

# AQUACULTURE WORKING GROUP USDA RECOMMENDATIONS

For Organic Production of  
Aquatic Animals and Plants

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# Aquaculture Working Group

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## Aquaculture in the World and United States

- The world's capture fisheries are at their limits
- One-half of all seafood supply is from aquaculture
- Growth in seafood consumption depends upon aquaculture
- USDA-HHS Dietary Guidelines for Americans 2010 recommend increased seafood consumption to two servings weekly (8 or more ounces per week)

## Organic Market

- 5% of food sold at retail are USDA Organic labeled
- Organic aquaculture products are expected to
  - replace some existing consumption of conventional
  - develop new consumption
  - much higher prices and margins
  - provide domestic producers new opportunities
- Farmed seafood is the only major animal protein without “USDA Organic” standards
- Contrary to the intent of OFPA for single and consistent USDA standards, salmon, shrimp, tilapia and oysters are legally marketed in the US with organic claims
- Some are not certified to any standards

# Organic Legal Structure in the USA

- Organic Food Production Act of 1990 (OFPA)
  - USDA National Organic Program (NOP)
  - National Organic Standards Board (NOSB)
    - Aquaculture Working Group (AWG)
- Final Rule (CFR) – actual standards
- National List of
  - Allowed synthetic substances
  - Prohibited natural substances
- Independent certifiers accredited by USDA NOP
- Organic System Plan (OSP) or (OMP)
- Absent an affirmative rule, other standards are allowed (i.e, EU, Canada, Natureland, or whatever)

# Status of Organic Standards

- 1999 First proposed NOSB standards
- 2005 Appointment of AWG
- Spring 2010 Final NOSB recommendations
- 2013 USDA NOP begins work on Final Rule
- Summer 2015 Proposed Final Rule sent to OMB
  1. Approval in 90 days with 90 days for public comments, then back to USDA NOP to publish
  2. Return to USDA NOP for more work
  3. Sit on indefinitely
- **Supportive public comments are essential**

## § 205.250 Aquaculture General

- Organic System Plan must include a detailed environmental assessment including
  - a map that includes a listing of flora and fauna,
  - a water quality monitoring program,
  - measures to minimize impacts,
  - biosecurity practices,
  - waste management plan,
  - surveillance, and
  - multi-stakeholder issue resolution
- Must consider measures to recycle nutrients, including through poly-culture and integration

## § 205.251 Origin of Aquatic Animals

- Triploidy is prohibited
- Monosex stocks by chemical and other artificial methods are prohibited
- Genetically modified plants and animals, and excluded methods are prohibited
- Traceability required
- Aquatic animals must be under continuous organic management beginning no later than 5% of total market weight



## § 205.252 Aquatic Animal Feed

- Prohibited -- antibiotics, hormones, mammalian and poultry slaughter products, synthetic solvents, and GMOs in feeds
- Fish meal and oil may not be sourced where FAO or other government authorities report “over-exploited,” “reduced reproductive capacity,” “overfished,” etc.
- Fish for oil and meal must be from regions with the lowest levels of persistent bioaccumulative toxins
- Fish oil must be treated with activated carbon to remove toxins

## § 205.612 Nonsynthetic substances prohibited

- Fish meal and fish oil from wild caught fish and other wild aquatic animals, Except if produced from environmentally responsible food grade wild caught fisheries and fed in the following step-wise levels: a maximum combined total of **25% during year 1 through 5** after this regulation is implemented, a maximum combined total of 15% during year 6 through 8, and a maximum combined total of 10% during year 9 through year 10, and a maximum combined total of **5% during year 11 and 12**, with the percentages by weight of feed being averages over the production cycle of the aquatic animal.
- Synthetic stabilizers are prohibited.

## § 205.253 Aquatic Animal Health Care

- Meet minimum nutritional needs (vitamins, trace minerals, etc.)
- Monitor, record, and maintain water quality
- Establish biosecurity measures
- Administer vaccines and other biologics, if allowed.
- Employ site fallowing, cleaner fish, etc.
- Must not:
  - administer antibiotics, hormones, etc.
  - sell clinically diseased fish as organic
  - administer synthetic parasiticides
  - administer medications in absence of illness (other than vaccines)
  - withhold treatment for illness

## § 205.254 Aquaculture Living Conditions

- Site environment must accommodate needs
- Containment must
  - Provide for exercise swimming behavior
  - Minimize potential for injury
  - Biomass densities appropriate for the animal that promote natural behaviors and limit aggression
- Predator Management Plan without use of lethal measures

## § 205.255 Aquaculture Facilities

- Pond berms to withstand 100-year flood
- Effluents must be assimilated within 25-meters
- Waste Management Plan involving nutrient recycling
- Escape prevention plan
- Net pens in public waters must
  - Avoid migratory routes of native species
  - Grow strains of native species
  - Be spaced from conventional net pen operations
  - Control fouling by physical or biological, not chemical means
  - Employ multiple species outside pens for recycling
  - Conversion period of the less of one-year, or one cycle
- Earth ponds conversion of 36-months if prohibited substances have been applied

## § 205.257 Bivalve Molluscs

- Detailed environmental assessment with maps
- Hydraulic Zone of Influence using oceanographic methods
  - Identification of sources of prohibited substances
  - Affidavits from contiguous users
- Expanded sanitary survey and site requirements
- Hatchery produced seed only
- Monitoring requirements for indicator organisms and sentinel animals
- Chemicals to control predators are prohibited
- Restriction on harvest methods and equipment
- Traceability requirements

## § 205.258 Farmed Aquatic Plants

- Earth ponds must not have prohibited substances for 36-months
- Dissolved nutrients must not exceed minimum necessary
- Berms, boundaries and buffer zones to prevent contamination
- Organic starter cultures required when available
- Composted manure allowed if it complies with 205.203, but prohibited in public waters
- Continuous organic management after 5%

## § 205.259 Harvest, ... and Slaughter of Aquatic Animals

- Minimize stress to animals and minimize environmental impacts
- Transport conditions must consider water quality, duration of trip, density and metabolite accumulation to minimize adverse effects
- Food deprivation period limited to that necessary to provide gut clearance
- Finfish must be stunned to be instantly rendered insentient and maintained insentient until death by:
  - Concussion to the head
  - Electrical stunning
  - Electrocution



## § 205.259 Harvest,...and Slaughter of Aquatic Animals (continued)

- Prohibited means include:
  - Ice slurry for cold water fish (allowed for warm water fish for five years)
  - Carbon dioxide
  - Suffocation or asphyxiation (leaving fish to die in the air)
  - Synthetic anesthetics
  - Exsanguination (bleeding) without stunning
- Ice slurry is allowed for aquatic animals that are non-sentient
- Proper disposal of harvest water, blood water, viscera, etc.

**Supportive public comments are  
essential**

**Also is Congressional support**