BETTER USE OF THE AQUATIC FOOD CHAIN

Although no official statistical data are available concerning the global production of certified organic aquaculture products, it is estimated that total production in 2000 was about 5 000 metric tons, primarily in European countries.

Small ponds recycle farm nutrients

This modest quantity represents only about 0.01 percent of global aquaculture production and about 0.25 percent of European aquaculture production. Little or no production data is available for countries outside Europe, but in many countries, producers are trying to develop organic aquaculture using national or private standards for production of a variety of species.

As with other organic foods, **consumer demand for organic seafood products from aquaculture is growing. The market is still small but species such as trout, salmon, carp, shrimp and oysters are now available** from organic sources and the production increase is significant, with typical growth rates of 25 percent per year. Current demand is concentrated in Western markets, especially in Europe, but increasing popularity of organic products should bolster demand for organic seafood in the world's largest seafood markets, Japan and the United States of America. Organic seafood prices are typically 25 to 30 percent higher than those of non-organic products, which explains much of the growing interest in production. Production is expected to continue to grow and, when supported by adequate marketing strategies, should enable farmers to produce and sell profitably to a growing number of well-paying consumer segments.

Even though draft standards have been developed, many issues relevant to organic aquaculture still are being discussed and negotiated, such as replacing fishmeal and fish oil in the diets of cultured aquatic organisms, addressing chemical drift and contamination of the water, defining parallel organic feed principles for terrestrial livestock, retaining the integrity of the organic product from farmer to consumer, and converting conventional aquaculture systems into organic systems.

Pristine river water flows in organic trout farm

organic FISH FARMING

Salmon with organic label gill tag

The low production in organic aquaculture has in part been due to the absence of internationally recognized and universally accepted regulations and standards. The organic aquaculture sector has 20 to 25 private and public certifying bodies with standards that vary considerably from country to country, certifier to certifier, and species to species. To a large extent, these reflect the differences between individual certifiers, farmers and other interested stakeholders in the interpretation of what organic aquaculture really means and entails, and highlight the urgent need for the adoption of a set of basic principles and production and certification standards.

Technical areas which require further research and development in organic fish farming include the following:

nutrition: *acceptable residue levels in fish feeds, replacement of fishmeal and fish oil with alternative protein and lipid sources, use of natural antioxidants and synthetic amino acids, nutrient fluxes and associated environmental issues;*

holding facilities: *selection of construction materials, stocking densities, the role of oxygenation, and water quality; and*

post-harvest: *slaughter, handling, transport and processing.*

Organic off-shore salmon farm, Ireland

Though certified organic aquaculture in developing countries is still in its infancy, these countries are the producers of more than 90 percent of global aquaculture production. The bulk of this production targets low cost freshwater species which feed low in the aquatic food chain. **Conversion to organic aquaculture would recycle valuable nutrients, with positive benefits for the environment and society.**

The FAO Fisheries Department provides expert advice and supports activities related to organic aquaculture. As a specific initiative of the European Inland Fisheries Advisory Commission, the ad hoc Working Party on Organic Fish Farming has been established to assemble material on the status of organic fish farming and market conditions, define research needs and review several technical areas.