

Southern™
Illinois University
Carbondale

Live Haul Aquaculture Marketing & Advantages of Collective Sales

Illinois Aquaculture TechSERV
Center for Fisheries, Aquaculture, & Aquatic Sciences

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What is Aquaculture?

Aquaculture is the production of aquatic animals and plants under controlled conditions for all or parts of their lifecycles. Interest in aquacultural production is on the rise because restrictions on the wild harvest of many seafood species may diminish wild harvest seafood supplies. During the last two decades, the value of U.S. aquacultural production rose to nearly \$1 billion.(USDA 2012)

The History of Aquaculture in Illinois:

- **Prior to 2000** – Aquaculture in Illinois was limited to a few commercial catfish farming operations and production of fingerlings for stocking of private ponds and lakes.
- **Beginning in 2000** – The Illinois Fish Farmers Cooperative boosted the development of the aquaculture industry by promoting farming of channel catfish, making available technical services, processing, and marketing.
- **During 2003** – Low prices on catfish due to foreign competition forced the shutdown of the fish processing facility, and caused farmers to consider alternative and more profitable fish species.
- **In 2004** – Former Governor Blagojevich abolished the funding that provided needed technical assistance and marketing to the aquaculture industry.

IL Aquaculture History-Cont.

In 2005 – Sen. Luechtefeld secured funding to continue technical assistance to the aquaculture industry in Illinois through SIU.

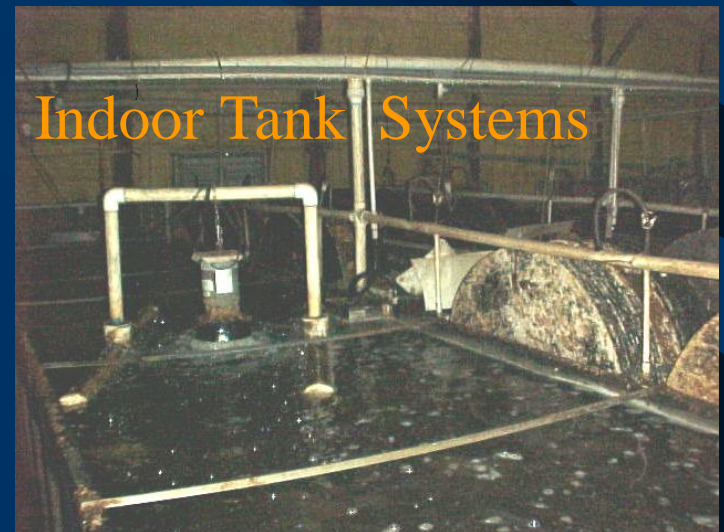
June 2006 - Illinois Department of Agriculture refused to renew funding for Illinois Aquaculture TechSERV after July 1, 2006.

July 2006 – Limited funding was secured through the IL. Department of Commerce & Economic Opportunity(DCEO) for an estimated 1 year period.

September 2007-Present – The majority of the funding for aquaculture is generated by brokerage fees on fish sales from fish farms to cover technical services and marketing provided by the IATS program at SIU.



Diversity in Illinois Aquaculture



Aquaculture Species in IL

* Hybrid Striped Bass

* Largemouth Bass

Tilapia

Channel Catfish

Freshwater Prawn

Rainbow Trout

Hybrid Sunfish

Yellow Perch

Paddlefish

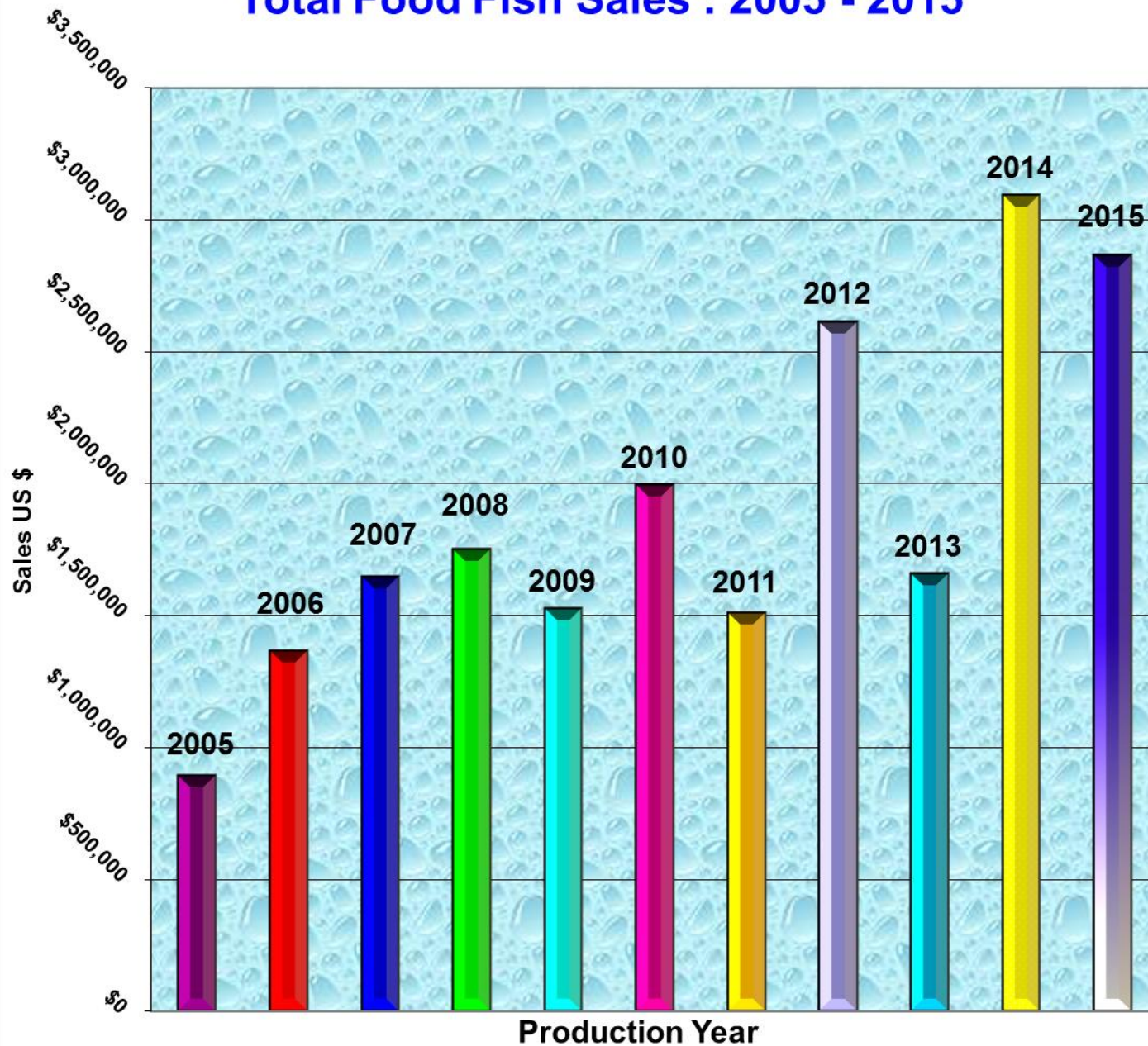
Triploid Grass Carp

Minnows

Other Species



Illinois Aquaculture Industry : Total Food Fish Sales : 2005 - 2015



Hybrid Striped Bass



- 2001 – 1 Producer and 5,000 pounds harvested
- 2006 – 22 Producers and 220,369 pounds harvested
* Price = \$2.85-\$3.00/Lb.
- 2015 – 16 Producers and 150,257 pounds harvested
* Price = \$4.00-\$4.25/Lb.

Overall HSB Aquaculture Production in the US(2013):

- 7,443,900 Total Lbs. :
 - * 6,119,986 Lbs. = On Ice Market Sales
or 82.2% of sales
 - * 1,329,914 Lbs. = Live Market Sales
or 17.8% of sales

Largemouth Bass



- **2005** - 6 New Producers & 87,410 Lbs. Harvested
* **Price = \$4.65-\$4.85/Lb.**
- **2009** – 22 Producers & 241,173 Lbs. Harvested
* **Price = \$4.25-\$4.50/Lb.**
- **2015** – 19 Producers & 409,700Lbs. Harvested
* **Price =\$5.00-\$6.25/Lb.**



Channel Catfish

2006 – 151,280 Lbs. harvested

* Price = 0.80/Lb.

2008 – 18,066 Lbs. harvested

* Price = 0.80/Lb.

2015 – 0 Lbs. harvested



- Processed
- Pay Lakes
- Live Haul



Tilapia



2005 – 2 Producers & 12,600 Lbs. Harvested

***Price = \$1.75-\$1.80/Lb.**

2009 – 7 Producers & 48,794 Lbs. Harvested

***Price = \$2.70/Lb.**

2015 – 0 Producers & 0 Lbs. Harvested

Tilapia Markets - US Importation :

A. Country of Origen %'s :

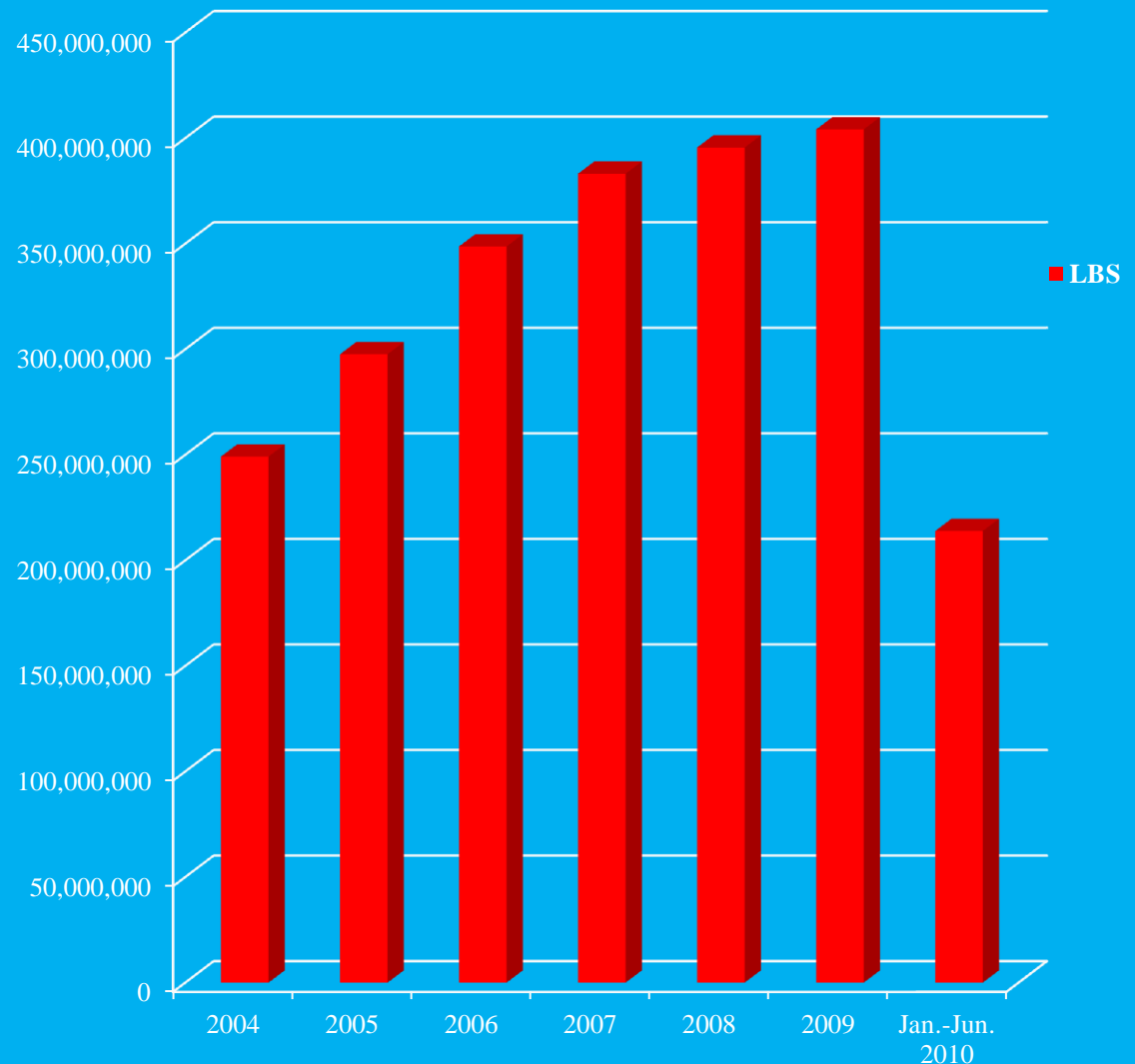
1. China = 71%
2. Taiwan = 9%
3. Ecuador = 5%
4. Indonesia = 5%
5. Honduras = 4 %
6. Costa Rica = 3%
7. Thailand = 2%
8. Other Countries = 2%

A. Presentation %'s :

1. Frozen Fillets = 67%
2. Whole Frozen = 20%
3. Fresh Fillets = 13%

* Eliminate competition
with foreign imports by
selling live product

Tilapia Imports/Year(USDA)



IL. Freshwater Prawn



2003 – 12,271 LBS.
* Price = \$5.00/Lb.
2009 – 1,680 LBS.
* Price = \$8.00/Lb.
2015 – 0 LBS.

Rainbow Trout

Off-season crop raised in
Freshwater Prawn ponds



2005 – 4 Growers & 7,000 Pounds

* Price = \$1.75/Lb.

2008 – 1 Grower & 2,000 Pounds

* Price = \$3.50/Lb.

2015 – 0 Growers & 0 Pounds

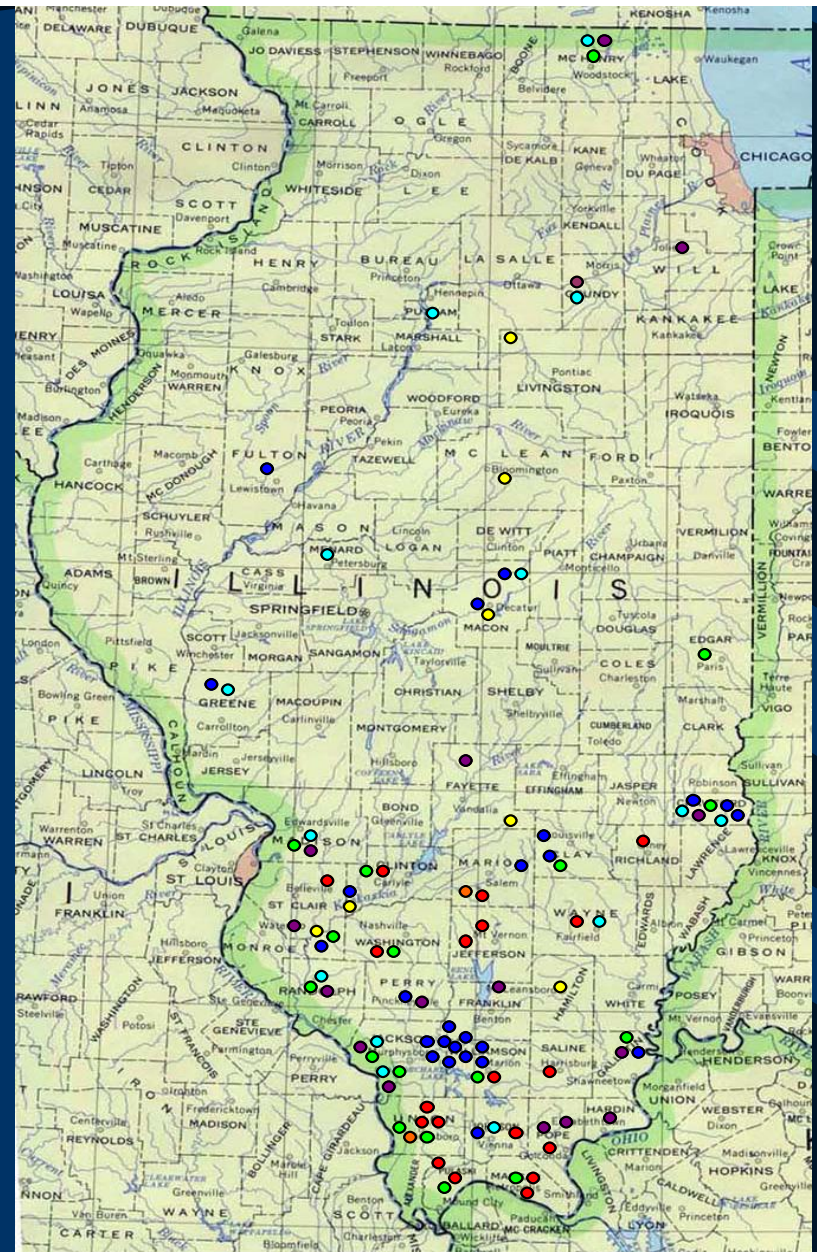


Fee-Fishing

IL Aquaculture Facilities Species Distribution

- Hybrid Striped Bass
- Largemouth Bass
- Channel Catfish
- Freshwater Prawn
- Tilapia
- Rainbow Trout
- Other Species

SIUC-Fisheries Illinois Aquaculture TechSERV Species Distribution Location



IL Harvests = 100% Live Market



Know your States Regulations Regarding Live Hauling:

- April 2014 = Aphis lifted the VHS order first issued in 2006 and deregulated it to the state level
- Contact your State's DNR for Regulations on transport of live fish species



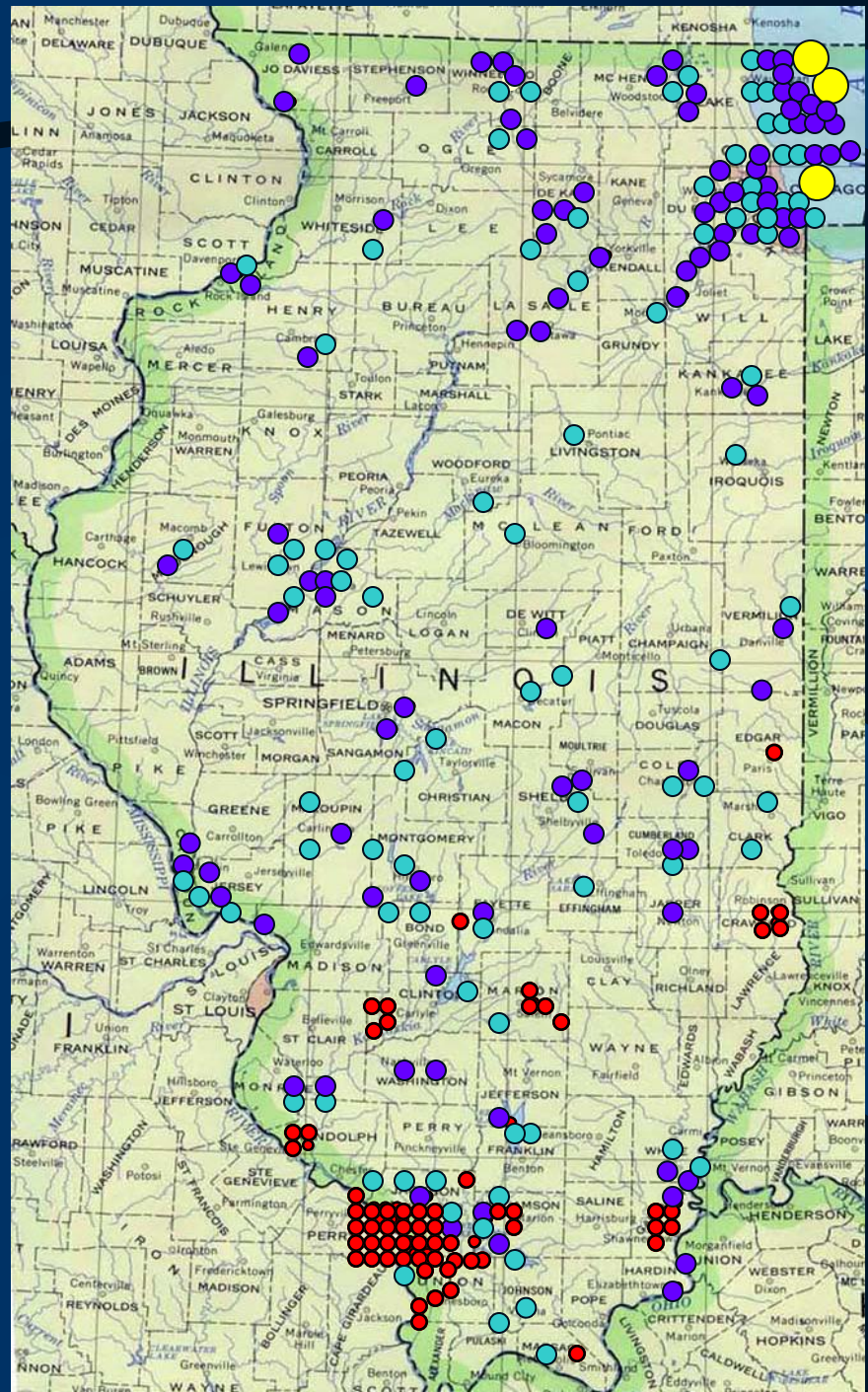
VHS Viral Screening :

1. Susceptible species
2. 28 Days for results
3. Valid for 1 year



VHS Locations Sampled in IL: 2007-2015

- Wild fish surveillance: 204 locations (blue dots), 52 watersheds = 30,560 specimens
- Aquaculture facilities (red dots) = 15,508 specimens
- Total specimens collected in Illinois for VHS testing to date = **46,068**
- VHS Positive Sites = 3/5 sites in Lake Michigan have tested positive to date.



- We have an idea of what species to grow, what we can transport, and an approximate selling price; so how do we market them?

What Do Buyers Want? (Wholesalers & Retailers)

1. A fair market price.



Wholesalers:

- Your preferred target buyer
- Will pick up at your farm or accept delivery at plant
- Take larger volumes of product on a weekly basis
- Store at warehouse & redistribute to multiple retail markets



Retailers:

- Take smaller volumes of product from the wholesaler
- Sales are direct to the general public
- Live products are killed at this point and usually gutted for the consumer



What Do Buyers Want? (Cont.)

2) A good, consistent quality product:

- * Proper size : 1.5 Lb. average weight
- * Correct quantity
- * Accurate total weight
- * Healthy product for increased longevity



What Do Buyers Want? (Cont.)

3) Accessibility to farm
for pick up

4) Assure the truck
returns fully loaded

5) Receive fish
immediately at farm

* no waiting



What Do Buyers Want? (Cont.)

6) Travel the least amount of miles possible to load the product

7) Year around production or access to product

* Collective Marketing

8) A variety of species to fill their customer needs



Buyer Expectations Continued :

- Convenience:
 - * One contact or broker who can deliver the species they prefer at the amounts they need.
- 24:7 access to broker and producer pick ups
- Someone knowledgeable or experienced in industry
- Broker to be present at harvest whenever possible
- Respectful, congenial personality with sense of humor
- Any export/import paperwork or health certificates to be in order
- Flexibility
- Honesty(“the product should sell itself”)
- Consideration:
 - * Work with buyer on problem shipments to reach a fair agreement
- Loyalty/Commitment:
 - * Priority to best buyers

- Meet buyers in person whenever possible



Tips for Maintaining a Quality Product for the Live Market:

- Discontinue feed 4-5 days before harvest
- Seine fish 3-4 days prior to live hauling for purging in holding tank



Holding Tank Procedures:

- Maximum temperature change difference = 10 degrees Fahrenheit
- Maintain flow through system with well water if possible
- Maintain salt concentration at 3-5 ppt.
- Maintain oxygen concentration > 10 ppm



Stocking Densities:

- Do not exceed stocking densities of 1 Lb./Gal. in holding tank for LMB
 - * Utilizing pure oxygen(gas or liquid)



Haul Truck Data:

- Adjust water temperatures = 45-60 degrees Fahrenheit
- Maximum temperature change difference = 10 degrees Fahrenheit
- Maintain salt concentration at 3-5 ppt.
- Maintain oxygen concentration @ 15-25 ppm
- Check quality of fish & oxygen in all tanks before departure



Hauling Densities:

- LMB : Maximum = 2 Lbs./Gal. on hauls of 24-36 hrs.
- HSB : Maximum = 1 Lb./Gal. on hauls of 24-36 hrs.



Record Keeping:

- Record oxygen & temperature readings of pond/holding tank and haul truck before and after loading
- Maintain copies of load sheet & bill of lading. Send originals along with VHS/health certificates with hauler



Average Weights:

- Weigh & record average weights on each harvest cage or tank and record on load sheet for future reference



The Future of Live Market Sales in the North Central Region:

- Climate is conducive to aquaculture for a variety of species
- Growers can supply buyers with high quality products
- Relative short distance to major markets provides a competitive advantage over southern and western states
- Foreign imports of fresh or frozen products will not affect our “live market” sales
- Collective Marketing can ensure a more steady supply of products for markets throughout the U.S. and Canada
- Expansion of aquaculture will assist in meeting the growing seafood consumption in the future

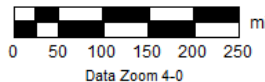
The Future of Aquaculture in the North Central Region Continued:

- Increases in production costs may influence profitability:
 1. High costs of feed directly related to elevated fish meal & fish oil prices
 2. Increase in fingerling prices for stocking
 3. Increased regulations may affect profitability
- Foreign exchange rates
- Lack of funding may jeopardize services provided by state institutions to growers for aquaculture extension, providing technical services and marketing assistance to farmers

NCRAC LOCATION ADVANTAGE



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DISTANCE/TIME TO MARKET

Distance and Time from Intersection I-57
and I-64

	miles	hours
Denver	923	15
St. Paul	643	11
Toronto	764	13
Dallas	692	12
Atlanta	478	9
New York	920	16
Washington, DC	786	14

- * THE NORTH CENTRAL REGION IS WITHIN A ONE-DAY GROUND TRANSPORTATION RADIUS OF ALMOST 75% OF THE TOTAL US POPULATION(>242,000,000 people)
- * A LIVE FISH THAT IS HARVESTED THIS MORNING CAN BE SERVED TOMORROW FOR LUNCH IN ANY RESTAURANT THROUGH OUT THIS ENTIRE AREA.

Working together is the key to Successful Aquaculture!



Thank you for your attention!

