

**Food Alliance Standard for Farmed Shellfish Operations**

(clams, geoducks, mussels, oysters)

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# **About Food Alliance**

Food Alliance is a 501(c)(3) nonprofit organization that defines sustainability in agriculture and food handling operations with sustainability standards and a comprehensive third-party certification program that addresses a wide range of consumer and industry concerns. Food Alliance works for safe and fair working conditions, humane treatment of animals, and careful stewardship of ecosystems.

Products that display the Food Alliance Certified seal include meats, shellfish, eggs, dairy, grains, legumes, mushrooms, a wide variety of fruits and vegetables, prepared products made with these certified ingredients, and ornamental plants. For more information, visit [www.foodalliance.org](http://www.foodalliance.org/).

# **Overview: Food Alliance Tools for Producers**

Food Alliance (FA) provides agricultural producers with a suite of tools to assess, manage, and certify sustainability practices. These tools help farmers, ranchers and growers manage their operations for environmentally, socially and economically sound outcomes.

* FA Standards provide a comprehensive definition to guide producers in achieving greater sustainability in their operations.
* FA Evaluation Tools allow producers to assess current sustainability performance and set sustainability objectives – either as a prelude to certification or as a best management practice. Third-party inspectors use the Evaluation Tools to determine if an operation meets the requirements of the FA Sustainability Certification Program.
* FA Certification Program is a voluntary and credible way for producers to distinguish their sustainably- managed operations and products in the marketplace, to customers and consumers.

**How are the Food Alliance Tools created?**

The Food Alliance Standards, corresponding Evaluation Tools and certification criteria are developed with input from a broad group of stakeholders. Initially, Food Alliance staff work with a consultant to draft the criteria. A select group of scientific researchers, usually from universities and public agencies, provide the first round of review and comment.

Once those comments are integrated into the criteria, a second round of review gathers comments from those with expertise in the standard area, such as industry organizations, private consultants, and non-profit staff (e.g., consumer group representatives, farm labor representatives, and environmentalists). Second round comments are then integrated into the criteria before Food Alliance inspectors, Food Alliance producers and handler/processors, and other practitioners provide final review.

The final draft is field tested prior to the adoption of the criteria. The names of all consultants and reviewers are listed at the end of the criteria, for those interested in seeing who had input. Footnotes are often provided to ensure clarity and consistency of interpretation.

***How are the Food Alliance Tools maintained?***

Food Alliance values continual improvement as a key component to sustainable management of agricultural operations. Similarly, Food Alliance conducts continuous review of its standards and criteria for relevance and effectiveness in assessing sustainable practices and outcomes.

When necessary, revisions are made to the standards and evaluation tools through a consultation and review process similar to that described above for the creation of new criteria. Affected certified operations are notified in advance of changes and provided reasonable time into compliance with new certification expectations.

# **Structure of the Food Alliance Standards and Evaluation Tools**

Food Alliance Standards set a high bar that recognizes innovation and continual improvement. Growers may receive credit for innovative practices that achieve the intended social, environmental, and economic outcomes. Likewise, growers participate in defining continual improvement goals, and are encouraged to define their own path for achieving those goals.

Food Alliance Sustainability Standards are organized by "standards areas." Standards areas are high-level, meaningful components of social and environmental sustainability that can be managed in an operation (e.g., Soil and Water Conservation).

Food Alliance Evaluation Tools detail evaluation criteria pertinent to each standards area. Evaluation criteria comprise a list of essential components for successful management within each standards area. The bulk of the criteria are scored criteria which yield a score based on performance levels (e.g., a score of 3 out of 4 on soil organic matter management). Evaluation Tools also include fixed evaluation criteria that yield a yes/no determination (e.g., no use of prohibited pesticides).

An operator or inspector uses the Evaluation Tool to measure performance to the corresponding Sustainability Standard. The Evaluation Tool includes all standard areas and their evaluation criteria. Outcomes of management practices are arranged into levels of achievement within each evaluation criterion:

Level 1: Meets legal requirements, or, in the absence of law, minimum expectations

Level 2: Common practice or industry standard

Level 3: Progressive management with demonstrated environmental stewardship and social responsibility

Level 4: Visionary management with exceptional effort to meet, and achievement of, social and environmental goals

Indicators provide specific suggestions for how level of achievement can be assessed for each evaluation criterion. In the context of a Food Alliance inspection, indicators are used by the inspector to verify and validate achievement within each level. In the context of self-assessment, indicators provide guidance for achievement within each level.

## Food Alliance Certified: Sustainability Certification Program

The voluntary Food Alliance Certification Program gives producers a credible way to distinguish their sustainably-managed operation and products in the marketplace to customers and consumers. With certification, products grown by these operations are eligible to display a Food Alliance Certified eco-label.

Certification to the Food Alliance Standards means the operation is managed with a demonstrated focus on sustainability practices as determined by a rigorous assessment that includes an on-site inspection for compliance with public, peer-reviewed criteria.

During certification, an independent third-party verifies management practices against the Food Alliance Evaluation Tools. Following a rigorous on-site inspection, an independent verifier determines whether to award certification. Certification is a tool that helps add credibility to sustainability claims through independent verification to meaningful standards.

**What are the requirements for certification?**

Producers seeking certification to the FA Sustainability Standards must accomplish the following, as verified by regular, third-party site inspections:

* Meet all fixed evaluation criteria;
* Achieve an average Level 3 (out of 4) performance for evaluation criteria within any given standard area (progressive management with demonstrated environmental stewardship and social responsibility); and
* Maintain ongoing requirements for setting goals and achieving continual improvement.

**What is the certification process?**

Producers interested in pursuing Food Alliance Certification should first read the Food Alliance Sustainability Standards and Evaluation Tools relevant to their operation, paying close attention to any the crop- or species­ specific criteria for the products to be sold as Food Alliance Certified.

Once prospective Food Alliance Certified producer is familiar with the standard, evaluation criteria and certification requirements, and feel that certification is right for their operation, they may begin the certification process. The process includes application, on-site inspection, review of inspection results, receipt of certificate, licensing agreement, and label submission. Information and application materials are available on the web: [www.foodalliance.org/certification](http://www.foodalliance.org/certification).

***What type of operations are best suited for Food Alliance certification?***

Food Alliance certification best suits producers who: 1) actively manage their operations with environmental and community impacts in mind; 2) have a commitment to continually strive to innovate and do better; and 3) wish to differentiate their company and its products in the marketplace through thoughtful marketing that highlights their sustainable practices.

Producers interested in pursuing Food Alliance certification should understand that certification is a tool that helps add credibility to their sustainability claims through outside verification to meaningful standards.

Email [info@foodalliance.org](mailto:info@foodalliance.org) to learn more about the FA Sustainability Certification Program:

# **Overview: Food Alliance Standard for Farmed Shellfish Operations**

The Food Alliance Standard for Farmed Shellfish Operations provides a comprehensive definition to help shellfish producers achieve greater sustainability outcomes. Performance to the standard is measured using the corresponding Food Alliance Evaluation Tool for Farmed Shellfish Operations.

The Food Alliance Evaluation Tools provide growers with a structured methodology to self-assess current sustainability performance – and set sustainability objectives – either as a prelude to certification or as a best management practice. Third-party inspectors use the Evaluation Tools to conduct on-site inspections, the results of which determine whether an operation meets the requirements of the Food Alliance Certification Program.

***What issues does the Food Alliance Standard for Farmed Shellfish Operations address?***

The standard addresses a comprehensive range of consumer and industry concerns, including: soil and water conservation, nutrient management; integrated pest, disease and weed management and pesticide risk reduction; safe and fair working conditions; shared resource management; healthy and humane care for shellstock; and fish and wildlife habitat, and biodiversity conservation.

***To what types of operations does the farmed shellfish standard apply?***

The standard applies to all North American oyster, clam, geoduck, and mussel production systems that produce shellfish from seed to harvest within a defined area and with clear ownership of the shellfish being cultured. The standard does not apply to wild harvest.

***Why did Food Alliance develop the Sustainability Standard for Farmed Shellfish Operations?***

Food Alliance developed the farmed shellfish standard, evaluation tool, and certification program in response to a request made by the Pacific Coast Shellfish Growers Association (PCSGA). In addition to the PCSGA's Environmental Codes of Practice, some association members desired the marketing benefits of an independent certification.

***How did Food Alliance develop the Sustainability Standard for Farmed Shellfish Operations?***

Individuals with professional experience and expertise in the shellfish industry – agencies, universities and the private sector – contributed to criteria development and review and provided opportunities for field testing.

The farmed shellfish evaluation criteria were developed in collaboration with Andrew D. Suhrbier, Senior Biologist with the Pacific Shellfish Institute, Olympia, WA., [suhrbier@pacshell.org.](mailto:suhrbier@pacshell.org)

The following individuals reviewed and provided comment on the evaluation criteria\*:

* Lisa Bishop, Little Skookum Shellfish
* Colin Brannen, Aquaculture Program Officer, World Wildlife Fund
* Dr. Dan Cheney, Senior Scientist, Pacific Shellfish Institute
* John Finger, Hog Island Oyster Co.
* Dr. Becky Goldburg, Director of Marine Science, Pew Environmental Group, Pew Memorial Trust
* Brian Kingzett, Blue Revolution Consulting Group
* Marco Pinchot, Community Relations and Sustainability Manager, Taylor Shellfish Co.
* John Lentz, Chelsea Farms, LLC.
* Dr. Sandy Shumway, University of Connecticut, Department of Marine Sciences

\*Not all reviewer comments and suggestions were incorporated in the final draft of these evaluation criteria, so recognition of their contribution does not constitute an endorsement.

The Pacific Coast Shellfish Growers Association (PCSGA) provided valuable support through industry contacts and outreach. It is sharing the new standard and criteria as a set of tools the entire shellfish farming industry can use to assess operational sustainability and management practices.

***Who supported the development of the farmed shellfish standard?***

Food Alliance received grant funding from:

* The Campbell Foundation
* The Russell Family Foundation
* Wildlife Forever Fund

***How does the farmed shellfish standard address pest management?***

Food Alliance certified producers make informed decisions regarding pest management and pesticide use. They employ cultural and biological pest prevention strategies to reduce or eliminate the need for pesticide applications. When pesticides are needed, they select effective materials with the fewest known environmental and health hazards for appropriate pest control outcomes. Food Alliance producers properly maintain application equipment to ensure precise applications and monitor weather conditions to prevent pesticide drift. When combined, these practices create an Integrated Pest Management strategy adapted to local conditions. As such, Food Alliance producers are able to deliver economically effective pest control while minimizing negative impacts to human health and the environment.

Food Alliance recognizes that there are some circumstances under which producers may not have complete management control over pest management on their operations. Where local, regional, state, or federal regulations require producers to comply with pest management programs, e.g., invasive species management, Food Alliance will make allowances for applications that fall outside the Food Alliance standards.

Food Alliance certified shellfish farmers whose farms include upland areas are evaluated using criteria similar to those applied to terrestrial producers. Aquatic applications of pesticides are not allowed except as legally required, e.g., control of Spartina, an invasive species.

Food Alliance makes a temporary exception for the aquatic application of pesticides to control burrowing shrimp in Willapa Bay, WA and Grays Harbor, WA. Shellfish producers in these locations currently are allowed to spray carbaryl in restricted areas under a strict IPM guideline. Shellfish farmers in these areas have agreed to stop using carbaryl (Sevin) to control burrowing shrimp on the mudflats where oysters are grown. Food Alliance will review and reevaluate this exception once an alternative to carbaryl has been proposed.

***What are the environmental impacts of shellfish aquaculture?***

Practiced responsibly, shellfish aquaculture can itself be environmentally beneficial. Shellfish remove nitrogen, phosphate, and other nutrients from the water as they feed. A single oyster can filter as much as 120 liters of water each day, and an acre of cultivated oysters can offset the nitrogenous wastes of 50 households. Shellfish also help offset carbon dioxide emissions by incorporating carbon in their shells.

Properly managed, shellfish aquaculture can also enhance habitat diversity, thereby benefiting a variety of organisms. Researchers have found that there is greater diversity and richness of species in sea beds with shellfish farming gear than in bare seabed or seabed habitat with eelgrass. Recent National Oceanic and Atmospheric Administration funded research found that mussel culture lines support more than 100 invertebrate species, and shiner perch and juvenile Pacific herring are seasonally concentrated in this habitat.

Tidelands that support shellfish aquaculture also provide critical foraging habitat for a large variety of water birds. Researchers have found that the population and diversity of 7 of 13 shorebirds and 3 of 4 wading birds was greater in tidelands with cultivated oyster beds.

However, shellfish aquaculture can also have negative environmental impacts. Identified risks include ecosystem integrity (with effects on surrounding habitat and the ecological community); disease and pest management (with potential for disease and pest transfer, pathogen loading, and use of chemical treatments); waste management (with lost gear and related debris, chemicals, and organic waste; processing of wastes; treatment of effluent; and maintenance of equipment); and multi-use issues (location, development, and aesthetics of aquaculture sites and conflicts with other resource users).

The Food Alliance Standard and Evaluation Tool for Farmed Shellfish Operations and Food Alliance Certification helps farmed shellfish producers maximize the environmental benefits of their operation while minimizing or eliminating negative environmental impacts.

# **Content of the Food Alliance Standard for Farmed Shellfish Operations**

Food Alliance Sustainability Standards are organized by "standards areas." Standards areas are high-level, meaningful components of social and environmental sustainability that can be managed in an operation.

This document lists all standards areas and evaluation criteria for the Food Alliance Standard for Farmed Shellfish Operations. For the full and comprehensive listing of evaluation criteria, performance levels and indicators refer to the Food Alliance Evaluation Tool for Farmed Shellfish Operations.

**Standard Area: Safe and Fair Working Conditions**

Producers develop employment policies to establish open channels for communicating with employees about such issues as workplace safety and job satisfaction. They provide incentives and opportunities for the development of employee skills and incorporate quality of life issues into daily decision making for themselves, their families and employees.

### Scored Criteria Address:

* Minors, children, and family members in the workplace
* Grievance procedures and policies
* Recognizing and supporting employee input for workplace improvement
* Farm Worker support services
* Discipline process
* Non-discrimination policy
* Hiring practices and communication of expectations and policies
* Workforce development and new skills training
* Compensation practices
* Employee benefits
* Worker housing and family support services
* Pesticide handler/applicator safety
* Hazardous materials emergency management
* Sanitation
* General safety

**Standard Area: Fish and Wildlife Habitat and Biodiversity Conservation**

Producers foster vegetative cover, food, and water resources necessary for fish and wildlife habitat by using methods such as establishing or maintaining biological corridors, managing mowing cycles, and restoring or protecting wetlands, prairies, and woodlands. They take steps to provide habitat for beneficial species to reduce the need for pesticides. Predator and nuisance species control is managed using least impact possible, and trapping/slaughter is only used as a last resort. Invasive species are avoided or mitigated.

### Scored Criteria Address:

* Continuing education for fish and wildlife habitat conservation
* Habitat conservation improvements
* Invasive species management
* Nuisance species management
* Threatened and endangered species protection (upland and aquatic)
* Fish and wildlife food, cover, habitat structure, and water
* Linking individual wildlife habitat conservation activities together
* Habitat protection of growout and buffer areas (growout)
* Genetic integrity of native shellfish

**Standard Area: Integrated Pest, Disease and Weed Management, and Pesticide Risk Reduction**

Producers make informed decisions regarding pest, disease, and weed management, and pesticide/herbicide/fungicide use. They employ cultural and biological prevention strategies to reduce or eliminate the need for chemical applications, and thus minimize negative impacts on the surrounding ecosystem. When chemical applications are needed, they select effective materials with fewer known environmental and health hazards. Producers properly maintain application equipment to ensure precise applications and monitor weather conditions to prevent drift. When combined, these practices create an Integrated Pest/Weed Management (IPM) strategy adapted to local conditions.

### Scored Criteria Address:

* Continuing education for reducing pesticide/herbicide use (upland and aquatic)
* IPM planning (upland and aquatic)\*
* Site monitoring/field scouting (upland)
* Weather monitoring
* Lowest effective application rates / reducing application rates (upland and aquatic)
* Pesticide selection and justification (upland and aquatic)\*
* Pesticide record keeping
* Calibration of application equipment and pesticide drift
* Hazardous material storage (upland)
* Predator management (growout)
* Noxious weed management (growout)
* Food Alliance prohibited pesticide list

\*aquatic - where chemicals are needed for control of Spartina and/or burrowing shrimp (Neotrypaea californiensis and Upogebia pugettensis)

**Standard Area: Soil and Water Conservation, Nutrient Management**

Producers protect water and soil resources by using methods such as creating buffer zones along waterways and reducing chemical and sediment runoff. Producers conserve water by encouraging infiltration and storage of rainfall in the soil. Producers reduce erosion and protect soils by optimizing plant cover throughout the year by establishing permanent vegetative cover in upland areas. Producers conserve and recycle nutrients by converting organic wastes into productive uses and by seeking ways to generate nutrients on the operation through such methods as cover cropping or on-site composting, where appropriate.

### Scored Criteria Address:

* Continuing education for soil and water resource conservation
* Buffer strips/sensitive habitats
* Upland/near-shore resource management
* Water quality (growout/harvest using floating aquaculture)

**Standard Area: Shared Resource Management**

Producers are good neighbors and minimize impacts on surrounding property owners, local residents, and other users of coastal areas. Adverse impacts from artificial lighting, noise, and odor outside the farm or facility are minimized. Farm sites and facilities are constructed in ways that minimize public aesthetic concerns.

### Scored Criteria Address:

* User relations
* Farm-site boundaries
* Marine operations and navigation
* Farm equipment maintenance and material reduction
* System design and maintenance (for floating structures)
* Harvest management

**Standard Area: Healthy and Humane Care for Shellstock**

Animals are treated with care and respect. Producers utilize management practices to maximize animal health and safety and eliminate use of antibiotics. The entire farming area is acceptable for the species being cultured. Periodic pathology screenings are conducted to ensure broodstock and animals being cultured are free from disease and bacterial contamination.

### Scored Criteria Address:

* Planting and production plan
* Carrying capacity management
* Disease prevention and management
* Transportation (nursery and growout)
* Hazard reduction and sanitation (growout)
* Culture conditions (growout)
* Holding and handling operations and facilities (nursery and growout)

**Fixed Criterion: No Genetically Modified Organisms (GMO) breeds or cloned animals used**

To avoid risks to human and animal health, the environment, economic wellbeing of farmers, food security, and export markets, production of GMOs, or cloned animals is discouraged. Although GMO breeds and/or cloned animals may be produced on the farm, they may not be produced or sold as a Food Alliance Certified product. Parallel production is prohibited. Triploid animals are not considered GMO as no genes are introduced.

**Fixed Criterion: No Prohibited Pesticides**

The Food Alliance Prohibited Pesticide List (PPL) is based on the WHO Recommended Classification of Pesticides by Hazard (2009). The PPL consists of materials classified as extremely hazardous or highly hazardous on the WHO list that are registered for use by the USEPA. Exceptions are allowed if the use of a material on the PPL is required by law or required for export.

**Fixed Criterion: No growth-promoting hormones or other growth promotants used**

Veterinary and/or production records are complete and show no use of hormone implants or use of other growth promotants, or visual inspection of storage area/buildings, and animals confirm no use of hormone implants. (At the time of publication, hormones are not currently used in shellfish production.)

**Fixed Criterion: No antibiotics are used**

Production records, visual inspection of storage area/buildings, or producer/manager confirms no feed additive (sub-therapeutic) or antibiotics used. Probiotics are not considered antibiotics and their use is allowed. (At the time of publication, antibiotics are not currently used in shellfish production.)

**Fixed Criterion: Moving shellfish**

Production records indicate either no shellfish are moved between production operations, or if shellfish are moved between farms, both farms are Food Alliance Certified.

**Fixed Criterion: Continual Improvement**

Producers are committed to setting goals and assessing their progress toward these goals by monitoring for impacts of decisions on their operation, family, employees, and the environment.