



Farmed Pangasius

One of the fastest growing types of aquaculture in the world is pangasius farming. Most pangasius – commonly known as basa, tra, Vietnamese catfish, Asian catfish and river cobbler – is produced at farms, the majority of which are in Vietnam. In 1990, pangasius aquaculture was a small industry. But by 2007, approximately 1 million tons of pangasius were produced in Vietnam. The major markets for this fish are the European Union, Russia, Southeast Asia and the United States.

The Production Process

It takes approximately 6 months to grow a market-sized pangasius – which means it's often possible to grow two crops a year. The process usually begins by producing young fish in hatcheries, then stocking the fish in nurseries. When they reach appropriate size, they are moved to ponds, pens and cages for grow-out. Most often they are moved to ponds as this method is the most economical.



Pond size normally measures about 1 ha or less, but can sometimes reach up to 10 ha. Ponds are generally stocked at about 60-80 fish/m³ and require frequent water exchange (20-30 percent exchange twice a week) through a pump system. Fertilizer is not used in pangasius culture but sometimes chemicals and drugs are used to treat/prevent disease and address other health issues.

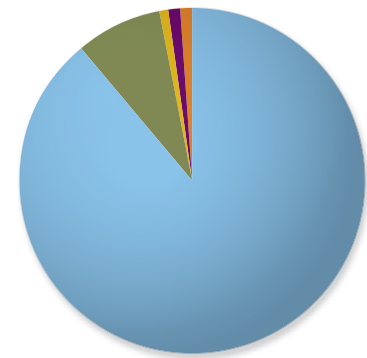
Feed varies by farm size. Larger-scale farms tend to favor manufactured feed pellets which are lower in marine ingredients. The typical feed conversion rate (FCR) is 1.5-1.8. Smaller-scale operations often use farm-made feed, which is moist and therefore has higher FCR, ranging from 2.8 to 3.0.

Once pangasius reach marketable size, they are usually harvested with nets. They are then brought to processing plants, where they are filleted, sometimes trimmed, and categorized by color, which determines their price and where they will be sold. Fish are typically packaged in a combination of plastic and cardboard to be sent to market.

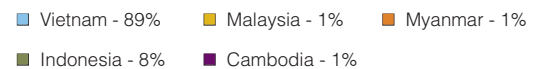
Production Statistics

• Farmed Pangasius by Country

Pangasius is primarily farmed in Asia. Vietnam has the highest output rate; in 2005 it supplied 89 percent of the market.



Data source: FAO FishStat 2005



• Farmed Pangasius by Species

The majority of farmed pangasius comes from just one species, *Pangasianodon hypophthalmus*. A small percentage is also *Pangasius bocourti*.

• Main Farmed Pangasius Importers

Major markets for pangasius from Vietnam include the European Union (48 percent of total turnover), Russia (9.2 percent), Association of Southeast Asian Nations countries (7.9 percent) and the U.S. (6.9 percent).



Potential Environmental Impacts

- **Land and water use:** As new farms are established, sensitive habitat can be destroyed and water can be diverted, which can affect other water users and the environment.
- **Water pollution:** Excess waste can pollute the water and negatively affect plant and animal habitat.
- **Escapes:** Pangasius that escape from aquaculture facilities may compete with wild fish and affect ecosystems, especially in areas where pangasius is not yet established.
- **Feed management:** Use of fishmeal, fish oil and trash-fish as pangasius feed is depleting resources that other fish rely on for food. Also, feeding trash-fish to pangasius can cause unsustainable harvesting and water pollution.
- **Health management:** Pangasius farms are prone to health problems that can impact farmed and wild stocks.
- **Antibiotics/chemicals:** Inappropriate use of antibiotics and chemicals can have unintended consequences on the environment and human health, such as antibiotic resistance and unsafe products.



Ways to Help Encourage Sustainable Farming

Use your purchasing power

- Purchase pangasius traceable to the pond they were grown in.
- Choose fish tested to be free of potentially harmful chemical and drug residues.
- Buy from farms that
 - employ water treatment methods and avoid direct discharge of effluents into the surrounding environment
 - grow in areas where pangasius is indigenous (e.g., the Mekong delta)
 - adhere, at minimum, to legal requirements for where and how to site farms

Join the Pangasius Aquaculture Dialogue

We encourage you to support the Pangasius Aquaculture Dialogue – a roundtable discussion to develop standards for minimizing or eliminating the key environmental and social issues associated with pangasius farming. The standards will be measurable, science-based and created by the world's leading pangasius farmers, academics, NGOs and others. Adoption of the standards will help ensure that farmed seafood is healthy for humans and the environment. We also encourage you to ask the seafood producers you work with to participate in the Dialogues.

To learn more about the Pangasius Aquaculture Dialogue and other Dialogues initiated by WWF go to: worldwildlife.org/aquadialogues



Dr. Flavio Corsin
WWF Senior Aquaculture Advisor
flavio.corsin@wwfgreatermekong.org
Phone +84 (912) 77 6993

worldwildlife.org