

Should Your Farm Be Certified?



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Certification

- What is meant by certification?
- Types of certification
- Typical certification process
- What's behind the push for certification?
- Examples of certification programs
- Benefits versus costs

Recent Review on Certification:

Toward sustainability: The roles and limitations of certification.

RESOLVE, Inc., Washington D.C. 2012

<http://www.resolve.org/site-assessment/towardsustainability/>



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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.

FAO 2011

FAO
FISHERIES AND
AQUACULTURE
TECHNICAL
PAPER

553

Private standards and
certification in fisheries
and aquaculture

Current practice and emerging issues



<http://www.fao.org/docrep/013/i1948e/i1948e00.htm>

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**

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

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**

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Certification can cover one or all....

- **Environmental sustainability** ✓ Sets criteria for how the product is raised.
- **Food safety** ✓ Documents production process.
- **Social responsibility** ✓ How workers are treated. Farm relations with local community.
- **Traceability** ✓ Track product from farm to store.

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Process of Certification

- **Certification body / organization**
 - Are accrediting associations to 'certify' certifiers.
- **Develop standards** – requirements
 - Mandatory [*"shall"*] & voluntary [*"should"*].
- **Testing / auditing** (inspection) of process or product, or both.
- **Issue certificate**
- **Label or ecolabel** to indicate that the process or product complies with standards.



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.

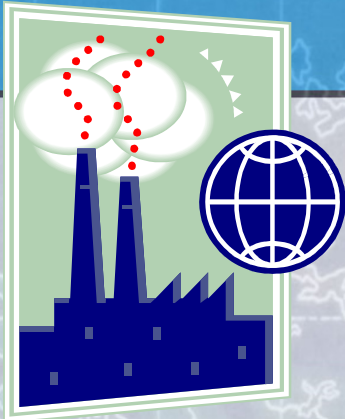
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What's behind Third-Party Certification Programs?

**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.

[Wouters, Marx and Hachez. "Private Standards, Global Governance and Transatlantic Cooperation: The Case of Global Food Safety Governance"]

Substitute for government regulations...

Private certification	Government
Standards	Laws, rules, regulations
Environmental Sustainability	
Food Safety	
Social Responsibility	
Traceability	 & Private sector
Enforced by Auditor(s)	Enforced by Federal, state and local authorities

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.”**

Fish farm doping: China's latest health scare

Staff Reporter | 2011-05-14 | 10:27 (GMT+8)



Illicit drug use has been prevalent among Chinese fisheries due to small business models, insufficient inspection and know-how. Picture: A fish farm in Gansu province. (File Photo/Xinhua)

The excessive use of illegal drugs to encourage faster breeding in fish has become the latest in a series of recent food safety scandals in

2008 Wall Street Journal – Harris Interactive Poll*

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

* From “Laboratory Error”, Food and Water Watch

2011 survey by Hart Research Associates /American Viewpoint

**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%

GAO* testimony (May 6, 2010)

- **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**

- **FDA inspected:**
3,066 in 2004
2,830 in 2005
2,456 in 2006
20%/year

Once every 5 years

[note: does not include NOAA inspectors or state health department inspections]

- **14,900 Foreign Exporters***

- **FDA inspected:**
81 in 2004
72 in 2005
68 in 2006
0.5%/year

Once every 200 years

*** registered; "a great many more are involved..."**

Sources: GAO 2010, CRS 2009

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)

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- **Examples of certification programs**
- **Benefits versus costs**

Global Aquaculture Alliance

Aquaculture Certification Council

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

Through its Best Aquaculture Practices program.



World Wildlife Fund Aquaculture Stewardship Council

Mission

- To transform aquaculture towards environmental and social sustainability using efficient market mechanisms which create value across the chain.



asc Aquaculture
Stewardship
Council

ASC Pangasius Standard

Version 1.0 Jan 2012

First published by the Pangasius Aquaculture Dialogue
August, 2010

GlobalGAP

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”



Global Gap

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*.

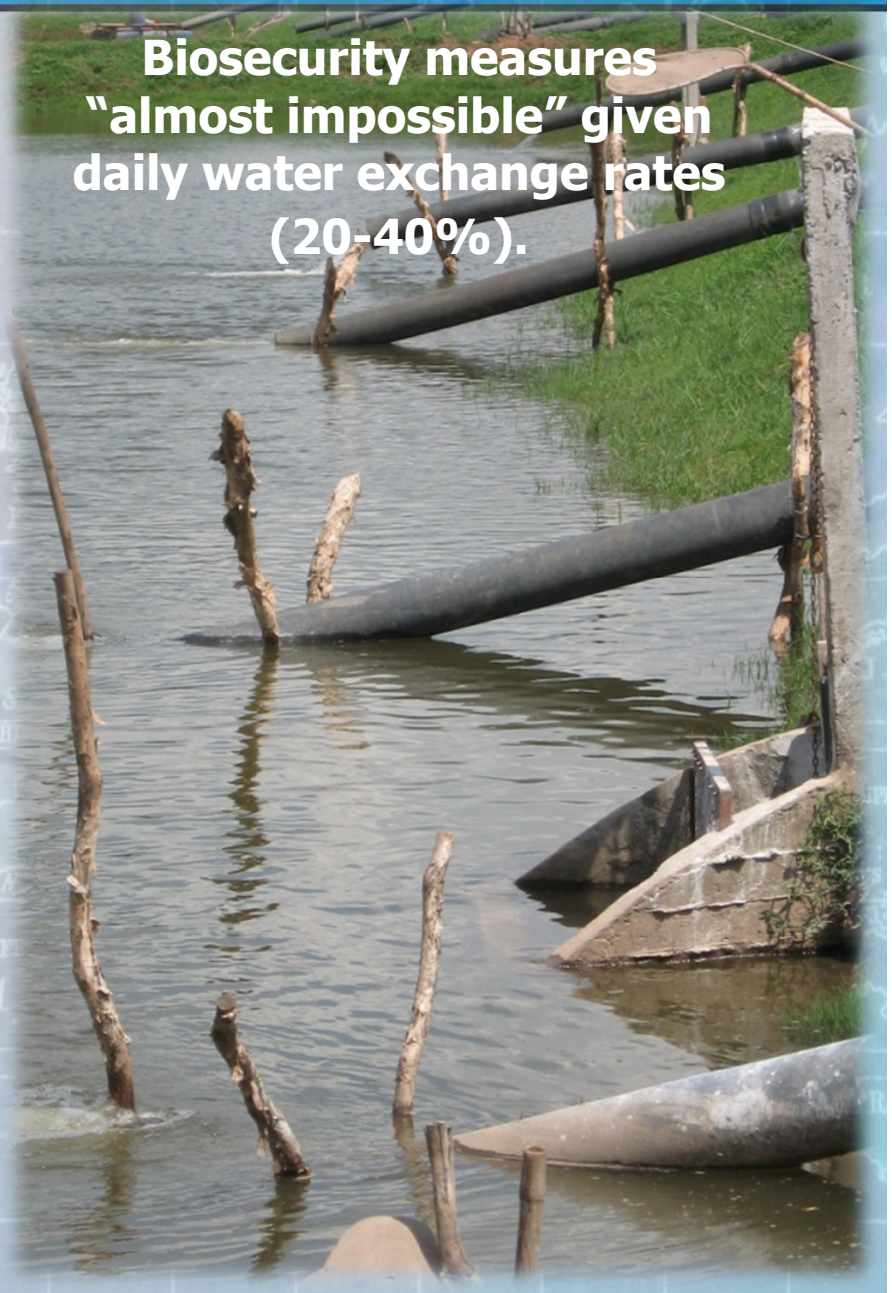
* Center for Food Safety and Applied Nutrition (CFSAN) - Questions and Answers on FDA's Import Alert on Farm-Raised Seafood From China

<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, tetracyclines, amphenicols, polymixin, diaminopyrimidines, rifamycins, sulfamides.
- **Legal compounds (with one exception); 28 antibiotics authorized for aquaculture use in Vietnam.**
- **Source:** Rico et al. 2013. Use of veterinary medicines, feed additives and probiotics in four major internationally traded aquaculture species farmed in Asia. *Aquaculture* 412-413:231-243.

**Biosecurity measures
“almost impossible” given
daily water exchange rates
(20-40%).**



Dilemma with Third-Party Certification

- 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

1. Generally, no price premiums for certified products - except for organic products.
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

FRESH FROM THEIR PONDS
TO YOUR PLATE.



DENNINGTON MOSS
2009 Arkansas
Catfish Farmer of the Year

BRANDON HARING
2009 Louisiana
Catfish Farmer of the Year

TOWNSEND KYSER
2009 Alabama
Catfish Farmer of the Year

JOE OGLESBY
2009 Mississippi
Catfish Farmer of the Year



U.S. FARM-RAISED
Catfish

Sponsored by The Catfish Institute

U.S. Farm-Raised Catfish is the freshest, healthiest fish available. Thanks to our hardworking farmers and strict standards, you can rely on that perfectly mild flavor year-round. Just be sure to look for the U.S. Farm-Raised seal. Find the recipe for Grilled Catfish with Black Bean Salsa at USCATFISH.COM

State Certification



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 onsite inspections of biosecurity and aquatic nuisance species status by Arkansas Agriculture Department staff.

Issue date _____ Valid through _____

Signature of Fish Farmer: Joey Allen

Farm Name: Coldstream Fisheries Inc.

Arkansas Permit #: AAD07-0007

Address: 2800 E. Kings Highway

Paragould, AR 72450

Phone: 1-870-236-2517

Fax: 1-870-236-8829

E-mail: coolstf@grnco.net

Issuing Farm Load Description

Species	Size	Weight

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

Certification of Commercial Bait and Ornamental Fish

ARKANSAS
AGRICULTURE
DEPARTMENT



-----FINAL RULE-----Agency# 290.02

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 1069, Little Rock, AR 72203.

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

Stricken language would be deleted from and underlined language would be added to the law as it existed prior to this session of the General Assembly.

Act 1449 of the Regular Session

State of Arkansas
85th General Assembly
Regular Session, 2005

As Engrossed: H3/15/05

A Bill

HOUSE BILL 2797

By: Representatives L. Evans, Davenport, Norton, Overbey, S. Prater, Rankin, Scroggin, Wood
By: Senator Glover

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. 2-5-201)

Marketing Safe Bait: safebaitfish.org

← → ↻ safebaitfish.org/index.html ☆ ☰







Safe Bait From the Natural State
Arkansas Certified Baitfish

Home Page

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!

Home Page
Program Promises
Oversight/Assurances
Farms, Farmers, & Fish
Certified Plants & Animals
Certified Diseases
Participating Farms
Detailed Program Description
Aquaculture in Arkansas
Scott Martin TV Video
Pictures
BMPs - Gambusia
E-mail



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Organic Standards

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

[Page 6, Steering Committee of the State-of-Knowledge Assessment of Standards and Certification. (2012). *Toward sustainability: The roles and limitations of certification*. Washington, DC: RESOLVE, Inc.]

Certified Organic Aquaculture



Naturland

Naturland Standards for Organic Aquaculture

Naturland - Verband für ökologischen Landbau e.V.
(Naturland - Association for Organic Agriculture, Registered Association)
Kleinhaderner 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
AQUACULTURE
INDUSTRY ALLIANCE**

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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 parasiticides, 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"

National Organic Aquaculture Working Group White Paper

By George Lockwood

On Monday, June 27, the National Organic Aquaculture Working Group (NOAWG) submitted a White Paper to the National Organic Program of the United States Department of Agriculture. Our White Paper proposes standards for organic aquaculture and it is intended to be an important reference and contribution to ongoing work by the National Organic Program of USDA and the National Organic Standards Board, and their newly appointed Aquatic Animal Task Force. Members of the Aquaculture Working Group of this task force are listed on the NOP website at <http://www.ams.usda.gov/nop/> under NEW LINK: Task Forces.

NOAWG was created in December 2003 and includes 86 aquaculture professionals who represent federal agencies, private companies, aquaculture producers, universities, and other interested entities. Most participants are from the United States but there are also representatives from Canada, Europe and Latin America. Membership has been open to individuals with an interest in organic standards for aquaculture products

and who can contribute to the process of developing national standards for organic aquaculture.

The primary goals of NOAWG are to support and facilitate a nationally coordinated, systematic approach to develop national organic standards for organic aquaculture, identify supporting research needs, create collaborations and partnerships across interested stakeholder sectors, and pursue sustainable work to accomplish planned objectives.

Many months of intense activity and dialog have been involved in developing this White Paper. Extensive consideration has been given to the 2000 and 2001 reports of an earlier Aquaculture Working Group as well as a large number of international standards for organic aquaculture being employed, or proposed, around the world.

We expect our White Paper and its proposals to receive considerable comment and perfection before any organic aquaculture standards are adopted by the USDA in their Final Rule.

Importation into the United States of aquaculture products that are certified organic has begun under a variety of foreign standards. This permitted practice of inconsistent organic certification programs and labeling creates confusion among buyers in the absence of U.S. national standards. National organic standards are needed to establish a benchmark or gold standard for all to meet and thus eliminate short-cut tactics and marginal practices that can result in consumer distrust with organic certified aquatic foods.

With changing demographics shifting to an aging, more health conscientious citizenry, recent recommendations of two servings of fish per week in the 2005 Dietary Guidelines for Americans, and increasing interest in eco-labeled seafood, including organic, by consumers, the need for USDA national organic standards has never been more urgent.

Questions about these matters can be directed to George Lockwood (GSLockCVCA@aol.com) or Richard Nelson (ecotruchas@hotmail.com), co-chairs. They can be reached by telephone at 831-659-4145 and 801-209-3567.

