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China's Tilapia Production Situation

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Report Highlights:

China's Tilapia production for 2006 is forecast at 1.07 MMT, up by 10 percent over 2005. Tilapia exports are forecast to reach 200,000 MT (converted into raw fish), up 20 percent from last year. The United States is the destination for 70 percent of China's Tilapia exports. The continued high growth rates for Tilapia production and exports are due to strong domestic and overseas demand.

Includes PSD Changes: No
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Executive Summary

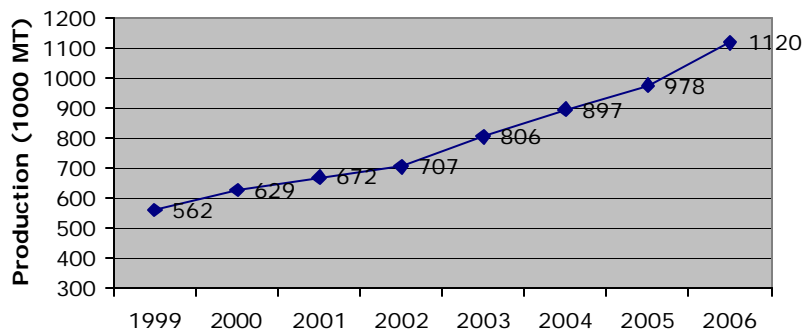
China's Tilapia production for 2006 is forecast at 1.07 MMT, up by 10 percent over 2005. Tilapia for export is forecast to reach 200,000 MT (converted into raw fish), up by 20 percent over 2005. Tilapia fillet exports are forecast to continue increasing, while Tilapia frozen whole will fall because of China's labor cost advantage. The United States continues to be the largest destination, comprising 70 percent of China's exports. The high growth rates for Tilapia production and exports are driven by strong domestic and overseas demand.

Production

China's Tilapia production is forecast to reach 1.07 MMT for 2006, up by 10 percent from the 978,000 MT in 2005. The rapid growth is driven by strong export and growing domestic demand. Production for 2007 is likely to continue growing if the per unit returns are still higher than other cultured species.

Tilapia was first introduced to China from Vietnam and Africa in 1956. Production reached 100,000 MT by 1990. Production rose sharply from 1995 to 2005, with an annual growth rate of approximately 15 percent, making China the largest producer in the world. China's production during 2005 reached 978,000 MT, accounting for 42 percent of the world's production for 2005 (See Chart 1).

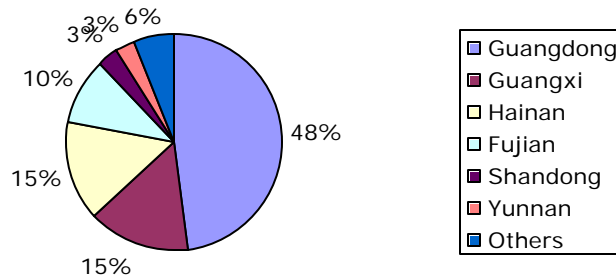
Chart 1: Tilapia Production from 1999-2006 (in 1000 MT)



Note: 2006 production is forecast by FAS/Beijing

According to the fishery development plan of China's Ministry of Agriculture (MOA), Guangdong, Guangxi, Hainan and Fujian are considered as the advantageous provinces in Tilapia production. MOA and the provincial governments encourage local farmers to develop Tilapia production for both export and domestic production. Industry sources reported that MOA appropriated limited funds to set up breeding farms to develop new tilapia species, however, no details were released. Some provincial governments provided subsidies, ranging from US\$300 to 500 per hectare of water area to farmers to build new ponds, and "small amount concessionary loan" is provided to new farmers to start operation. Because of its relatively higher returns as compared to other cultured fish, Tilapia production is regarded as a major means to raise income of rural population in these provinces. Some farmers shifted to tilapia production from traditional fish species such as carp, and shrimp when the United States imposed anti-dumping rate on shrimp imports from China in 2004.

Chart 2. Tilapia Production Distribution in 2005



Guangdong continued to be the largest producer in 2005 (see chart 2). The total culture water area in Guangdong is estimated at more than 48,000 HA in 2004, and production at 469,000 MT for 2005, accounting for about 48 percent of the nation's total, followed by Guangxi and Hainan.

Although the MOA's fishery development plan lists four provinces as advantageous regions for Tilapia production, other provinces are also producing Tilapia (see chart 2). Industry sources report that the yearly Tilapia production in Guangxi and Hainan is expected to reach 300,000 MT, respectively, in five years. However, trade sources report that such production levels and the resulting export growth might lead to trade disputes, and suggest a 10 to 15 percent annual production growth rate is more realistic.

Production growth is driven by strong exports and domestic demand as well. The export share increased from 7 percent in 2002 to 19 percent in 2005. The increased demand for Tilapia is due to the decreased marine catch of some fish with tilapia regarded as a good substitute. In China—particularly the southern coastal provinces—Tilapia is popular because of its better taste and quality compared to other cultured fish such as carp. Tilapia is also more affordable compared with other high-valued, cultured species. An industry survey showed that 93.1 percent of consumers favor Tilapia in Guangdong, 76.3 percent in Zhejiang and 65.2 percent in Shandong. Tilapia is also increasingly popular in large cities such as Beijing and Shanghai.

Rapid technology and breeding advancements in Tilapia culture have also fueled recent production growth. The most popular cultured species is a hybrid of *O. aureus* male and the Nile Tilapia female. The offspring has a high rate of males (ranging from 90 to 98 percent) and fast growth. The industry introduced another species, GIFT tilapia, in 1994, and its crossbred species are also raised in China.

Based on industry sources, household farmers raise the majority of China's Tilapia production. However, some large companies—engaged in breeding, commercial production and processing, trade and feed production—are emerging in Guangdong and other leading producing provinces. Compound feed is widely used in Tilapia farming, contributing to high productivity.

Tilapia processing is also developing rapidly because of the growing demand for fillets by the export market. Industry source reported that there are about 120 plants engaged in Tilapia processing nationwide, of which 30 are specialized in tilapia processing. Products include

frozen whole and fillet. The utilization rate of the current processing capacity remains relatively low, partially because the domestic consumers still prefer live fish. The processing facilities for export have reportedly adopted a HACCP system.

Product quality is one challenge the industry faces. As there are numerous players in the production chain, and many of them are small in scale scattered in vast region, it is difficult to monitor the entire production process, including water and feed quality, and the use of medicines and chemicals. China's preference for live fish makes quality supervision even more difficult and expensive. The industry has been calling for the establishment of strict quality supervision system covering the whole production chains including quality of water, feed and medicines. In general, products for export are subject to quality inspections according to the contracted requirements of the importers.

Consumption

Though per capita consumption of Tilapia (0.6 kg per year) in China is very low, Tilapia production is the sixth-largest cultured fish in China. The highest consumption levels are in the producing provinces. Consumption in non-producing regions remains limited. This is mainly due to the consumer's preference for live fish, making transportation difficult and the supply period short. Tilapia fillets are available in some supermarkets in large cities, but more time and market education is needed for consumers to understand and accept frozen Tilapia (whole or fillet). Industry sources reported that some marketing is underway in cities like Beijing and Shanghai to promote both live Tilapia and fillet consumption. In general, along with the increase of disposal income and fast live pace in large cities, consumers will continue to diversify their diet and opt for higher quality and ready-to-cook seafood.

Marketing

Traditional seafood marketing is still popular. For domestic consumption, the traders usually buy fish from farmers and sell in the wholesale markets. Farmers may have their own booths in a wholesale market too. Export trade is mostly done by large companies, which may own processing plants and farms as well. These companies sign contracts with household farmers when they receive orders; however industry sources report the risk is high because both parties could default when prices fluctuate.

The Tilapia Branch Association under the China Aquatic Product Processing and Marketing Association (<http://www.cappma.com>) sponsors an annual nationwide Tilapia Technology and Trade Seminar. According to industry sources, the association is planning to conduct Tilapia consumption promotions in domestic markets. China's Tilapia exporters also market their products at China's Annual Seafood and Aquaculture Fair.

Tilapia prices in domestic markets have fallen since August 2005, mainly because of the increased production coupled with a lack of marketing to boost sales in the non-producing provinces. According to industry sources, in Beijing and Shanghai, the weighted average price dropped to \$1.6/Kg in January 2006 from \$2.3/Kg in August 2005. Although the export price recovered since last year, it is expected that prices will continue to fall in 2006 in the domestic market if the market promotion remained weak. The average export price in 2005 reached \$2167/MT, up by \$381/MT over 2004. Industry insiders attributed this to the increased export of value added product such fillet.

Promoting China's Tilapia species remains a priority for the industry. Currently, most of the traders are mainly processing for international food brands. A branded Chinese tilapia product for both foreign and domestic markets is rarely seen. Some industry insiders opined

that traders should implement brand strategy and promote branded products in the domestic market first.

Trade

Tilapia exports for 2006 are forecast to exceed 220,000 MT, up by 20 percent over 2005. Exports since 2002 continued to increase rapidly with an averaged annual growth rate of 60 percent. The strong exports are mainly attributed to the low production cost. Based on industry sources, the production cost is estimated at \$0.7/Kg, as compared to the \$2/Kg in the United States. Industry experts, however, anticipated that the growth curve is likely to level off in during 2006 to a more sustainable growth rate.

Table 1 Tilapia exports (converted into raw fish) from 2002 to 2005 (Metric Tons) *

HS Code	Category	2002	2003	2004	2005
03042010	Fresh or chilled tilapia fillet	24,651	51,392	97,951	144,577
03037940	Frozen tilapia	22,163	37,406	45,262	41,235
03026940	Fresh or chilled tilapia	78	39	0	49
Total exports		46,892	88,837	143,213	185,861
Total production		707,000	806,000	897,000	978,000

Note: Converted to raw fish by conversion rate of 37% for fillet and chilled, and 94% for frozen whole.

Tilapia fillet and frozen whole are the major products, accounting for almost 100 percent of total exported volume. The export mix, however, changed dramatically in 2005, with fillet exports increased by 47 percent and frozen whole decreased by 8 percent over the previous year, respectively. This is mainly because of China's relatively low labor cost together with the industry's effort to deepening processing to add value to exported products. Tilapia fillet exports are likely to increase in the foreseeable future, and frozen whole exports are expected to drop further. Industry sources reported the industry took deepening processing as a priority in the coming years, so that more value added products will be available for overseas consumers.

Table 2 Export mix from 2002 to 2005 (Metric Tons)

HS Code	Category	2002	2003	2004	2005
03042010	Fresh or chilled tilapia fillet	9,121	19,015	36,242	53,494
03037940	Frozen tilapia	20,833	35,162	42,546	38,761
03026940	Fresh or chilled tilapia	73	37	0	46

United States remained the largest export destination from 2002 to 2005, which on average took 77 percent of tilapia fillet and 73 percent of frozen whole tilapia, followed by a distant second-Mexico. Export of Tilapia fillet to the United States increased by 59 percent to 43357 MT in 2005 from the 27,293 Mt for 2004. Export of frozen whole in 2005, however, dropped by 7 percent as compared to 2004. This trend is likely to continue in 2006 and beyond mainly because of China's advantage in labor cost. Industry insiders said the industry increasingly pays more attention to diversify its export market, in particular in Europe and Middle East.

Table 3. China's Tilapia Exports by Destination (2002-2005, in Metric Tons)

Tilapia fillet				
Country	2002	2003	2004	2005
United States	7,012	14,550	27,293	43,357
Mexico	1,712	3,291	7,540	6,578
Puerto Rico (U.S.)	56	186	496	781
Germany	52	0	0	619
Israel	0	120	152	595
Belgium	16	0	0	512
Canada	113	11	103	467
Hong Kong	44	389	144	141
Others	115	467	513	444
TOTAL	9,121	19,015	36,242	53,494
US Share	77%	77%	75%	81%
Frozen Whole Tilapia				
United States	16,173	26,816	28,878	26,871

Mexico	2,222	4,554	7,776	8,297
Indonesia	37	213	1,589	574
Israel	23	387	526	436
Canada	506	459	584	396
Dominican Rep	153	133	117	367
Malaysia	66	1,184	2,085	309
Utd. Arab Emirates	402	0	28	218
United Kingdom	0	0	0	178
Other	1,251	1,416	963	1,114
TOTAL	20,833	35,162	42,546	38,761
US Share	78%	76%	68%	69%

