



Institute for Social Economic
and Ecological Sustainability

University of Minnesota

National Organic Aquaculture Workshop

June 23-24, 2000

Final Report

Edited by

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Executive Summary

The first National Organic Aquaculture Workshop convened by the Institute for Social, Economic and Ecological Sustainability (ISEES) at the University of Minnesota June 23-24, 2000 jump-started the most comprehensive dialog to date on organic aquaculture in the United States. Cross-sectoral attendance included representatives from the aquaculture sector, the organic agriculture sector, non-governmental organizations, academia and government agencies, all of whom provided a fresh and informative approach to the development of national organic aquaculture standards.

Featured presentations by recognized experts laid the foundation for subsequent small group breakout discussions. Key issues included aquatic animal feed, induction of triploidy as a biological barrier, effluent management, predator control, aquatic animal health care, and the possibility of organically certified wild harvested aquatic animals.

Participants found room for agreement and decided to redraft new general principles for organic aquaculture. The general principles address: basic conditions, location of production units, location of collecting areas, health and welfare, spawning, reproduction and breeding, nutrition, harvesting, transportation of living aquatic organisms and slaughter. Preliminary progress motivated workshop participants to continue the discussion of organic aquaculture general principles with an eye towards eventually developing standards under each principle. Workshop attendees formed a Working Group and ISEES created an Internet Discussion Room to facilitate the dialog.

The workshop has spawned a number of positive outcomes.

- First, a draft set of general organic aquaculture principles was presented to the United States Department of Agriculture's National Organic Program.
- Second, the expanding national and international network of original workshop participants and other interested parties remains connected and informed of progress through the Internet discussion room.
- Third, the National Organic Standards Board (NOSB) has formed an aquatic task force and an advisory aquaculture working group. Two thirds of the group were participants in the ISEES workshop and included the coordinator, Deborah Brister.
- Fourth, the International Federation of Organic Agriculture Movements (IFOAM) has recently established an organic aquaculture working group and has asked Brister to participate as a technical advisor and key contact person between the IFOAM working group, Standards Committee and international network.
- Fifth, the United Nations Food and Agricultural Organization (UN FAO) through its European Inland Fisheries Advisory Commission (EIFAC) Working Party on Organic Fish has established a working relationship with ISEES, strengthening opportunities for future collaboration and international cooperation on organic aquaculture issues.

National Organic Aquaculture Workshop Report

The first National Organic Aquaculture Workshop convened by the Institute for Social, Economic and Ecological Sustainability (ISEES) at the University of Minnesota June 23-24, 2000 jump-started the most comprehensive dialog to date on organic aquaculture in the United States. Over 40 representatives from the aquaculture sector, the organic agriculture sector, non-governmental organizations, academia and government agencies provided a fresh and informative approach to the development of national organic aquaculture standards.

Background

The Organic Foods Production Act (OFPA) mandates the United States Department of Agriculture Agricultural Marketing Service National Organic Program (USDA/AMS/NOP) to develop standards for certain agricultural products as organically produced. Under OFPA's definition for livestock, fish used for food and wild or domesticated game are included. The National Organic Standards Board (NOSB), a 15-member advisory panel, consisting of organic certifiers, farmers, handlers, consumer and public interest groups, environmentalists, retailers and scientists provide the NOP with recommendations on organic practice standards, and allowed and prohibited substances. With little input from the aquaculture sector, the NOSB Livestock Committee drafted several sets of organic aquaculture standards, however, upon review, were considered unreasonable by experts in the aquaculture industry.

At the June, 1999 NOSB meeting, ISEES (represented by Deborah Brister) submitted 13 pages of recommendations for improving the draft organic aquaculture standards. In addition, we proposed to the board that additional input by the aquaculture sector was needed before organic aquaculture standards could be finalized and offered to convene a national organic aquaculture workshop. The NOSB agreed, understanding that this was a necessary step towards practicable, organic aquaculture standards.

Expected Key Issues

In a 1999 briefing paper, "Unresolved Issues in Organic Aquaculture Standards," submitted to the NOSB Livestock Committee from the NOP, key issues included aquatic animal feed and products derived from wild caught animals, induction of triploidy as a biological barrier, effluent management, predator control, aquatic animal health care and the use of antibiotics. We asked our speakers to address these issues and based our breakout sessions on the identified problem areas. Workshop participants then had the opportunity to comment at length on these topics. Additionally, an open session room was available during the breakout sessions for topics that participants felt also needed to be addressed.

Deliberations

Aquatic animal feeds were intensely debated. Many participants agreed that fishmeal and oil should be permitted in organic aquaculture production, however, national organic livestock standards require feed that is 100% organic (with some exceptions). Feed derived from wild harvested aquatic animals would likely require organic certification. Part of organic certification would include the sustainability of the fishery. Participants were unsure of who would do the certification (i.e., private or government), with what standards (e.g., National Organic Standards, Marine Stewardship Council, other), and who would ultimately be certified. Beyond the question of sustainability, was concern over aquatic animals' exposure to contaminants in open water bodies. Participants were unclear whether the managing body could adequately predict and control contaminant exposure since these waters are public and the activities in them are beyond the control of those managing the fisheries.

The use of terrestrial animal by-products in aquatic animal feeds was also extensively debated. Some participants felt the prohibition of these by-products prevented the potential for aquaculture as a recycler of products that would otherwise be destined for the waste stream. In addition, the prohibition of these by-products may make the cost of feed unaffordable by many who would otherwise be interested in organic production. Some workshop participants felt that public perception, especially with the fear of bovine spongiform encephalopathy and Creutzfeld-Jakob Disease, were strong reasons for prohibition of terrestrial animal by-products in organic aquaculture standards.

Aquatic animal health issues revolved mainly around the use of antibiotics. Terrestrial livestock standards require that no antibiotics be used in organic production. Participants felt that this would not be a major obstacle for smaller operations, however it may prove problematic for larger operations.

The importance and allowance of triploidy induction as a biological barrier to prevent reproduction was supported by workshop attendees. Although this procedure is prohibited in many organic standards, participants believed it was due to a misunderstanding of the actual process and outcome. Triploidy induction does not remove or insert foreign genetic material into the aquatic animal. Applying a pressure or temperature shock to an egg immediately after fertilization simply prevents a polar body containing an additional set of haploid chromosomes from being discarded. Naturally occurring triploid animals do exist.

The majority of participants felt that the proposed prohibition of all net cage operations in organic production was overly restrictive and unjustified. Attendees felt that an examination of the underlying issues of effluent management should be addressed directly instead of restricting specific types of operations. Many agreed with principles that encourage optimum use of nutrients and practices that minimize waste. Recommendations for effluent management included a nutrient management plan, the use

of multiple species (polyculture) if possible, appropriate stocking densities and adequate monitoring of affected areas.

Collaborative Large Group Outcomes

Participants found room for agreement and decided to redraft new general principles for organic aquaculture. After making comparisons of other organic aquaculture standards such as the Soil Association (United Kingdom), KRAV (Sweden) and Naturland (Germany), participants decided on the International Federation of Agriculture Movements (IFOAM) draft organic aquaculture standards to use as a template. The general principles address: basic conditions, location of production units, location of collecting areas, health and welfare, spawning, reproduction and breeding, nutrition, harvesting, transportation of living aquatic organisms and slaughter.

Positive Outcomes As A Result Of the Workshop

A draft set of general organic aquaculture principles was presented to the United States Department of Agriculture's National Organic Program following the workshop.

Preliminary progress motivated workshop participants to continue the discussion of organic aquaculture general principles with an eye towards eventually developing standards under each principle. Workshop attendees formed a Working Group and ISEES created an Internet Discussion Room (<http://communities.msn.com/OrganicAquacultureWorkingGroup/home.html>) to facilitate the dialog. The network expanded to international levels and to date, representatives from Chile, Brazil, Ecuador, Canada, Germany, the UK, Finland, the Netherlands, New Zealand and India, in addition to numerous groups from North America, have joined or requested to join the ISEES Organic Aquaculture Working Group.

In September, 2000, the National Organic Standards Board (NOSB) formed an aquatic task force and two advisory working groups, one for aquaculture and one for wild harvest. Two thirds of the aquaculture working group were participants in the ISEES workshop and included the coordinator, Deborah Brister. The NOSB working group has presently submitted two reports to the NOSB.

The International Federation of Organic Agriculture Movements (IFOAM) has recently (Feb. 2001) established an organic aquaculture working group and has asked Brister to participate as a technical advisor and key contact person between the IFOAM Working Group, Standards Committee and international network. IFOAM aquaculture standards are currently in draft form.

The United Nations Food and Agricultural Organization (UN FAO) through its European Inland Fisheries Advisory Commission (EIFAC) Working Party on Organic Fish has established a working relationship with ISEES, strengthening opportunities for future collaboration and international cooperation on organic aquaculture issues.

The final rule for organic crop and livestock production was released on December 21, 2000 (www.ams.usda.gov/nop). This rule does not currently include aquatic animals, however the NOP anticipates a proposed rule for aquatic animals will be in place by the time the final rule is fully implemented (August, 2002). Upon approval, aquatic standards will then be amended into the final rule for organic crop and livestock production.