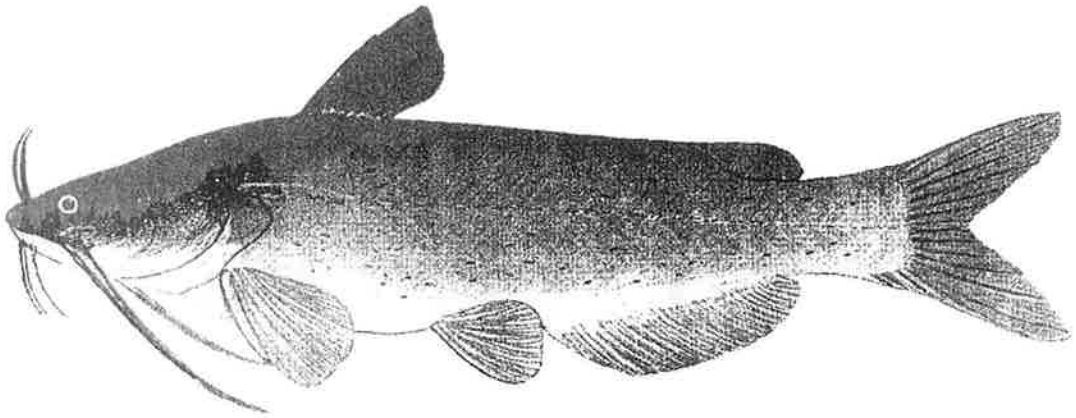
2014 U. S. Catfish Database



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Mississippi Agricultural Statistics Service (MASS)

U.S. Farm-Raised Catfish Industry
2014 Review and 2015 Outlook

Highlights

- U.S. farm-raised catfish was eighth in the 2013 "Top 10" fish and seafood consumption list for Americans, who consumed 14.5 pounds of fish and seafood per person, 0.56 pounds of which was 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 2014, 301 million pounds were processed, down 32 million pounds (-10%) from 334 million pounds processed in 2013; and a 54% decrease since the 2003 peak.

- Imports of frozen catfish fillets decreased by 42 million pounds (-15%) to 239 million pounds in 2014; however, imports still account for 80% of all U.S. sales of frozen catfish and catfish-like fillet products.

- There were 69,910 acres of water in catfish production in the U.S. in January 2015, down 2.5% from January 2014. Current production acreage for the top three catfish producing states, Alabama, Arkansas and Mississippi was down 7,700 acres (-11%) to 62,100 acres.

- The average annual price received by producers was $1.189 per pound in 2014, up $0.213 (+22%) per pound from the 2013 average price of $0.974 per pound. In 2014 there was a $0.165 per pound difference between the high (June, $1.274 per pound) and low (January, $1.109 per pound) pond bank prices received during the year.

- Total producer income in 2014 was $358 million, a 10% increase over 2013 producer income of $325 million, due primarily to the increase in price paid by processors to producers as overall quantity sold decreased.

- In-pond inventories of foodsize fish in January 2015 were down 2% from January 2014 levels. Stocker inventory was down 11% from January 2014 levels. Fingerling weight (and number) inventory was down 1% (and up 7%) from January 2014 levels. Broodfish pounds were down 12% from January 2013 levels.

- Catfish feed prices (32% protein) in 2014 averaged $482 per ton, down $1 per ton from the 2013 average feed price of $483/ton. Note: 2014 feed prices peaked in April ($515/ton) while the lowest feed price in 2014 occurred in October ($448/ton).

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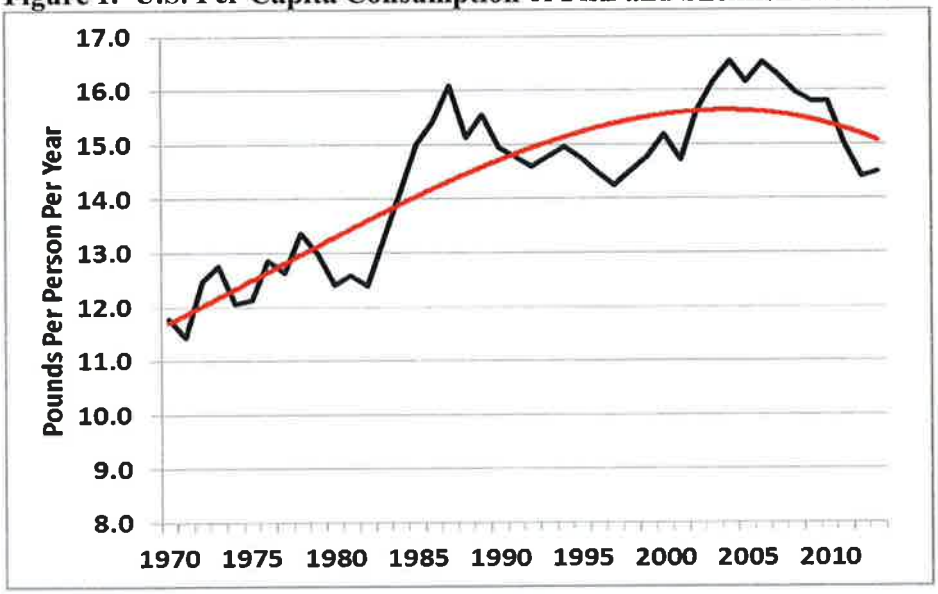
The 2014 review and the 2015 outlook report on recent trends in the U.S. catfish industry were derived primarily from National Agricultural Statistics Service (NASS) reports - Catfish Production, Catfish Processing and Catfish Feed Deliveries reports. However, due to sequestration NASS stopped doing the latter two reports in March 2013. NASS has continued conducting the twice yearly Catfish Production report.

1. U.S. Fish and Seafood Consumption

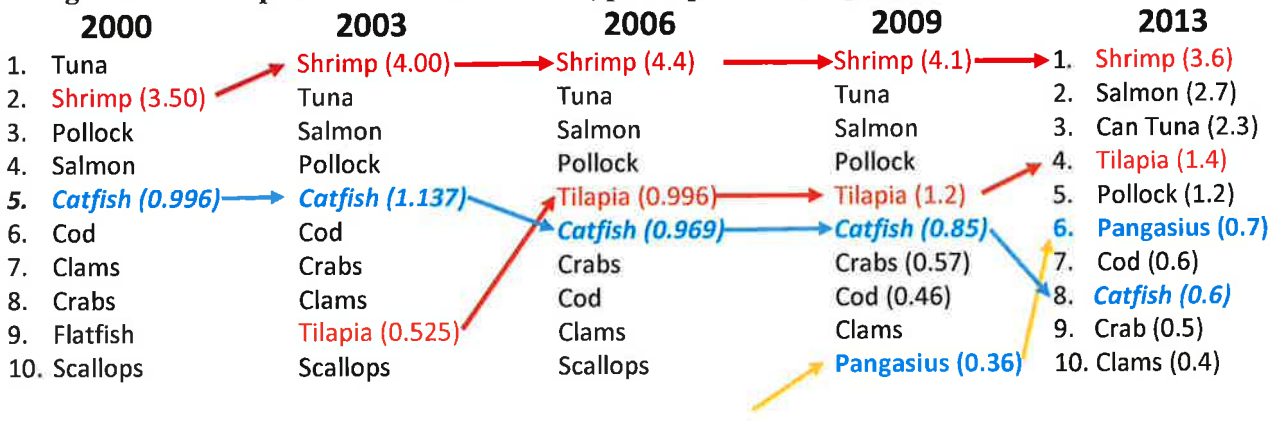
U.S. per capita consumption of fish and shellfish was 14.5 pounds (edible meat) in 2013. This total was 0.1 pounds greater than the 14.4 pounds consumed in 2012, Figure 1. The small change is due to an increase in canned seafood consumption where a small reduction in canned tuna consumption was offset by a larger increase in canned salmon consumption. Domestic production of canned salmon was particularly high due to a large pink salmon harvest in 2013. Per capita consumption of fresh and frozen products was 10.5 pounds, with no change from 2012 levels. 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 3.7 pounds per capita in 2013, up 0.1 pounds from 2012. Cured fish accounted for 0.3 pound per capita, the same amount as in prior years. (Fisheries of the United States, 2013, NOAA Office of Science and Technology, p.101 http://www.st.nmfs.noaa.gov/Assets/commercial/fus/fus13/FUS2013.pdf).

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. In 2013 Salmon supplanted canned Tuna as the number two preferred seafood. Canned tuna is now in third place and with shrimp and salmon above two pounds consumed per person per year in the U.S. Tilapia surpassed Pollock in 2012 and has stayed at number four in popularity. Pangasius rose to sixth place in 2012 and stayed there in 2013. U.S. farm-raised catfish dropped to ninth in the 2012 but rose to number eight in 2013 with Americans consuming just over 0.56 pounds per person per year.

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



2. Imports

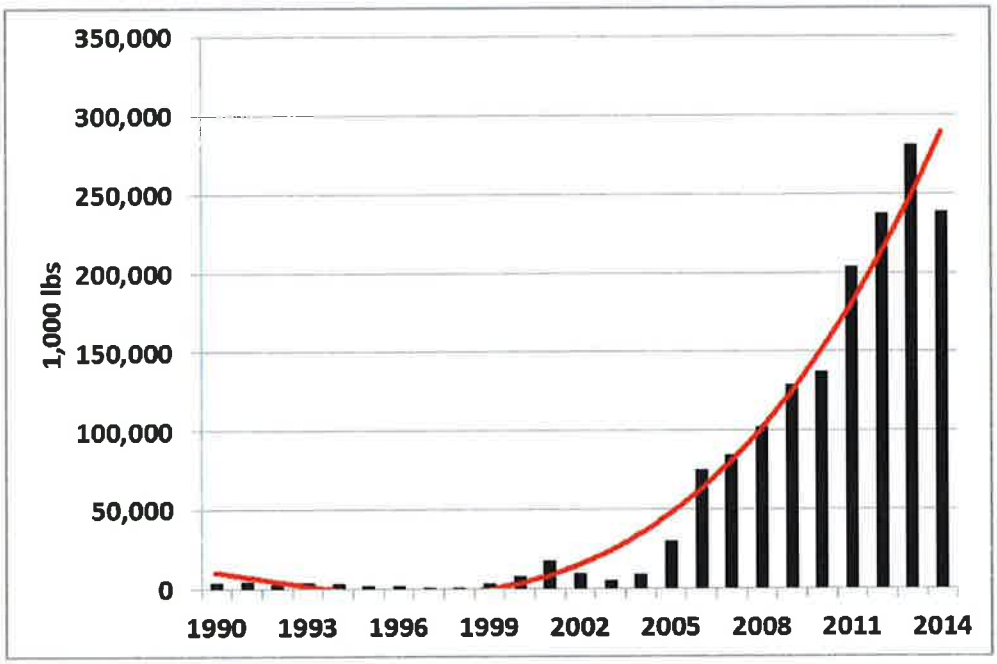
Imports of frozen catfish and catfish-like fillets decreased by 42 million pounds (-15%) to 239 million pounds in 2014; and imports now account for 80% of all U.S. sales of frozen catfish fillet product.

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%);
- in 2013 the import quantity increased to 281 million pounds (+ 18%); and
- in 2014 the import quantity decreased to 239 million pounds (- 15%).

In total, the U.S. farm-raised 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, 69 million pounds in 2013 and 61 million pounds of frozen fillet product in 2014, Figure 4.

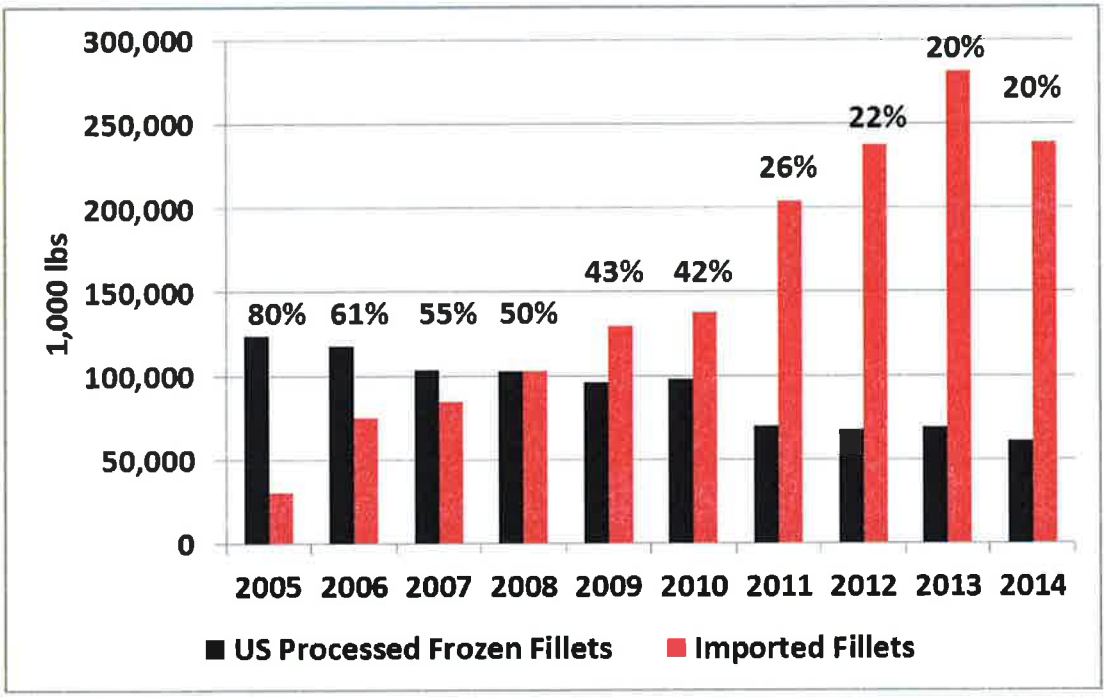
Figure 3. Imported Catfish, 1991 – 2014.



The quantity of imported frozen catfish and catfish-like fillets sold in the U.S. was equal to the quantity of U.S. processed frozen catfish 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 until 2013. In 2014 the volume percentage was equal to the 2013 level. Domestically produced frozen catfish fillet products made up 20% of the entire quantity sold in the U.S. in 2013 and 2014 (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 U.S. market share for frozen catfish and catfish-like fillet products (U.S. percentage of sales have declined from 80% to 20% during this same period). Much of this decline could have been related to the higher domestic catfish fillet price and to domestic catfish feed prices that increased the cost of producing domestic farm-raised catfish. However, we may be seeing the beginning of a sea change. Emerging U.S. consumer trends to buy products that are locally sourced with known production methods and approved, safe inputs may favor the U.S. farm-raised industry.

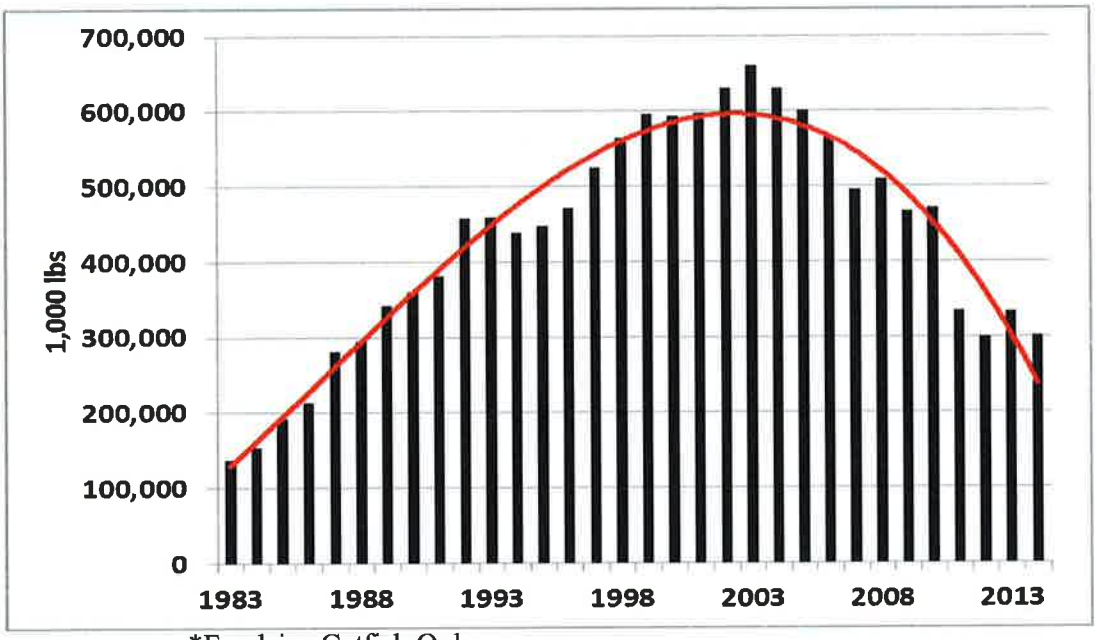
Figure 4. Quantity of U.S. Catfish and Imported Catfish-Like Frozen Fillets Sold in the U.S. (U.S. percentages of frozen fillets sold are in boxes), 2005 - 2014.



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

The U.S. catfish quantity processed provides a view of what was in demand and supplied to the U.S. market place. Figure 5 shows the annual amount processed and the trend line in red. 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 2014, 301 million pounds were processed, down 32 million pounds (-10%) from 334 million processed in 2013. From 2003's high to the 2014 level, there has been a 360 million pound decrease (-54%) in U.S. farm-raised round weight catfish processed.

Figure 5. Round Weight Processed by U.S. Processors*, 1977 – 2014.



*Foodsize Catfish Only

During the 1992 to 2014 period frozen catfish fillet product sales have declined by 10 million pounds (-17%), while frozen "Other" product sales have declined by 16 million pounds (-43%) and frozen whole catfish product sales have declined by 15 million pounds (-20%), though from 1996 to 2001 there was a large increase and from 2001 to 2011 there was a striking decrease in volume processed, Figure 6.

Likewise during the same 1992 to 2014 period fresh catfish fillet product sales have declined by 38 million pounds (-42%), while fresh "Other" product sales have declined by 42 million pounds (-42%) and fresh whole catfish product sales have declined by 26 million pounds (-52%), Figure 7. Again, there was the increasing period from 1994 through 2003, a decreasing period from 2004 to 2011 and for the last few years a relatively stable period.

Figure 6. U.S. Processed Weight of Frozen Catfish Products, 1992 - 2014.

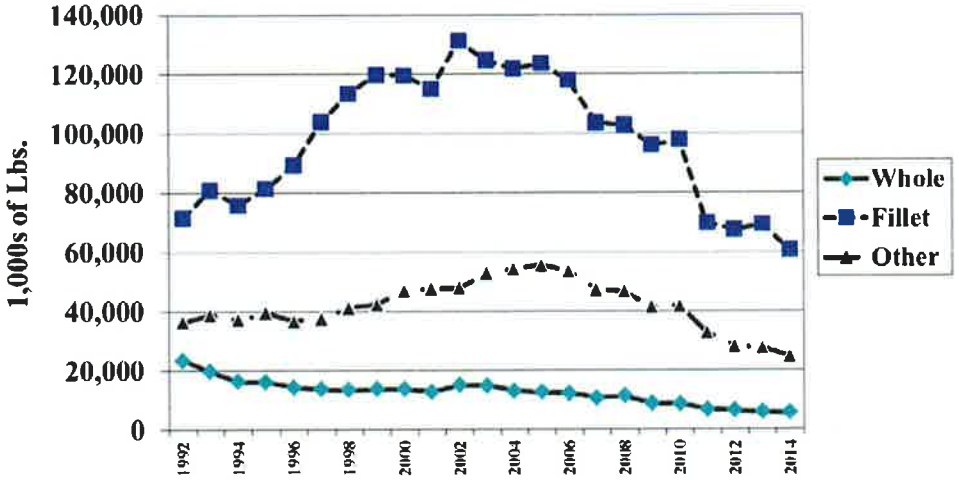
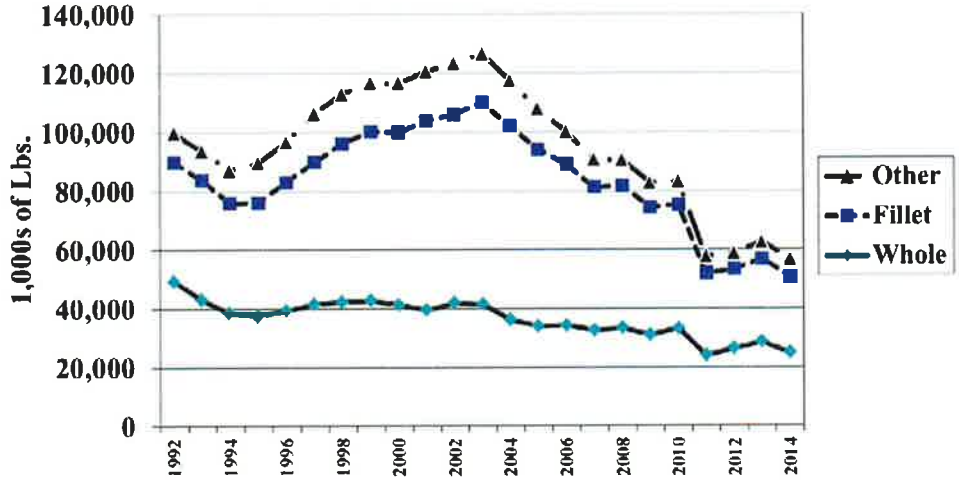


Figure 7. U.S. Processed Weight of Fresh Catfish Products, 1992 - 2014.



4. U.S Farm-Raised Catfish Production

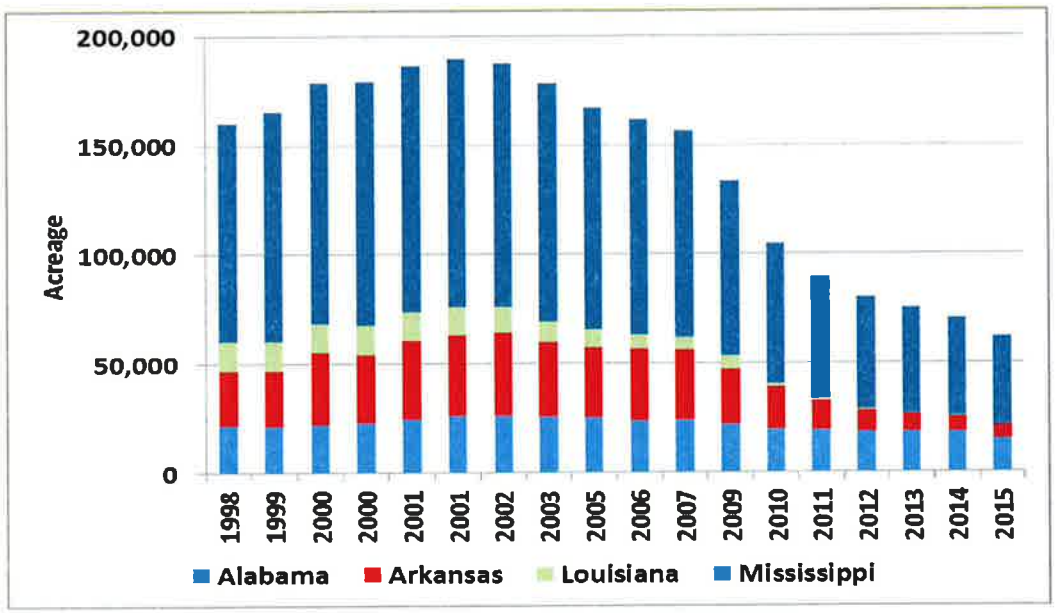
Sales of domestic catfish products (foodfish, broodfish, stockers, fry, and fingerlings) in 2014 were approximately $352 million, down 1.4% from 2013 ($357 million) sales. Production acreage was projected to be less in 2015 than in 2014, and the rate of decrease increased from 2014 to 2015 (-10%) compared to 2013 to 2014 (-6%) rate, Figure 8. U.S. farm-raised catfish production acres have declined to 69,910 acres (projected use from January 2015 NASS Catfish Production report) from a 2002 high of 196,760 acres. This is a 126,850 acre decrease (-64%) in 13 years, Figure 8. Since 2002, Mississippi catfish production acreage has declined 70,500 acres (-63%), Arkansas acreage has

declined 32,200 acres (-85%), Louisiana acreage has declined 11,475 acres (-95%), and Alabama acreage has declined 10,600 acres (-41%).

Catfish feed prices soared upward from 2005 to 2013 shocking the US catfish industry but have caused processing plants to go up in the price they paid producers. The time it took to exercise this price increase probably led to a lot of the pond acreage and operators to go out of business. However, this assertion must be buffered by the reality that it took time for the U.S. market place to accept higher catfish product prices that allowed processors to pay more to producers. This shock to the industry resulted in a dramatic decrease in catfish production acreage.

Many producers who used to plant row crops in Arkansas, Louisiana and Mississippi delta regions converted their pond acreage back into corn and soybean production. There was a 7,815 acre reduction (-10%) in production acreage from January 2014 to January 2015. Producers' income, that is the average annual price received across the whole industry by producers multiplied by total round weight processed, was $34 million (+10%) more in 2014 ($358 million) than in 2013 ($325 million).

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



5. Fish Price

The shortage of catfish during 2014 resulted in a higher price paid to producers by processors. The pond bank price paid to catfish producers averaged $0.767 per pound in 2007 and averaged $1.189 per pound in 2014, an increase of 52% over the last seven years. In 2013 the average price paid to producers was $0.976 per pound compared to $1.189 per pound 2014 price paid, a 22% increase, Figure 9.

It is noteworthy that 2014 (and 2011) prices to producers were the highest ever and reflected the shortage of fish available during those years, Figures 9 and 10. The 2014 price level began high, at $1.109 per pound in January, reached a high of $1.274 per pound in June and went down to $1.153 in December. The shortage of fish in 2014 appears to be continuing into 2015, so a high price to producers is expected.

Figure 9. Nominal Prices Paid to U.S. Catfish Producers by Month, Jan 2006 - Dec 2013.

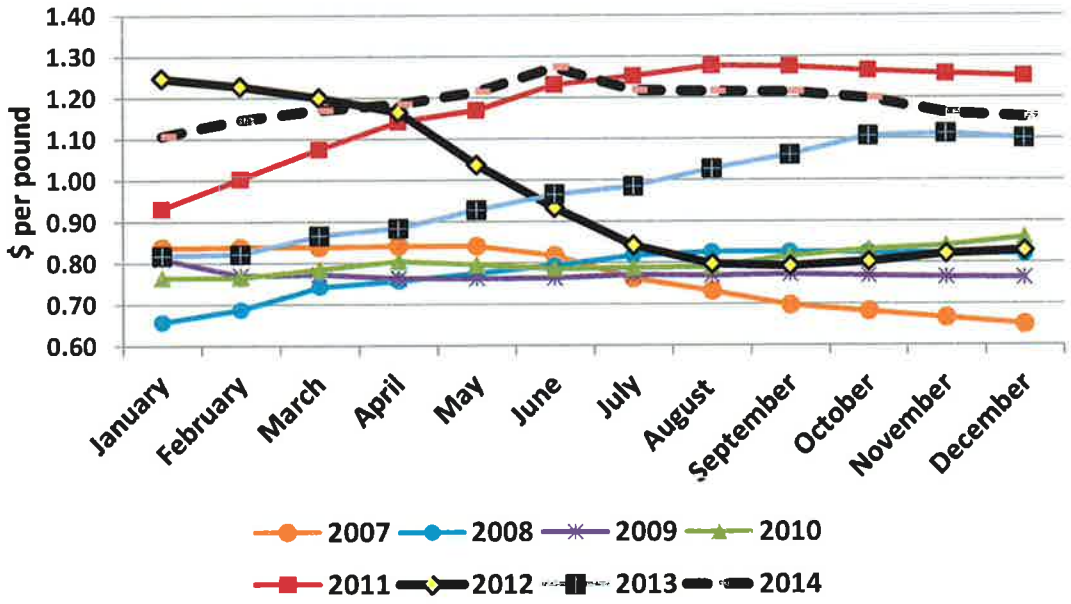
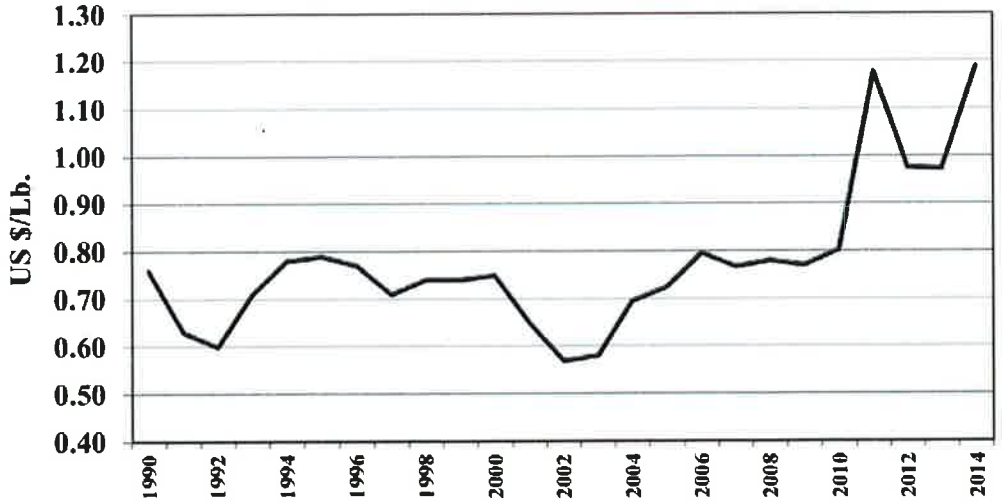


Figure 10. Nominal Prices Paid to Producers by Month, 2007 - 2013.

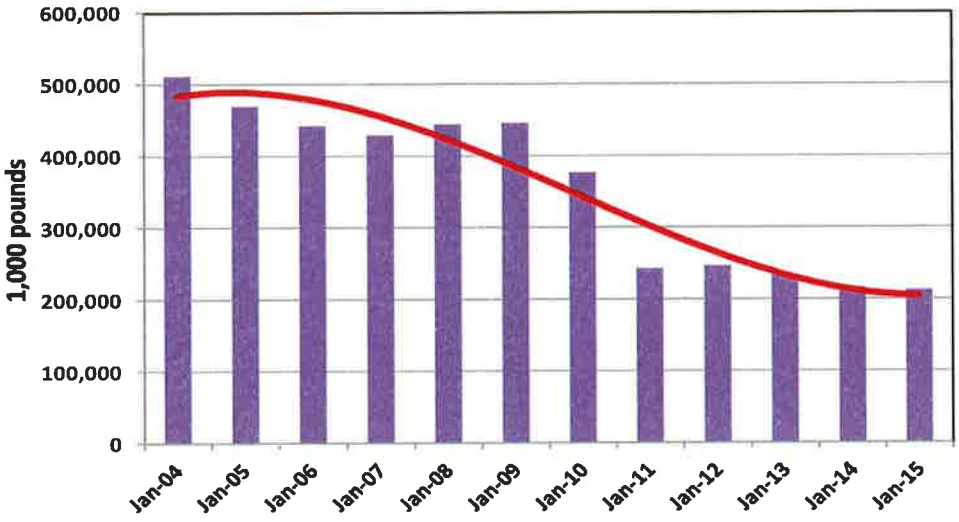


6. In-Pond Fish Inventory

As stated earlier, the 2014 processing volume was 301 million pounds and the 2013 volume was 334 million. If these volumes are to be reached in 2015 the fish inventoried in ponds by size is essential to predicting this year's production potential. Specifically, foodsize in-pond live fish inventories, available from the January 2015 NASS Catfish Production report, will be the supply source for the immediate term. Keep in mind that processor's frozen stored product inventory is available as well to supply fish to markets. The in-pond inventory of live stocker sized fish will be the supply source for the mid- to late 2015 and early 2016 periods. The in-pond live fingerling inventory will be the supply source of foodsize fish for the mid-2016 and early to mid-2017 period.

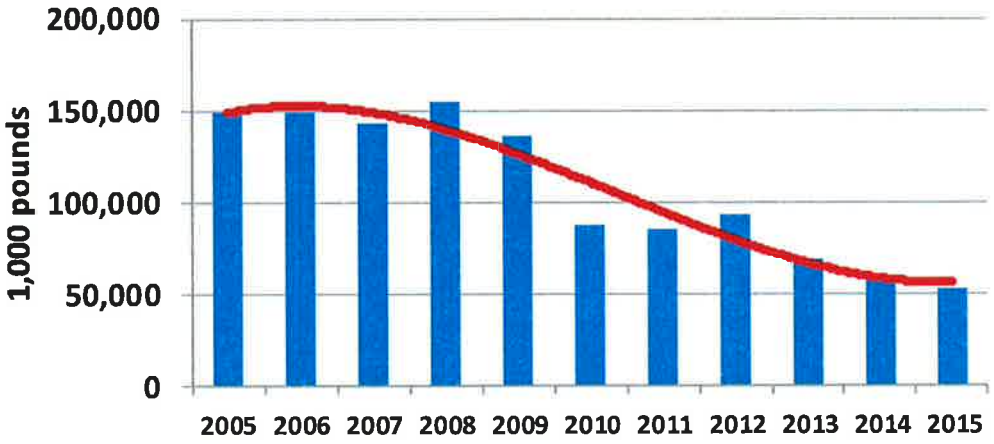
The January 2015 foodsize in-pond inventories (small, medium and large sizes) were reported at 212 million pounds, down 2% from January 2014 levels, Figure 11. Thus, there is slight shortage of readily available fish for processors in the near term.

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



The "stocker" size catfish will be harvestable in mid- to late-2015 and early 2016. The inventory of stocker sized fish in January 2015 was approximately 53.1 million pounds down 11% from January 2014 levels, Figure 12, indicating a potential shortfall of fish product in the mid- to late-2015 period, if 2014 levels of processing are to be matched.

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



The reported January 2015 fingerling quantity, in pounds, was down one percent from the January 2014 report while the fingerling numbers increased by 7% from a year ago, indicating a smaller fingerling size being available in 2015, Figures 13 and 14.

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

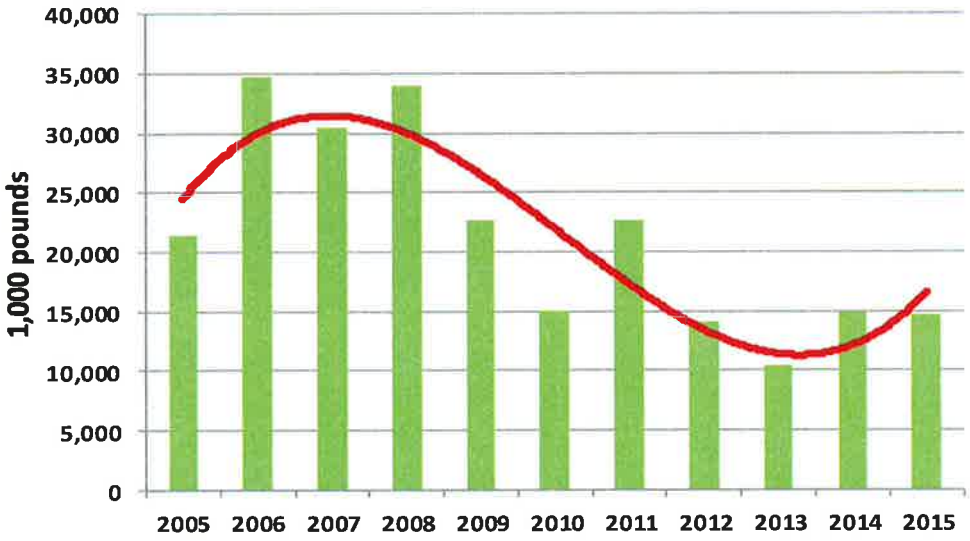
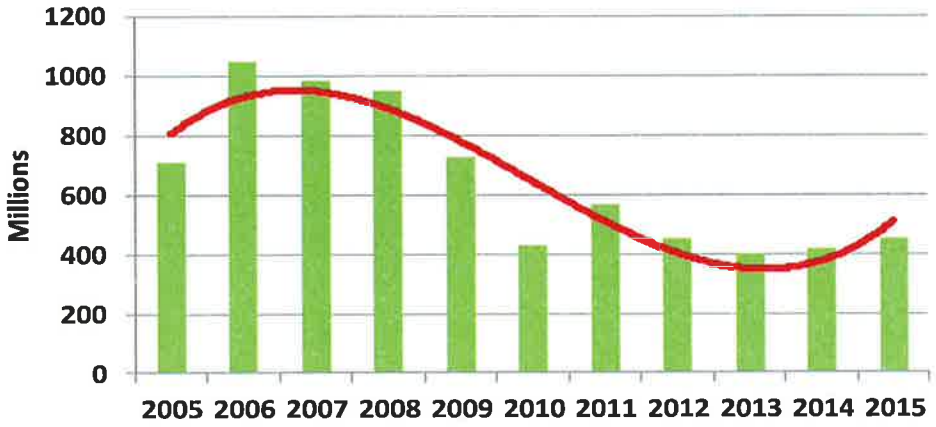
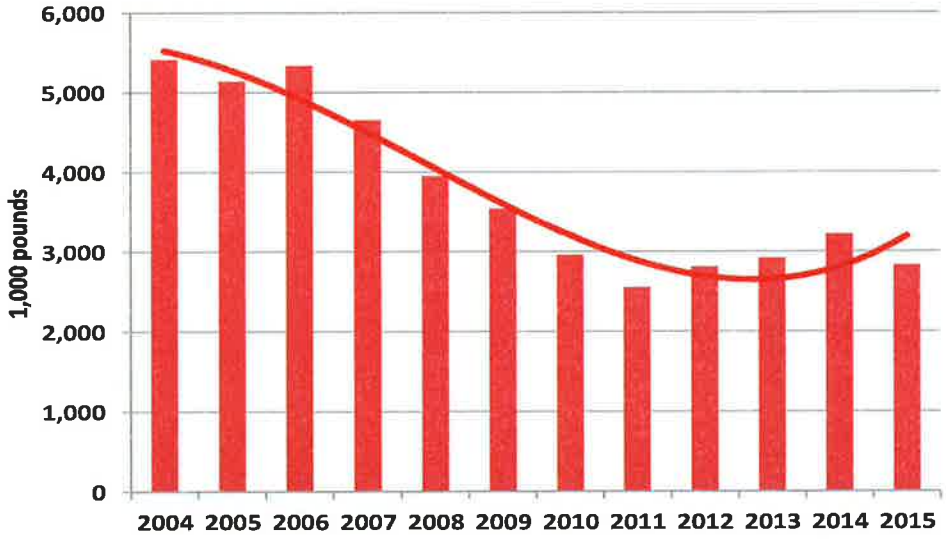


Figure 14. U.S. Catfish Fingerlings in Inventory, January of each year, number.



Many catfish production operations have gone out of business. There were 624 producers reported by NASS in January 2013, but NASS no longer provide this figure annually, so we do not know how many operations are in business now. Lower prices to producers and prior years of reduced production and processing have led to hatchery operators reducing their number of fingerlings and broodstock on hand. This may be changing as increases in the number of fingerlings occurred for the start of the 2015 production year, though pounds of broodstock decreased. Broodstock inventory from the January 2015 NASS Catfish Production reported pounds were down 12% from January 2014 levels, Figure 15. Also, the number of broodstock was down 11% as well. This amounts to fewer fingerlings being produced in 2015 and available for sale to producers for stocking in late 2015 and early 2016.

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



Thus, from an "in-pond" inventories perspective, there will be a slight shortage of readily available foodsize live fish for processors in the first half of 2015. The "stocker" size catfish inventory is lower than last year indicating a potential shortfall of fish product from this size class when they are harvestable in mid- to late-2015. The quantity of reported fingerling is up but the average size is smaller than last year indicating that they will not be ready for harvest as foodsize fish until 2016. For the future, the decrease in catfish broodstock on hand means fewer fingerlings being produced in 2015 and available for sale to producers for stocking in late 2015 and early 2016.

The fish shortages of 2011 and 2014 could have resulted in some buyers having been turned away without as much product as they would have liked to purchase. It looks like there will be a shortage of fish in 2015 as well. In 2011 and again in 2014 the U.S. catfish industry lost market share as a result of the fish shortage and this may occur again in 2015 if US catfish supply is short again. Conversely, the price to the producer and the price to processors for fillet products did increase during 2014, so maybe a shortage is good for those still in operation.

7. Feed Price

Catfish feed is expensive. Is the increasing feed price trend over the last eight years coming to an end? The high price mark of $562 per ton for 32% crude protein floating feed was in August 2012. The highest feed price month in 2013 was July when feed cost $516/ton and in 2014 the high price occurred in April when feed cost $515/ton. The average annual feed costs for 2012 to 2014 were $469, $483 and $482 per ton respectively for 32% protein feed, Figure 16. Though the 2014 average feed price was $482 per ton, the price was greater than $500 per ton during five months of 2014, Figure 17. In 2013 the feed price went above $500 per ton in only one month. So, the direction feed prices will go in 2015 is still up in the air, though if one follows the soybean futures market this may be a forecasting tool that may help indicate whether catfish feed prices will go up or down. According to agricultural economists at Auburn University it there are no severe weather events, such as drought, in the mid-west this summer the supply and prices for corn and soybean will be stable and catfish feed prices should not increase.

Figure 16. Prices for 28% and 32% Crude Protein, Floating Catfish Feed, 1997 - 2014.

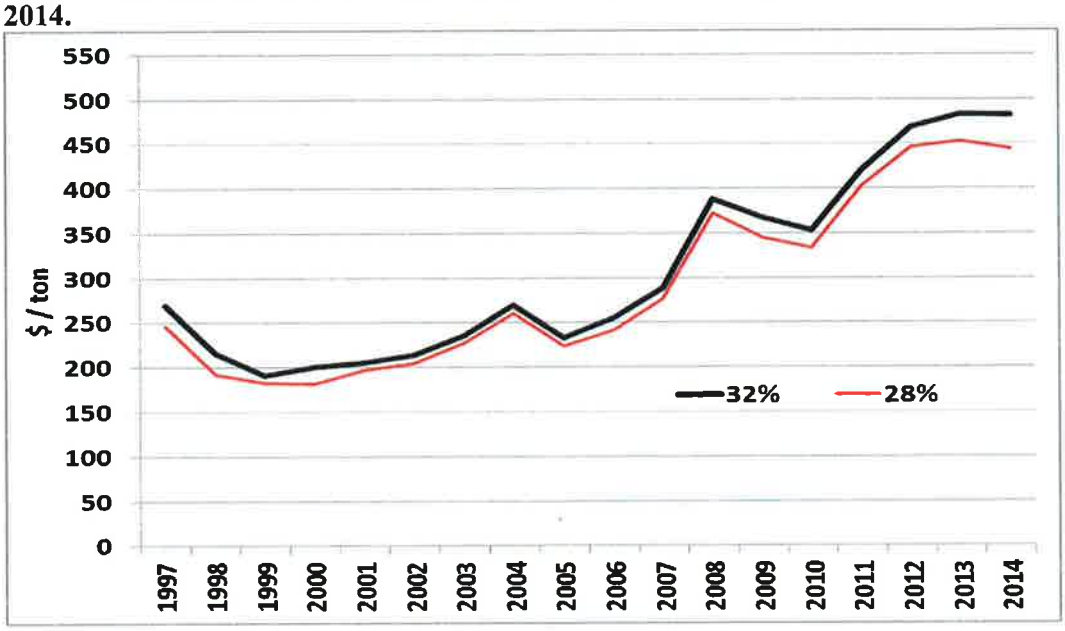


Figure 17. Monthly Prices for 28% and 32% Crude Protein, Floating Catfish Feed in 2014.

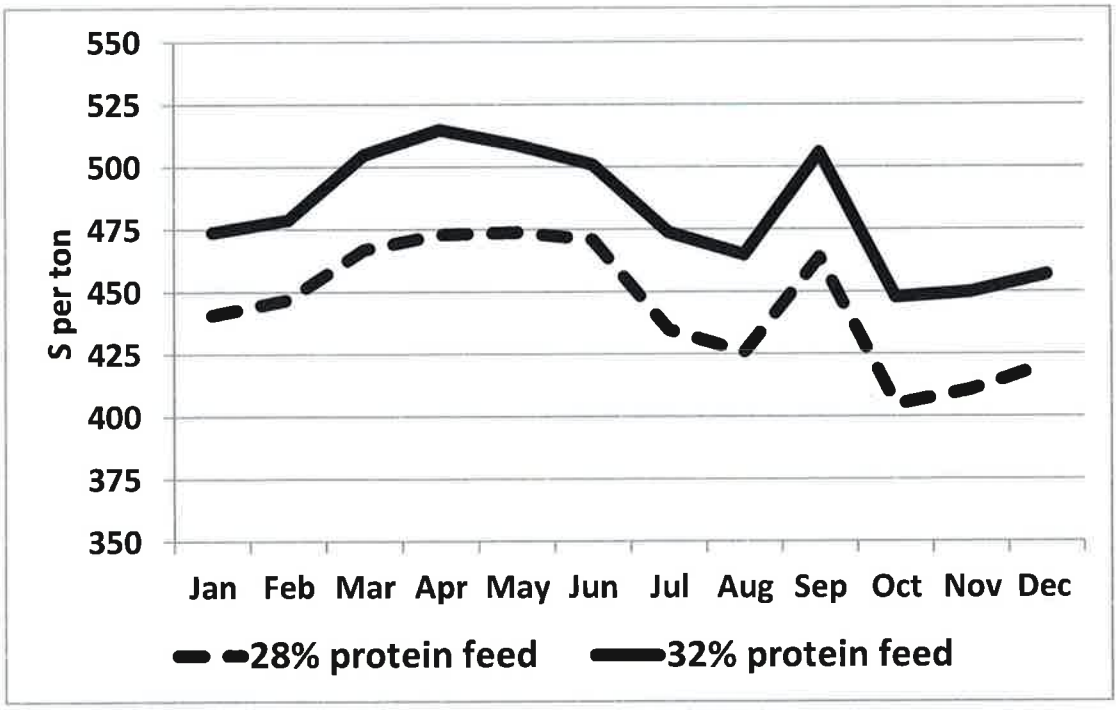


Figure 18 depicts and compares the monthly tons of feed delivered to the U.S. catfish industry in 2008, 2010, 2012 and 2014. It is clear that the total quantity of feed being fed in the U.S. farm-raised catfish industry declined from 2008 and 2010 levels, but 2012 and 2014 feed fed levels were comparable. Perhaps this is an indicator that a leveling off of the U.S. catfish industry decline is occurring.

Additionally, when graphed by state where the feed was delivered, the sharp declines in production occurring in individual states is seen, Figure 19. Clearly Mississippi and Arkansas had the greatest reductions in feed purchases since 2007. Alabama has had declining feed delivery quantities as well but in a less dramatic trend.

In 2014, Mississippi fed 196 thousand tons of catfish feed, which is down 45% from 2004 levels (353 thousand tons); while Alabama fed 124 thousand tons in 2014 which is down 80 thousand tons from 2004 levels (-39%), Figure 19. Arkansas fed 26 thousand tons of feed in 2014, which is down 78% from 2004 levels (118 thousand tons). Meanwhile, Louisiana catfish production has nearly disappeared, with feed fed in 2014 at just over 1.4 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 39 thousand tons in 2014, Figure 19, representing 10% of all feed fed in the U.S. catfish industry.

Figure 18. Comparison of Total U.S. Catfish Foodsize Feed Delivery by Month between 2008, 2010, 2012 and 2014.

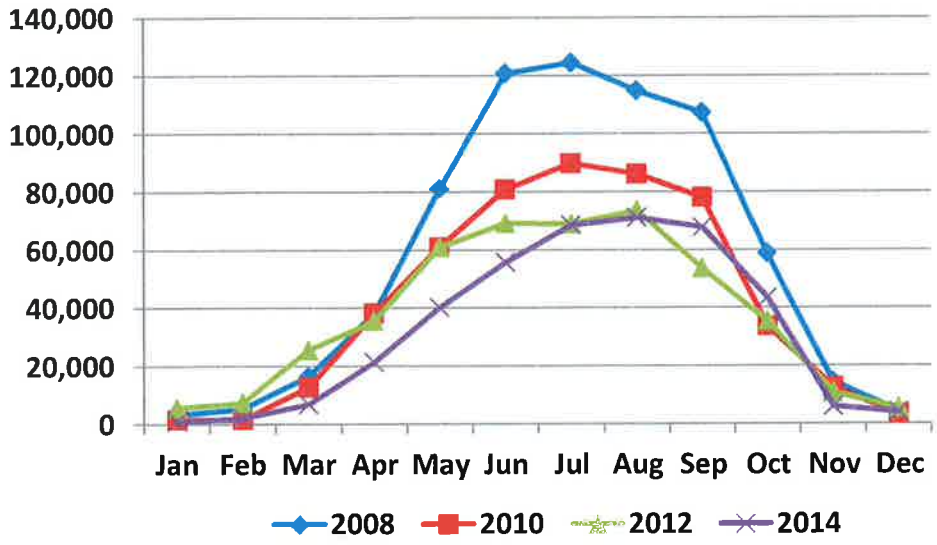
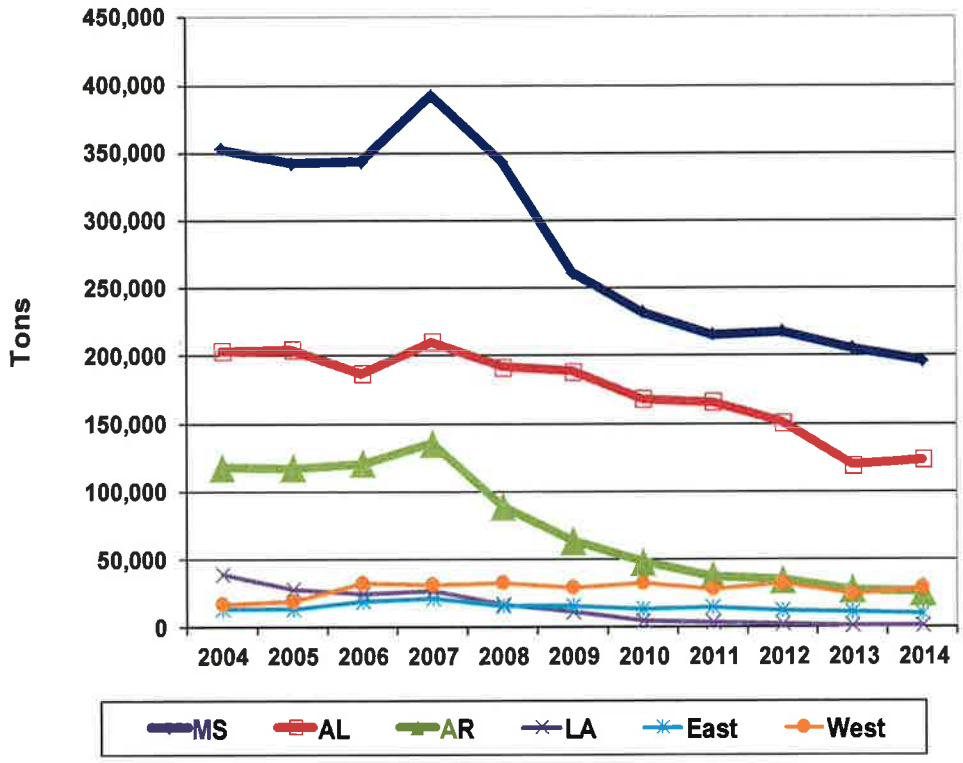


Figure 19. Catfish Foodfish Feed Delivered to each State and Remaining Other States.



8. 2014 Summary and 2015 Outlook

The long term trend in U.S. consumption of fish and seafood products seems to have peaked, with a general increase in consumption from 1970 through 2006 but in the last few years per capita quantity has decreased. Among the most consumed fish and seafood species in the U.S., domestic farm-raised catfish is number eight, preceded by shrimp, salmon, canned tuna, tilapia, pollock, pangasius and cod. The final two species in the top ten are crab and clams. Notable changes from the 2009 to 2013 period is salmon rising from number three to the second position; tilapia rising from fifth to fourth spot; pollock dropping one spot to number five; pangasius rising from number ten spot to number six spot and US farm-raised catfish falling from number six to number eight spot. U.S. catfish consumption is 0.6 pounds per person per year in the U.S., down from 0.85 in 2009.

Until 2014, there was an increasing quantity of imported frozen catfish and catfish-like fillets coming into the U.S., but in 2014 imports actually went down by 15%. This is the first time in the last ten years that imports have decreased from one year to the next.

Even with fewer imported frozen catfish fillets, imports still account for 80% of all sales of the frozen fillet product form in the U.S.

In 2014 round weight processing in the U.S. catfish industry was down 10% from 2013 levels. The last four years have seen processing quantity going up and down by 10% each year. If this up and down trend continues a 10% increase in processing may occur in 2015. Even with a 10% decrease in domestic product processed, processor sales were only down 1.4 percent due to increased wholesale prices for all U.S. catfish product forms.

From the January 2014 reporting of in-pond live catfish inventories to the January 2015 reporting of inventories there was a lower inventory of food size fish (-2%), stocker size fish (-11%) and fingerling pounds (-1% but a 7% increase in number). Additionally, total fresh and frozen product inventories were down 1.5% or 1.25 million pounds from 2013 to 2014 levels. These inventory levels indicate fewer foodsize fish available for harvest and processing in 2015 than in 2014 and will make it difficult for the U.S. catfish industry to achieve the 2014 round weight processed level of 300 million pounds. The demand for U.S. catfish product is strong but with a limited supply the price for catfish at the producer and processor levels should remain strong.

The price producers may receive for their live catfish in 2015 is hard to determine, but by the end of December 2014, processors were paying $1.153 per pound to producers, which was $0.052 per pound more than in December 2013. With catfish feed prices leveling off around $482 per ton (32% protein) in 2013 and 2014, catfish producers and processors are figuring out how to be profitable at this high feed price. Producers have become even more efficient, processors are paying more for fish and product prices are rising as they go to the market place. With the possibility of a catfish shortage in 2015, it is expected that the processor price paid to producers will remain high, maybe in the $1.08 to $1.13 range.

In 2014, the U.S. catfish industry had a 10% reduction in production from 2013. Production water acreage decreased by 10 percent from January 2014 to January 2015 (projected), which is greater than the decline of 6% from January 2013 to January 2014. The average annual feed price was similar in 2013 and 2014 with only five months in 2014 (32% protein feed) having greater than $500 per ton feed prices. However, the range of feed price was greater, that is, more volatile than in 2013. With soybean and corn production not expected to change much from current expectations (without severe weather events) catfish feed should cost the same or less in 2015. Through April 2015, the average price for 32% protein feed was reported at $420 per ton, down $62 per ton from the 2014 average price. The price received by producers in April 2015 was $1.13 per pound ($1.08 per pound in Alabama due to harvest and hauling costs being subtracted). So, with receding feed costs and a good fish price the outlook for individual producer profitability is good in 2015. This should encourage producer demand for fingerlings to increase and encourage hatcheries to make plans to increase their broodstock numbers and fingerling supply in 2015 and 2016.