CLASS LURES ASIA'S FISH FEEDERS

Australian specialists in aquaculture nutrition recently shared their knowledge and experience with their counterparts in South-East Asia, as part of a regional effort to overcome a critical shortage of fish feed

PHOTOS: BRYDON COVERDALE

BY BRYDON COVERDALE

Ten years ago Australian aquacultural scientists predicted a looming shortage of fish meal and a consequent spike in prices. Their predictions have come true, with prices leaping from US$600 a tonne last year to US$1500 a tonne in recent months.

Not surprisingly, with aquaculture a major supplier of protein in South-East Asian diets, this is causing big problems for struggling Asian fish farmers who rely on fish meal to feed their stock. But the Australian organisers of a masterclass on aquaculture nutrition, held in Thailand in August this year, hope their work will help introduce changes to lift the industry's sustainability, efficiency and profitability.

Organised by ACIAR, the Australian Academy of Technological Sciences and Engineering (ATSE) Crawford Fund and other groups, the two-week masterclass invited scientists specialising in aquaculture nutrition in Australia to share their knowledge and research with scientists and aquaculture specialists from Thailand, Laos, Cambodia, Indonesia, Vietnam, India, the Philippines and Papua New Guinea.

CSIRO aquaculture nutritionist Kevin Williams says the world fish-meal shortage is one of the critical issues that needs addressing. "Whether we're talking about wet trash fish or fish being processed into fish meal, there is a finite limit to the availability of that material and we have been at that finite limit for more than 10 years," he says.

And with aquaculture now accounting for about one-third of the world's fisheries production—up from about 10% in the early 1980s—it is no surprise that this fish-meal supply squeeze is getting worse.

"Australia recognised this 10 years ago, and we worked on how we could substitute fish meal in the diets of high-value species such as finfish and shrimp," Dr Williams says. Meat or poultry can be used in some feeds, as well as plant products such as lupins and cereals.

"Australia will benefit because we are a very large producer and exporter of terrestrial protein and carbohydrate sources," he says. "We produce probably 80% of the world's lupin grain production."

But while some South-East Asian fish farmers may be able to afford commercial feeds, most cannot, according to one of the leaders of the masterclass, Dr Geoff Allan of the NSW Department of Primary Industries, Port Stephens. He says that in Thailand, for example, species such as catfish, tilapia and carp might sell at the farm gate for prices ranging from 20 to 50 baht (roughly A$0.70 to A$1.70) a kilogram. However, with catfish and tilapia feeds retailing at about 70 cents a kilogram, profits can be either slim or non-existent.

"You can see that if you're feeding between one and two kilos of feed to produce one kilo of flesh, the economics really don't stack up," Dr Allan says.

It is a similar story across South-East Asia, so making do with other available ingredients is the best option for many farmers.

But for this to happen they need access to information—the reason for the masterclass, which built on established relationships between Australian and Asian researchers, some of whom had worked together on ACIAR aquaculture projects.

Masterclass participants visited a tilapia farm cooperative where the manager demonstrated his feeding techniques (above), and saw workers at a catfish farm grading young catfish for quality (left).

Topics included combining available feeds as efficiently as possible, physically producing feed pellets, storing feed and minimising wastage when distributing feed.

Dr Allan says that maximising efficiency and minimising waste are crucial for fish farmers, who not only rely on seafood for income but also, in many cases, to feed their families.

"Aquatic protein is the most important source of protein in the world and in this region about 25% of total protein intake comes from fish and aquatic products," he says.

The organisers of the masterclass also hope to truncate the two-week course into a three-day program that masterclass participants can run so the information is more widely delivered. ◀

Brydon Coverdale is a journalist with Rural Press and travelled to the Thailand masterclass courtesy of the ATSE Crawford Fund. This article first appeared in Rural Press newspapers, including Stock & Land*, on 7 September 2006.*