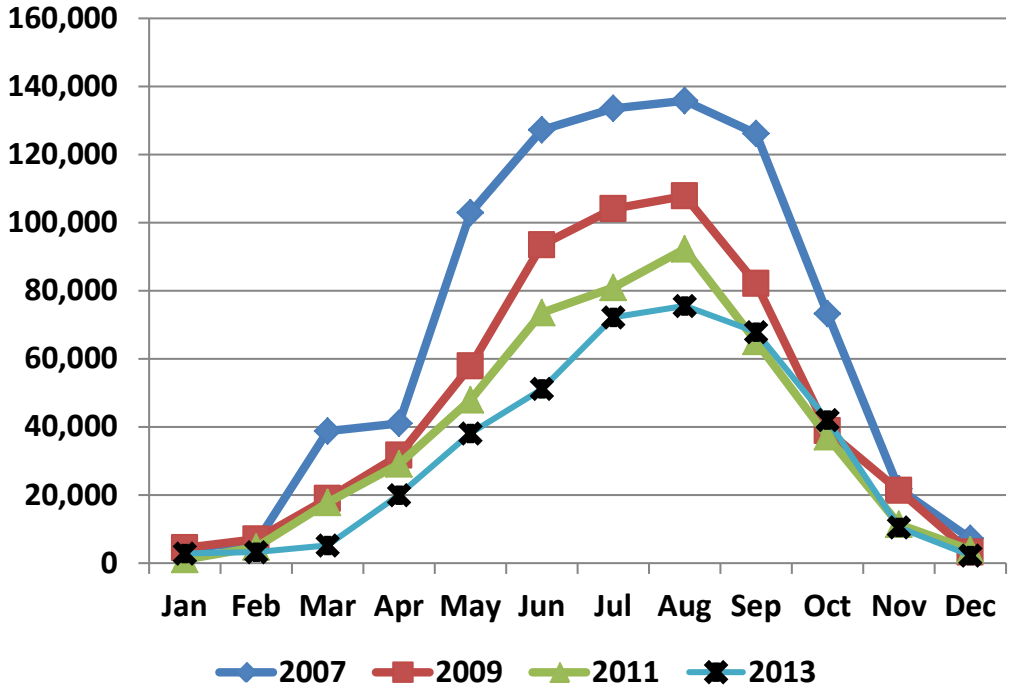
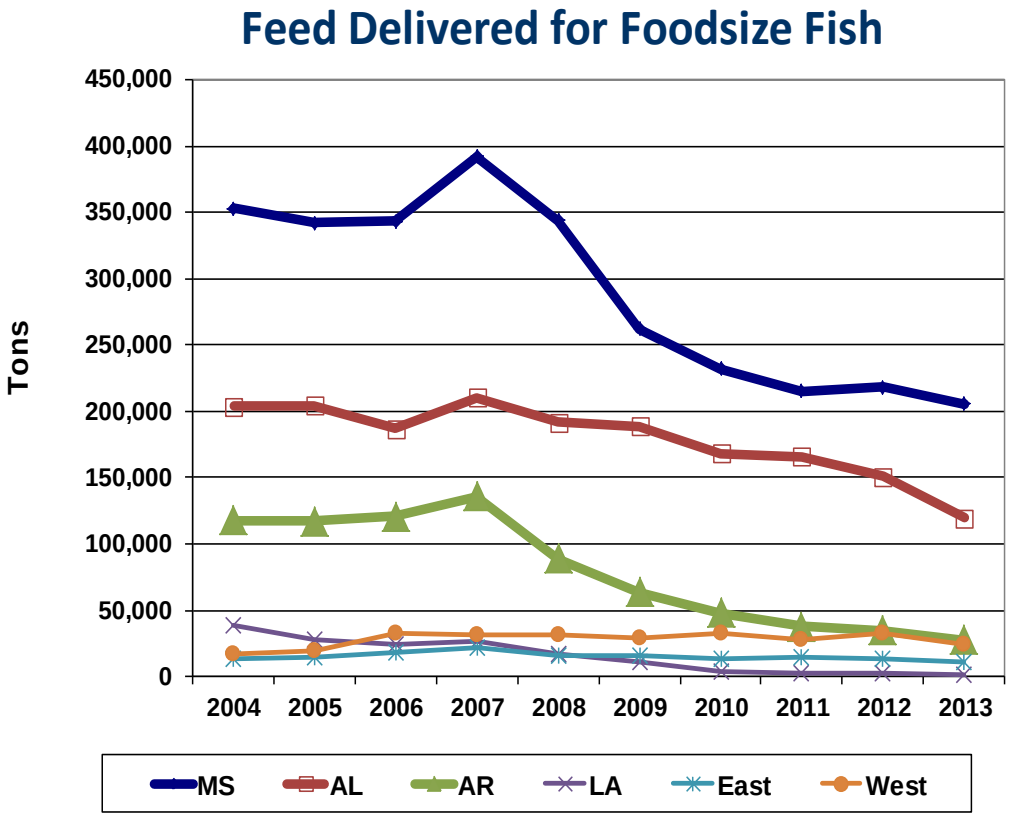


Figure 19. Catfish Foodfish Feed Delivered to each State and Remaining Other States.



7. Farm-Raised Catfish Outlook for 2014

The long term trend in U.S. consumption of fish and seafood products is peaking, with a general increase from 1970 through 2006 and in the last few years per capita quantity decreasing. Among the most consumed fish and seafood species in the U.S., farm-raised catfish produced in the U.S. is number nine, preceded by shrimp, tuna, salmon, tilapia, pollock, Pangasius, crab and cod. The final species in the top ten list was clams. The surprise in 2012 was pangasius jumping from tenth place to sixth place and moving ahead of channel catfish. Pangasius consumption is 0.7 pounds per person per year in the US, up from 0.36 pounds consumed annually per capita in 2009. This is an imported "catfish-like" product and is a substitute product to the channel catfish species grown in the U.S.

Recent trends show there is an increasing quantity of imported frozen catfish and catfish-like fillets coming into the U.S. This import trend continued and increased dramatically in 2013 to 281 million pounds, an increase of 44 million pounds over 2012 imported quantities (237 million pounds). Imported frozen catfish fillets now account for 80% of all sales of this product form in the U.S. This trend is likely to continue in 2014, due to the relatively high cost of producing and processing of U.S. catfish products. Round weight processing in 2013 from the U.S. catfish industry was up 11% from 2012 levels. There is a lower inventory of food and stocker size fish in producer ponds and a lower level of fresh/frozen products at the processor's freezers at the beginning of 2014 than at the beginning of 2013. Thus, it will be difficult to achieve the 2013 round weight processed level in 2014. The demand is there but the supply is expected to be less in 2014.

The U.S. catfish industry had a good production year in 2013 with 11% more fish harvested and processed than in 2012. The average annual feed price was higher in 2013 than in 2012 but by only 3% and only having one month where the average price was greater than $500 per ton. The range of feed prices though was higher and less volatile than in 2012. The sustained higher feed price with a flat price received by producers made 2013 a questionably profitable year. The latter half of 2013 had an average price for catfish to producers at a much higher level ($1.07 per pound) than in the first half of 2012 ($0.88 per pound). The higher fish prices coming late in the year may have had an impact on stocking fish, as this activity usually occurs in the first half of the year or fall/winter season. With the higher sustained feed price and low average price received for fish in the first half of 2013 more production acres went out of business. There was an 11,295 acre reduction (-14%) in production acreage from January 2013 to January 2014. Thus, in 2014 there is the possibility that there will be a shortage of foodsize fish for most of the year.

The price producers will receive in 2014 is hard to determine, but by the end of February, processors were paying $1.147 per pound to producers, which was $0.325 per pound more than in February 2013. With continued high catfish feed prices, catfish processors would benefit from figuring in the variable costs of production as well as fixed costs when determining the price to pay producers. Paying a price that covers variable costs will ensure short term survival of farmers and paying a price that covers variable and

fixed costs will ensure a long-term profitability and sustainability for the industry as it allows for investment in new technologies, such as in-pond raceways, that can significantly reduce the cost of production. If the breakeven cost of production covering variable cost is not paid by processors to producers, then producers will continue to go out of business, infrastructure closings will follow, and that will mean the end to the large-scale U.S. farm-raised catfish industry. On the other hand producers need to invest in newer technologies with profits they make. The question is whether the processors can pass on a higher fish price to their middlemen buyers and whether catfish producers will invest in newer more efficient production technologies. If both are possible, the US farm-raised catfish industry will compete favorably with inexpensive imported fish and seafood.

Terry R. Hanson, Ph.D.
Associate Professor
School of Fisheries, Aquaculture and Aquatic Sciences
Auburn University
April 2014

Notes from USDA NASS Reports:

General

USDA-NASS (U.S. Department of Agriculture - National Agricultural Statistical Service) provides to the public information on the production and processing sectors of the U.S. catfish industry. Over the years this data has been printed and distributed. More recently, data from 1995 to present have been put onto the Internet for easy access at http://usda.mannlib.cornell.edu/, then search for 'catfish'. However, pre-1995 data are not available on-line. Thus the reason for this publication is to put the longer time series together in one place. In some presented tables and graphs, time series have been shortened, but data for the longer series is available upon request. All data in this publication, except for catfish feed prices, comes from USDA-NASS or the state equivalent MASS (Mississippi Agricultural Statistics Service). The following notes are the notes that accompany USDA's reports, "Catfish Production," "Catfish Processing," "Catfish Feed Deliveries," and MASS annual reports.

Note: in March 2013 NASS curtailed all catfish reports due to budget sequestration issues. The Catfish Institute asked Dr. Terry Hanson, Auburn University, to continue the Catfish Processing and Catfish Feed Delivery reports as they are vital to industry transactions. This has continued to the present time. We use the same methodology and standards as NASS. The reporting by NASS on catfish processing and feed delivered may be reinstated in the next fiscal year as NASS determines its priorities and budget capability. NASS did resume its Catfish Production report in January 2014.

"Catfish Production" Report Notes:

Catfish Production Estimation and Survey Procedures:
States used every available source of producer names to make their list as complete as possible. Great care was exercised to ensure that all operations were accounted for in the estimates.

Estimation Procedures:
Sound statistical methodology is employed to derive the estimates from reported data. All data are analyzed for unusual values. Data from each operation are compared to their own past operating profile and to trends from similar operations. Data for missing operations are estimated based on similar operations or historical data.

Reliability:
Catfish production estimates are based on a census of all known active producers and, therefore, have no sampling variability. However, estimates may be subject to errors such as omissions, duplication, and mistakes in reporting, recording, and processing of the data. These errors are minimized through strict quality controls in the edit and summarization process and a careful review of all reported data for consistency and reasonableness.

Revision policy:
Estimates for the previous year are subject to revision when current estimates are made. Revisions are the result of late or corrected data.

Definitions Used for Catfish Production:
Broodfish - Fish kept for egg production, including males. Broodfish produce the fertilized eggs which go to hatcheries. The most desirable size is 3 to 10 pounds or 4 to 6 years of age.
Large Foodsize - Fish weighing over 3 pounds.
Medium Foodsize - Fish weighing over one and one-half pounds to 3 pounds.
Small Foodsize - Fish weighing over three-fourths pound to one and one-half pounds.
Large Stockers -Fish weighing over 180 pounds to 750 pounds per 1,000 fish.
Small Stockers -Fish weighing over 60 pounds to 180 pounds per 1,000 fish.
Fingerlings/Fry - Fish weighing 60 pounds or less per 1,000 fish.

"Catfish Processing" Report Notes:

Catfish Processing Estimation and Survey Procedures:
Survey data for catfish processing are collected monthly from approximately 24 processors. All participating processors must meet the minimum criteria of having a capacity to process at least 2,000 pounds live weight of catfish per 8-hour shift. The survey is conducted entirely by NASS Headquarters' staff in Washington, D.C. NASS field offices, however, are responsible for keeping Headquarters informed of any new processing operations in their state to ensure that the survey coverage is as complete as possible. Processors are contacted either by mail or telephone. Diligent effort is made to ensure that all operations are accounted for in the estimate.

Estimation Procedures:
The "Catfish Processing" report refers strictly to farm-raised fish and excludes wild capture fish. Prior to summarization, questionnaires are compared with the previous month's reports for comparable placement of data, reasonable price levels, and reasonable inventory carryover given the sales and processing totals reported. Estimates are made for those processors whose reports are not available in time to be included in the release. These plants are identified by an asterisk on page 5 of each release of the "Catfish Processing" report. Estimates are normally based on the processor's previous report and current conditions. Published totals are a straight summation of the individual reports and estimated data. Price items are weighted by the associated volumes to compute weighted average prices. The published price for total whole fish, however, reflects an adjustment to the round and gutted only price to bring it to an equivalent dressed weight price. If a plant uses a fiscal accounting system, proration is used to convert reported data to a calendar month basis. Only national level estimates are published due to the limited number of plants involved. Generally, individual items are not published if there are less than three plants reporting, or if any one plant has 60 percent or more of the total. One unique feature of the "Catfish Processing" report is the listing of cooperating processors by name on each month's release. This feature originally was used to solicit industry cooperation in maintaining coverage, but it has continued because of the processors' overall acceptance of this policy.

Reliability:

Catfish processing estimates are based on a census of all known active processors and, therefore, have no sampling variability. However, estimates may be subject to errors such as omissions, duplication, and mistakes in reporting, recording, and processing of the data. These errors are minimized through strict quality controls in the edit and summarization process, and a careful review of all reported data for consistency and reasonableness. Revision Policy: Revisions may be necessary following a review of late reports received from plants. Revisions of less than two percent of the existing published levels of any category will normally not be made.

Definitions Used For Catfish Processing:

Average Price Paid to Producers - Refers to the price of fish delivered to the processing plant door. Price includes charges for any services provided by the processing plant, such as seining and hauling, but does not include any adjustments based on year-end settlements.
Fillets - Boned sides of the fish, cut lengthwise away from the backbone. Includes regular, shank, and strip fillets and excludes any breaded product.
Fresh Fish - Fish intended for immediate consumption. Also referred to as "ice-packed."
Frozen Fish - Fish which are individually quick-frozen and glazed (IQF) or individually bagged and bulk frozen.
Nuggets - Small fillets cut from below the rib section of the fish. Usually includes breading or added ingredients.
Round and Gutted Only - Fish with no processing done or viscera only removed.
Round Weight - A term for fish live weight.
Steaks - Cross-section cuts from larger dressed fish.
Strips - Finger size pieces of fish cut from fillets. Usually includes breading or added ingredients.
Whole Dressed - Weight of whole fish with only head, viscera, and skin removed. Generally, 60 percent of the live weight remains as dressed fish.
Other catfish - Includes regular, shank, and strip fillets and excludes any breaded product.
Whole - Includes round and gutted and whole dressed fish
Other - Differs from “other” category used by USDA-NASS. Includes steaks, nuggets, and all products not already reported, including weight of breading and added ingredients.
Total Fresh - Includes whole, fillet, and other forms of fresh catfish.
Total Frozen - Includes whole, fillet, and other frozen catfish.
Total - Includes all fresh and total frozen catfish product forms.

Processing data were compiled in cooperation with the following processors:

America's Catch
Carolina Classics Catfish, LLC
Fish Breeders of Idaho, Inc.
Guidry Catfish, Inc.
Harvest Select Catfish, Inc.
Lake's Farm Raised Catfish, Inc.
Prime Line Inc.
Simmons Farm Raised Catfish, Inc.
Superior Fish Processors
Bowers Shrimp and Fish
Consolidated Catfish Producers, LLC
Freshwater Farms Products, LLC
Haring's Pride Catfish
Heartland Catfish
Pride of the Pond
Seabrook Seafood, Inc.
SouthFresh Farms

(As of the Jan., 2014)

"Catfish Feed Deliveries" Report Notes:

Survey Procedures: Survey data for catfish feed are collected from feed mills by the USDA-NASS Mississippi Field Office, who is responsible for ensuring survey coverage is as complete as possible. Mills are contacted by mail, telephone, fax, or internet. All cooperating feed mills have allowed NASS to publish data at the State, Regional, and National level.

Estimation Procedures: The "Catfish Feed Deliveries" report refers strictly to catfish feed delivered to bonafide catfish producers and excludes catfish feed delivered to producers of other species. The totals include both bagged and bulk feed. Prior to summarization, questionnaires are compared to previous reports for comparability. Estimates are made for feed mills whose reports are not available in time to be included in the release. Estimates are based on the mill's previous reports and current conditions. Published totals are a straight summation of the individual reports and estimated data.

If a mill uses a fiscal accounting system, proration is used to convert reported data to a calendar month basis.

Two unusual features of this report are worthy of note: (1) cooperating feed mills are listed by name, and (2) it is impossible for the public to infer the amount of catfish feed produced in each state. Since many mills deliver feed to more than one state and to growers of other species, any inferences about overall production per state or per mill are not valid.

Reliability: Catfish Feed estimates are based on a census of all known active and cooperating catfish feed mills, and therefore have no sampling variability. However, estimates may be subject to errors such as omissions, duplication, and mistakes in reporting, recording, and processing of the data. These errors are minimized through strict quality controls in the edit and summarization process, and a careful review of all reported data for consistency and reasonableness.

Revision Policy: Revisions may be necessary in the following month's publication pending a review of late reports received from mills. Revisions to previous estimates are made to improve month to month relationships. Estimates for the previous month are

subject to revision in all States each month when current estimates are made. In February, all monthly estimates for the previous year are reviewed and subject to revisions. The review is primarily based on data that may have been received after the original estimates were made.

Definitions Used for Catfish Feed Sales

Broodfish - Fish kept for egg production, including males.
Catfish Feed - For the purposes of this report catfish feed is defined as feed delivered to bonafide catfish producers. Thus, it is not the absolute total amount of feed produced or even sold by a mill. (Some catfish feed is sold to producers of other species of fish.) The definition includes medicated feed.
Catfish Feed for Foodsize Fish - Feed containing pellets larger than 1/8 of an inch.
Catfish Feed for Fingerlings/Broodfish - Feed containing pellets 1/8 of an inch or smaller.
Fingerlings - Smaller fish about 2 to 6 inches in length.
Foodsize Fish - Fish being grown commercially for human consumption. Optimum sizes at harvest depend on the market but are generally no lower than 3/4 pound but near one pound.

Data were compiled in cooperation with the following feed mills:

Alabama Feed Mill LLC
Delta Western
Flint River Mills, Inc.
SouthFresh Feeds
Topwater Feed Mill
Carolina Fish Feeds
Fishbelt Feeds, Inc.
Land O' Lakes
Star Milling Co.

(as of January 2014).

Mississippi Catfish Notes:

Mississippi data was obtained from Mississippi Agricultural Statistics Supplements.

Methods for gathering data: Much of the data used to calculate statistics published by the NASS is collected by a part-time staff of telephone and field enumerators. This enumerator staff is employed by the National Association of State Departments of Agriculture (NASDA) and serves as outside contract workers for the USDA. The National Agricultural Statistics Service is recognized as one of the premier statistical organizations in the world. That reputation rests in large part on the efforts of enumerators in every state in the U.S. The Mississippi Agricultural Statistics Service gratefully acknowledges the work and integrity of its own enumerators.