Development of New Products and Markets for the Global Tilapia Trade

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Introduction

- Rapid increases in production
- Explosion in tilapia trade
- Markets and new products
Tilapia production

- Currently second in volume to carps
- Prediction: Tilapia will become most important aquaculture crop in this century
- Widest demand, no religious/cultural concerns, few environmental concerns
- More genetic potential
- Greatest variety of production systems
Large cage farms

Lake Harvest

Tilapia
Tilapia-shrimp polyculture Farms
Intensive Raceway Systems
Improved processing plants
High quality products
World Tilapia Production of 1,648,477 mt in 2003

metric tons per year

- China
- Egypt
- Philippines
- Mexico
- Thailand
- Taiwan
- Brasil
- Indonesia
- Colombia
- Cuba
- Ecuador
- Vietnam
- Costa Rica
- United States
- Others
Global Tilapia Sales (farmgate)

- For year 2000
  - US $ 1,706,538,200
    (FAO Fisheries Circular No. 886)

- 2003 sales >$ 2,500,000,000

- 2010 sales >$ 5,000,000,000
US Tilapia consumption
(187,000 mt of live weight - 2003)
(229,000 mt of live weight – 2004 est)
US Consumption of tilapia from domestic and imported sources

Tilapia (000's of kg of live weight)

- Domestic
- Imports

Graph showing the increase in consumption of tilapia from 1990 to 2004 (est), with imports showing a significant increase over this period.
23,000 mt fresh fillets, 31,000 mt frozen fillets, 52,000 mt whole frozen (est. 2004)
Value of Tilapia product forms imported to the U.S.

US Sales of tilapia

- Imports in 2003 were $241,205,610
- US production of $30,000,000 at farm
- 2003 sales were over $271,000,000

- 2004 Imports $287,000,000
- 2004 Total US tilapia sales $317,000,000
## Top Ten Seafoods (U.S.) per capita (lbs)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
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<tbody>
<tr>
<td>Tuna</td>
<td>3.5</td>
<td>Shrimp</td>
<td>3.4</td>
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<tr>
<td>Shrimp</td>
<td>3.2</td>
<td>Tuna</td>
<td>2.9</td>
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<tr>
<td>Pollock</td>
<td>1.6</td>
<td>Salmon</td>
<td>2.0</td>
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<tr>
<td>Salmon</td>
<td>1.5</td>
<td>Pollock</td>
<td>1.2</td>
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<tr>
<td>Catfish</td>
<td>1.1</td>
<td>Catfish</td>
<td>1.1</td>
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<tr>
<td>Cod</td>
<td>0.8</td>
<td>Cod</td>
<td>0.6</td>
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<tr>
<td>Clams</td>
<td>0.5</td>
<td>Clams</td>
<td>0.5</td>
</tr>
<tr>
<td>Crabs</td>
<td>0.4</td>
<td>Crabs</td>
<td>0.4</td>
</tr>
<tr>
<td>Flatfish</td>
<td>0.4</td>
<td>Flatfish</td>
<td>0.4</td>
</tr>
<tr>
<td>Scallops</td>
<td>0.3</td>
<td>Tilapia</td>
<td>0.35</td>
</tr>
<tr>
<td>Tilapia</td>
<td>0.28</td>
<td></td>
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</table>
How did tilapia get so popular, so fast?
Tilapia widely popular around the world and beyond.

- Common names: Tilapia, chambo, boulti, lou fei, pla nil, St. Peters fish, mojara, freshwater and/or red snapper
- Used in many cuisine, hundreds of recipes, often replaces over-fished local species
- Eggs hatched and fry reared on International Space Station
Consumer evolution in US and EU

- Ethnic buyers (Asian and Latino; Asian and African)
- Up-scale restaurants
- Casual dining
- Club stores
- Local groceries
Consumption patterns in producing countries

- Consumption by growers
- Local markets
- Live tanks in restaurants
- Sell to large urban markets
- High quality product into up-scale domestic markets
- Restaurants and groceries
- Exports
Additional processing and quality assurance steps

- Depuration stage
- Bleeding step
- Deep skinning
- Additional trimming
- Ozone dips
- Improved packaging
- Faster delivery
Carbon monoxide debate

- CO used to preserve fillets
- Maintains “fresh appearance”
- Still under review as treatment
- May improve shelf life, reduce bacteria
- May have to report as treated with a preservative
Individual bags for frozen fillets
New product forms

Smoked tilapia

Sashimi grade tilapia
Current Global Market Trends

Prices have been constant for several years and will remain stable, will not increase with inflation.
Current Global Market Trends

- Increase in demand for all forms of tilapia
- Demand increase will be greatest for fresh fillets
Industry by-products

- Leather goods from skin will become a significant contributor to profitability
- Pharmaceuticals from skins
- Formed fish products
- Fertilizer
- Fish meal
Flowers made from Tilapia scales
Global aquaculture production of tilapia

- **Aquaculture**
- **Fishery**

**Year**
- 1984
- 1985
- 1986
- 1987
- 1988
- 1989
- 1990
- 1991
- 1992
- 1993
- 1994
- 1995
- 1996
- 1997
- 1998
- 1999
- 2000
- 2001
- 2002
- 2003

**Metric tons**
- 0
- 200,000
- 400,000
- 600,000
- 800,000
- 1,000,000
- 1,200,000
- 1,400,000
- 1,600,000
- 1,800,000

**Graph Description**
- The graph shows the global aquaculture production of tilapia from 1984 to 2003.
- The production has increased significantly over the years, with a steady upward trend.
- The data includes both aquaculture and fishery contributions.
Future global tilapia production
Tilapia – Worth going to jail?

- PLACETAS, Cuba, September 1
- Police arrested a young man who was selling tilapia fillets out of his bicycle in Placetas Sunday morning and local residents loudly protested the lost possibility of buying the fish.
- The policeman making the arrest saw the man at an intersection and ordered him to walk to the police station while he followed in his car.
- Residents watching the parade protested loudly. One woman brought her hands to her head and said: "Now, what am I going to feed my children and my mother? We are the ones that get stuck, because they (meaning the government) don't sell fish through the rationing system."
- A young woman said: "Now they'll confiscate the tilapia and keep it for themselves."
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