Pangasius farming in the Mekong Delta is an important industry that employs around 100,000 people and covers more than 6,000 hectares of Vietnam. In 2012 it generated exports valued at £1.15 billion, with Europe accounting for 24% per cent and the US for 21%.

The industry began in a serious way just 15 years ago, when farmers began to see the potential for selling beyond the domestic market and increased their production capacity. In the following decade the industry grew slowly from just under 100,000 tonnes to 400,000 tonnes, then rapidly took off as large numbers of farmers started farming pangasius to meet the demands of a growing international market looking for alternative supplies of white fish. In just two years, production leapt to 1.4 million tonnes before declining to the current level of around 1.2 million.

This decline was precipitated by exposés of poor environmental controls on farms, excessive use of antibiotics and chemicals, and a disregard for social welfare. The result was a serious setback for pangasius in terms of both sales and reputation, and Vietnamese fish farmers have struggled to regain consumer trust.

However, the government stepped in with tighter controls and set up initiatives to improve production and environmental standards, with the aim of reassuring seafood buyers. One major initiative has been the promotion of greater uptake of standards such as Global GAP, VietGAP and ASC.

The government’s target of 10% of production being ASC certified by the end of 2013 has already been exceeded by 5%. Thirteen
Improving pangasius standards in the Mekong

TARGETS
GAP certification is also being promoted and the ambitious target is for all pangasius farms to be VietGAP certified by 2015. ‘Pangasius is one of our key farmed species and makes up 40% of total aquaculture volume,’ explained Dr Pham Anh Tuan, deputy director general of the Vietnam Directorate of Fisheries.

‘We have put money and resources into research to improve juvenile quality, feed quality and production standards, with an emphasis on food safety, traceability, animal health, environmental protection and social standards,’ he added.

The new strategy, which all the major producers have signed up to, includes the production of higher quality feed, tighter control of raw materials and the development of more effective feeding methods. At present pangasius are fed by hand to appetite, even on the largest farms. In addition, attention is being paid to improving farm infrastructure such as water supply and waste treatments and to researching improved production methods.

INTEGRATION
Vinh Hoan is one of the largest pangasius producers, and also operates its own feed mill plus primary and secondary processing plants. ‘Full integration makes the most sense because it enables us to manage the process from start to finish,’ said Nguyen Ngo Vi Tam, the company’s deputy general director.

The company has a 47ha hatchery and 300ha of grow-out farms, where 1kg fish are produced in large, intensive ponds. They spend 2-3 months in the hatchery and 6-7 months in the ponds. These are fed with water from the adjacent Mekong River and around 30% is replaced each day. Waste water passes through a settlement pond filled with water hyacinth, which reduces the phosphorous and nitrogen load. Ponds are worked on an all in/all out basis and fallowed at the end of each cycle.

Water quality and temperature are regularly monitored to ensure there are no issues that would affect the fish. Temperature in the ponds ranges from 28 to 32°C, which matches the preferred range of pangasius.

‘We supply around 80% of the raw material for our processing unit and we contract farmers to

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provide the remainder,' explained Nguyen Ngo Vi Tam. ‘In this way we can be more flexible in our demand.’

Farmers working in isolation only receive around £0.66-0.72 per kilo for their fish, whilst processors, working on a 35-40% yield, sell for three times this value. In the supermarkets, it is one of the cheapest items on the fish counter. Vinh Hoan farms have GlobalGAP, AquaGAP, BAP and were the first in Vietnam to gain ASC certification. ‘Because we already had a number of other certifications, it was not too onerous for us to comply with the requirements of ASC, which requires strict controls on the source of fish meal and fish oil, improved production methods, lower stocking densities and control of escapees, plus habitat and biodiversity protection and social responsibility,’ said Nguyen Ngo Vi Tam.

‘Two of our farms are now certified, amounting to some 14,600 tonnes, but demand for ASC pangasius is growing, especially from Europe, so we are bringing a third farm under the certification scheme this year.’ Vinh Hoan is working on a broodstock development programme to improve the quality of fingerlings and has introduced a traceability system that follows the fish from egg to packaged product. Industry standard for mortalities is 20% throughout the lifecycle, which the company is working to reduce. The fishmeal factory, set up in 2007, produces 100% of the company’s requirements for feed. It also produces fishmeal and fish oil from pangasius waste, which is sold for use in feed for other fish such as barramundi and snakehead.

The Hung Vuong Corporation runs a similar intensive pangasius pond operation, raising and processing 120,000 tonnes of fish per year to GlobalGAP standard, and a growing proportion to the ASC standard. Fish is processed in their 12 factories, built close to the production sites on the riverside.

**EXPORTS**

Nguyen Dang Khoa, vice sales manager of Hung Voan, explained that current exports are worth around $200 million, but the company aims to increase this to $300 million by 2015. ‘Being certified against the ASC standard has definitely helped in our dealings with customers and we are gradually increasing the number of our farms that operate to the ASC standard. It has also improved production rates and reduced mortality, making our business more efficient.’

All pangasius are transported live to the processing plants in specially developed wellboats, and the transformation process to frozen product takes less than 2 hours.

**NEW FEED PRODUCER**

EWOS is a newcomer to feed production in Vietnam. The company entered a joint venture agreement with Anova Feed in 2009 to run their small feed mill on the outskirts of Ho Chi Minh and took over management of the plant in 2011. The factory now has ISO 9001, is working towards ISO 14000, and is aiming to gain ISO 22000. Following the installation of a new biomass boiler,
EWOS recently completed a buyout of the plant. EWOS recently completed a buyout of the plant. Dave Robb, deputy general director of EWOS Vietnam, explained that particular emphasis was given to R&D within the company, which has set up two trials sites in the Mekong Delta to improve the performance of its feeds. Trials are overseen by EWOS Innovation in Norway and managed locally. ‘We are working to understand the nutritional needs of the fish better, which will help us to produce an optimal feed for this species. The original industry formulation for pangasius was based on that used in the US Channel catfish industry and is not necessarily the most appropriate for conditions in the Delta,’ explained Dave.

The pangasius industry now appears to be on a new footing, although each week seems to herald a new market crisis, not helped by the global economic situation. However, Dr Pham Anh Tuan believes that the country’s pangasius farmers and processors are well placed to meet the growing need for high-quality seafood, and explained that a new trade association has just been formed to help achieve this.

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