Should Your Farm Be Certified?

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Aquaculture/Fisheries Center
University of Arkansas at Pine Bluff
<table>
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<th>Certification</th>
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Recent Review on Certification:

Toward sustainability: The roles and limitations of certification.
RESOLVE, Inc., Washington D.C. 2012

http://www.resolv.org/site-assessment/towardsustainability/
Certification

• What is meant by certification?
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• Examples of certification programs
• Benefits versus costs
Certification

“Procedure through which written or equivalent assurance states that a product, process or service conforms to specified requirements”

FAO 2007

Typically provided by a private organization.

Certification - 2011

- Over 425 labels (over 350 ecolabels)
- 246 countries
- 25 industry sectors
- For aquaculture, certification available for each step in the production chain:
  - Hatchery
  - Feed mill
  - Farm
  - Processor

Key Point:

Certification is a business

Even non-profit organizations must become self-sustaining at some point. Typically initially subsidized by foundations.

Requires:

- Enough participating producers to share the costs, at least to break-even.
- Enough participation to financially support quality auditors.
- Adjustments to certification charges over time.
From: “Toward Sustainability…”

- Percent of aquaculture production that is certified: 2.6%
  - [4.6% - Bush et al. 2013.]
- Percent of global wild landings of fish for human consumption that are certified: 7%
- Percent of U.S. fishery landings that are certified: 60%
- Price premium: small to nonexistent
Certification

• What is meant by certification?
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Certification can cover one or all of the following:

- **Environmental sustainability**
  - Sets criteria for how the product is raised.

- **Food safety**
  - Documents production process.
  - How workers are treated. Farm relations with local community.

- **Social responsibility**

- **Traceability**
  - Track product from farm to store.
Certification

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Process of Certification

1. **Certification body / organization**
   - Are accrediting associations to ‘certify’ certifiers.

2. **Develop standards** – requirements
   - Mandatory [“shall”] & voluntary [“should”].

3. **Testing / auditing** (inspection) of process or product, or both.

4. **Issue certificate**

5. **Label or ecolabel** to indicate that the process or product complies with standards.

FAO 2007
No ‘standard’ standards

- Process standards – how the seafood is grown
- Product standards – attributes of the product
- Major programs – NO product testing for drugs or chemicals. Just record-keeping
- Free range (animal welfare) standards
- Organic standards
- Taste standards
- Fair trade standards
Future Standards?

- Carbon footprint
- Food miles
- Water use
- Life cycle assessment
  - Quantitative evaluation of environmental sustainability –
    - Climate change
    - Eutrophication
    - Biotic resource depletion
    - Abiotic resource depletion
    - Ecotoxicity
    - Ozone depletion
    - Photochemical oxidant
Auditors

- Typically independent contractors.
- Inspect farms at intervals of 1-2 years. Often announced visits; inspect operation, check records.
- Key to the success (or failure) of certification programs.

Is the auditor creditable?
- Education, training, language skills, personality, honesty.

Are audits uniform among producers?
- Albersmeier et al. (2009) in “Food Control”. Auditing results for German pork producers: Statistical analyses clearly indicate differences among auditors.
Certification

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What’s behind Third-Party Certification Programs?

Importers & retailers selling foods from developing nations
Global Agrifood System

- Food products are increasingly produced and traded globally.
- Developing nations – weak environmental, health and safety regulatory frameworks.
- In the late 1990’s, third-party certification emerged to set private standards.

<table>
<thead>
<tr>
<th>Private certification</th>
<th>Government</th>
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<tbody>
<tr>
<td><strong>Standards</strong></td>
<td><strong>Laws, rules, regulations</strong></td>
</tr>
<tr>
<td><strong>Environmental Sustainability</strong></td>
<td>![Various logos]</td>
</tr>
<tr>
<td><strong>Food Safety</strong></td>
<td>![Various logos]</td>
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<tr>
<td><strong>Social Responsibility</strong></td>
<td>![Various logos]</td>
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<tr>
<td><strong>Traceability</strong></td>
<td><strong>&amp; Private sector</strong></td>
</tr>
<tr>
<td><strong>Enforced by Auditor(s)</strong></td>
<td><strong>Enforced by Federal, state and local authorities</strong></td>
</tr>
</tbody>
</table>

Key Difference: With Government regulations, there are civil and/or criminal penalties for violations.
“The overuse of contraceptive pills and antibiotics in aquatic stock has become increasingly common in China... Some breeds of fish are fed birth control pills....”

“The misuse of antibiotics in aquatic species is an even more serious issue, however. “

“65% of American consumers doubted the safety of imported food from developing countries”

* From “Laboratory Error”, Food and Water Watch
Requiring foreign countries that export food to the United States to certify that their food safety programs and standards are as good as those in the United States:

Strongly favor: 73%
Somewhat favor: 17%
Somewhat oppose: 4%
Strongly oppose: 5%
Not sure: 1%
• In 2007 and 2008, FDA inspected 95 and 153 foreign food facilities, respectively.
• Out of an estimated 189,000 such facilities.

[At this rate, it will take over 1,000 years to inspect them all one time... ]

*GAO = U.S. Government Accountability Office; testimony by Lisa Shames, Director, Natural Resources and Environment, before congressional subcommittee.
FDA Inspections of Seafood Processing Establishments

- **13,300 Domestic Plants**
  - **20%/year**
  - Once every 5 years

- **14,900 Foreign Exporters**
  - **0.5%/year**
  - Once every 200 years

*registered; “a great many more are involved...”*

Sources: GAO 2010, CRS 2009

[note: does not include NOAA inspectors or state health department inspections]
Why Do Retailers Seek Third-Party Certification for Products?

- Corporate social responsibility
- Environmental NGO pressure
- Help consumers to identify products
- Reduce risk and liability

“...provide buyers some insurance against food scares and a due diligence defense.” (FAO, 2011)
Certification

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The mission of the Global Aquaculture Alliance is to further environmentally responsible aquaculture to meet world food needs.

Through its Best Aquaculture Practices program.
Mission

➢ To transform aquaculture towards environmental and social sustainability using efficient market mechanisms which create value across the chain.
The GLOBALGAP standard is primarily designed to reassure consumers about how food is produced on the farm:

- Minimizing detrimental environmental impacts of farming operations.
- Reducing the use of chemical inputs.
- Ensuring a responsible approach to worker health and safety as well as animal welfare.
“Green Noise”

Too many eco-labels

The vast array of seafood eco-labels is “confusing and daunting” to the public.

Eric Roderick, Managing Director, FishGen

Global Food Safety Initiative – foundation to benchmark varying standards, create common acceptance of benchmarked food safety schemes.
U.S. Aquaculture

- Aquaculture drug and chemical use is tightly regulated.
- Only a very few products that undergone thorough testing can be used.
- The FDA has not found an illegal drug in domestic aquaculture seafood*.

* Center for Food Safety and Applied Nutrition (CFSAN) - Questions and Answers on FDA's Import Alert on Farm-Raised Seafood From China

http://www.fda.gov/Food/FoodSafety/Product-SpecificInformation/Seafood/ucm119105.htm
Pangasius Culture in Vietnam

- Pangasius farmer survey:
  - 100% of farms used antibiotics.
  - Average of 3 different antibiotics per farm, 10% used 5 or 6.
- 17 different antibiotics belonging to 10 different antibiotic classes used across the industry:
  - Penicillins, aminoglycosides, cephalosporins, quinolones, teracyclines, amphenicols, polymixin, diaminopyrimidines, rifamycins, sulfamides.
- Legal compounds (with one exception); 28 antibiotics authorized for aquaculture use in Vietnam.

Biosecurity measures “almost impossible” given daily water exchange rates (20-40%).
• Implies that all products with the same label are equally safe and sustainable.
• U.S. producers are already highly regulated.
• Where is the benefit for U.S. producers?

U.S. Grown = Imported?
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Third-Party Certification

2. Seafood buyers may require third-party certification.
3. Ultimately, it’s a business decision: are the benefits (e.g., market access) worth the cost?
Boyd and McNevin (2012)

“It is doubtful that aquaculture certification will become fully viable unless one or both of the following occur:

1) clear evidence is developed revealing that the better practices and certification enhance efficiency enough to offset the added costs of participating in these programs, and/or

2) more consumers become willing to pay a premium for “environmentally friendly” products, and a fair portion of the higher price filters down to farmers.”
Consumers Care about Food Safety

- Locally-grown
- Fresh
- Safe
- Family farm
- Family food
- Slow foods
Arkansas Agriculture Department

Bait and Ornamental Fish Certification

Certification Serial Number

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 on-site 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>
<thead>
<tr>
<th>Species</th>
<th>Size</th>
<th>Weight</th>
</tr>
</thead>
</table>

Farm Name: Coldstream Fisheries Inc.
Arkansas Permit #: AA007-0007
Address: 2000 E. Kings Highway
Paragould, AR 72450

Phone: 1-870-236-2517
Fax: 1-870-236-8829
E-mail: colds@gmc.net

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.ar.gov.
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.
- Increasing recognition of disease transmission especially from uncontrolled sources.
- Demonstrate safety of farm-raised product.

Arkansas Democrat-Gazette
December 2005
CIRCULAR 21
ISSUED: March, 2007
REVISED: December, 2010

REGULATIONS ON
AQUACULTURE IN ARKANSAS

This circular is issued in March, 2007, by the Arkansas State Plant Board. Other regulations issued by the Plant Board are covered in other circulars. Address correspondence to State Plant Board, P.O. Box 9000, Little Rock, AR 72203.

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Section 1. Standards for the Certification of Commercial Bait and Ornamental Fish

1. Certification of Commercial Bait and Ornamental Fish

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.

Approved and Issued by:
ARKANSAS STATE PLANT BOARD
Under Authority of:
Commercial Bait and Ornamental Fish Act (A.C.A. 5-5-201)
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!**
Organic Standards

“...translation of a philosophical approach to agriculture into a set of standardized growing practices.”

Naturland Standards for Organic Aquaculture

Naturland - Verband für ökologischen Landbau e.V.
(Naturland - Association for Organic Agriculture, Registered Association)
Kleinhadener Weg 1, 82166 Gräfelfing, Germany
Phone +49-89-89 80 82-0, Fax +49-89-89 80 82-90
Naturland@Naturland.de
www.naturland.de

Canadian Organic Aquaculture Standard

With the release of the Canadian Organic Aquaculture Standard, Canadian consumers will now have the opportunity to choose certified organic farmed seafood including finfish, shellfish and aquatic plants.

News Release - May 10, 2012

New Organic Standards Released for Canadian Farmed Seafood

Frequently Asked Questions about the Canadian Organic Aquaculture Standard
1. What does “organic” mean with respect to aquaculture?
Organic aquaculture is a holistic system designed to optimize the productivity and fitness of the aquatic ecosystem, including benthic organisms, seaweeds, aquatic plants, aquaculture animals and people.
Specifically, the organic aquaculture standards prohibit the use of antibiotics, herbicides and genetically modified organisms, and severely restrict the use of parasitcides, allowed only under veterinary supervision as a last course of treatment. The standards set measurable requirements for practices that minimize the impact of waste. These include defining stocking rates, cleaning procedures and the cleaning and feed materials that must be used.

2. What will the Canadian organic aquaculture standard mean for consumers?
The word “organic” on aquaculture products will mean an accredited certifying body has verified that the production methods meet or exceed the Canadian standard for organic aquaculture production.
U.S. ORGANIC AQUACULTURE

10 years and counting...

National Organic Aquaculture Working Group - Created in December 2003

George Lockwood, 2005:
“We expect our White Paper and its proposals to receive considerable comment and perfection before any organic aquaculture standards are adopted by USDA in their Final Rule”