Arkansas Bait and Ornamental Fish Certification Program

Wisconsin Aquaculture Association, 2013

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“The uncontrolled taking of minnows for sale as bait from public waters is a vexatious problem ... Without question the day is not far distant when the propagation of minnows for commercial purposes will be undertaken.”
Public sector encouraged baitfish culture
2007 Census of Agriculture:
358 baitfish farms in U.S.
$40.3 million farm-gate
58,306 water acres (2005)
1950’s - Start of Baitfish Farming in Arkansas

Fish shipped from Arkansas to other states for over 50 years…
Live baits are in demand --

75% of freshwater game fish are caught using a live bait. (Steinberg 1982).

USFWS 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation:

- $1.5 billion spent on bait by 60% of anglers ($76/spender).

Anglers can catch their own bait or purchase bait from a shop.

- Bait shop sales – control over bait species and health status, generates tax revenues.
Growing awareness and concern over aquatic invasive species and new diseases

Nonindigenous Fishes
Introduced into Inland Waters of the United States

UABP Aquaculture/Fisheries Center

The National Invasive Species Council

National Invasive Species Awareness Week

Wisconsin's Comprehensive Management Plan
To Prevent Further Introductions and Control Existing Populations of Aquatic Invasive Species

Prepared by Wisconsin Department of Natural Resources in cooperation with:
University of Wisconsin - Sea Grant
Great Lakes Indian Fish and Wildlife Commission

2010-2012 Wisconsin Aquatic Invasive Species Progress Report

ANS Task Force
Dedicated to the prevention and control of aquatic nuisance species
Wisconsin is serious!
So is Arkansas!

Arkansas • Baitfish

The Safe Bait.
Pathways of Aquatic Introductions

- Aquaculture
- Aquarium trade
- Biological control
- Boats and ships
- Channels, canals and locks
- Live bait
- Nursery industry
- Scientific research institutions and schools
- Recreational fishing enhancement
- Restaurants, seafood retail and processing
Why Baitfish?

- Bait bucket releases by anglers.
- Concern that non-native species could be mixed in with baitfish.
- Concern baitfish might spread new diseases or parasites.
- Live baitfish are transported among states.
- Farms, wholesalers, and shops are easily regulated.
  - Much more difficult to control anglers catching their own bait or internet sales.
Aquatic Invasive Species – Hazard Analysis and Critical Control Point Training Curriculum Second Edition
Edited by Jeffrey L. Gunderson and Ronald E. Kinnunen

Using the HACCP Approach for the Biosecurity of Your Farm

Developed by the Arkansas Bait and Ornamental Fish Growers Association
In cooperation with the University of Arkansas at Pine Bluff Aquaculture/Fisheries Center
Avoid bringing outside fish onto your farm.

Avoid returns or isolate fish.

No new exotics or “experimental” species, especially on a baitfish farm.

Sanitize seine & equipment (waders, buckets, dipnets, boat, motor) in between ponds, blocks of ponds, or farms.

Use a HAACP plan to document that you follow safe practices.
Everyone needs to work together to prevent the introduction or spread of exotic species or diseases.

- A problem on one farm in Arkansas can destroy everyone’s markets.
- Be responsible - follow AGFC measures to prevent the introduction or spread of exotic species.
- Be proactive - consider a HACCP plan for your farm.

Biosecurity = Secure Markets
Fish farmers wanted independent, third-party certification of their farms

- Discovery of Spring Viremia of Carp virus in North Carolina -2002.
- Discovery of VHS virus.
- Emergence of new parasite (*Heterosporis*).
- Increasing recognition of disease transmission and ANS potential of baitfish, especially from uncontrolled sources.
- Demonstrate safety of farm-raised product.

*Arkansas Democrat-Gazette December 2005*
Certification of Commercial Bait and Ornamental Fish

REGULATIONS ON AQUACULTURE IN ARKANSAS

For An Act To Be Entitled
AN ACT TO ESTABLISH A COMMERCIAL BAIT AND ORNAMENTAL FISH PROGRAM UNDER THE STATE PLANT BOARD; AND FOR OTHER PURPOSES.

Subtitle
TO ESTABLISH A COMMERCIAL BAIT AND ORNAMENTAL FISH PROGRAM UNDER THE STATE PLANT BOARD.
Certification Program

- To provide high quality, farm-raised bait and ornamental fish, free of certain diseases, undesirable plants, undesirable animals, and other contaminates deemed injurious to fish or fisheries.

- The Arkansas State Plant Board, a division of the Arkansas Agriculture Department, under act 1449 of 2005, is the official certifying agent.

- The director of the State Plant Board or his agent may conduct investigations and/or make inspections as necessary to assure conformity with these standards.
Arkansas Department of Agriculture Bait and Ornamental Fish Certification Program

- Voluntary
- Cost paid by farmers
  - $1/acre/year
  - Veterinarian fees ($100+/hour)
  - Laboratory fees ($1,000+/year)
Free from specific important diseases

- Testing to international standards
  - Twice a year farm level inspection
  - Fish collected by an APHIS accredited DVM
  - Testing in a lab using APHIS-approved protocols
    - Spring Viremia of Carp (SVCV)
    - Infectious Pancreatic Necrosis (IPNV)
    - Viral Hemorrhagic Septicemia (VHSV)
    - Infectious Hematopoietec Necrosis (IHNV)

Certification requires a two-year history of being free of these diseases

UABP Aquaculture/Fisheries Center
Free from specific important aquatic nuisance species

- Eurasian watermilfoil (*Myriophyllum spicatum*)
- Giant salvinia (*Salvinia molesta*)
- Hydrilla (*Hydrilla verticillata*)
- Zebra mussel (*Dreissena polymorpha*)
- New Zealand mud snails (*Potamopyrgus antipodarum*)
- Red-rimmed melania (*Melanoides tuberculata*)
- Sticklebacks (Family Gasterosteidae)
- Rudd (*Scardinius erythrophthalmus*)
- Orfe (*Leuciscus idus*)
- Silver carp (*Hypophthalmichthys molitrix*)
- Bighead carp (*Hypophthalmichthys nobilis*)
- Snakehead fish (Family channidae)
- Quagga mussel (*Dreissena rostriformis bugensis*)
Biosecurity

- Only Arkansas Game and Fish Commission approved species.
- Only well water or recycled on-farm.
- No introductions of animals or water from uncertified sources.
- Captive broodstock.

Notice:

Pool Fisheries is certified as disease and ANSI free.

To ensure the continuation of this status;

Any person or material previously exposed to an uncertified aquatic environment is strictly forbidden on the premises without proper disinfection and/or behavior consistent with our biosecurity protocol.
Well Water & Levee Ponds
Inside Standpipes
Indoor Hatcheries
Disinfection of Equipment

Photograph by Hugh Thomforde
Educating Farm Workers

Protecting the Farm — Training Video —

School of Agriculture
Fisheries & Human Sciences

English/Spanish versions 2/2011

UAPB Aquaculture/Fisheries Center

For Spanish: On DVD menu, click Scenes and choose the Spanish version.

Arkansas • Baitfish
The Safe Bait.
Arkansas Agriculture Department
Bait and Ornamental Fish Certification

The Arkansas Agriculture Department certifies that the fish in this shipment meet the Official Standards for the Certification of Bait and Ornamental Fish [Circular 21] and are free of specific pathogens and aquatic nuisance species. This certification is based on a two-year farm inspection history that includes semi-annual disease sample collection by USDA accredited veterinarians, testing by diagnostic laboratories using APHIS-approved protocols, and onsite inspections of biosecurity and aquatic nuisance species status by Arkansas Agriculture Department staff.

Issue date __________________ Valid through __________________

Signature of Fish Farmer: __________________

Issuing Farm Load Description

<table>
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<tr>
<th>Species</th>
<th>Size</th>
<th>Weight</th>
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This certificate is provided with each load of Arkansas Certified Bait and Ornamental Fish and is invalid if not completed in full and signed by the participating fish farmer or their designee. Misuse is subject to enforcement action. Copies of the Official Standards for the Certification of Bait and Ornamental Fish can be obtained by contacting the program administrator at (501) 225-1598 or at www.aad.az.gov.
Fathead Minnows:

Spawning-rearing pond method
Potential for contamination with mosquitofish
BMPs for Mosquitofish

“...Arkansas Plant Board approved best management practices that reduce the likelihood that the following species will be present in any shipment of certified fish.

a. Mosquito fish (*Gambusia spp.*)”
1) No uncertified broodstock can be used.

2) Broodstock must be inspected for Gambusia.

3) Broodstock cannot be used if Gambusia are present.
- Ponds are drained and dried between crops.
- Puddles or sumps treated.
- Equipment must first be dried or treated.
UAPB research program on fathead minnow hatchery methods
Temptation with a Certification Program

“Load the Cart” with testing requirements for additional diseases and aquatic nuisance species.
Realities of Arkansas Baitfish Production

- No new farms in 20+ years.
- Inability to raise prices as costs (feed, fuel, labor) increase.
- Existing producers living on equity in farms.
- Declining number of farms:
  - 1998 = 62; 2005 = 51; 2012 = ?
- Certification has increased costs.
- Competition from other baitfish sources: wild-caught, angler-caught, uncertified farms.
- Does it pay to raise certified baitfish?

UABP Aquaculture/Fisheries Center
Marketing Safe Bait: safebaitfish.org

Everybody knows that using live bait is the best way to ensure a great catch. Unfortunately, there are also concerns that the transport and use of live baitfish might move dangerous diseases, undesirable fish species, invasive plants, and even exotic animals like zebra mussels. In addition, harvesting baitfish from the wild may reduce the supply of natural food and limit the growth of sportfish. How can you be sure that you will have a great fishing trip, but that your bait will not cause problems in the environment?

Use only baitfish Certified by the Arkansas Agriculture Department to be farm raised and free of invasive plants, exotic animals, and dangerous diseases!
Questions?