Marine Harvest

Biological drivers to succeed
Oslo 9 June 2011
Marine Harvest at a glance

- Turnover NOK 15.2bn
- Salmon volume 296’ tonnes (HOG)
- 5 000 employees
- Presence in 21 countries
- Global market share of ~25%
  - Farmed Atlantic Salmon
- Leading producer in:
  - Norway
  - Canada (West Coast)
  - Scotland
  - Chile
- Extensive value adding processing of convenient, healthy, natural and fresh salmon and other species
  - Europe (MH VAP)
  - USA, Chile
  - Japan

2010 Sales breakdown

Harvest volume 2011E (HOG)
Marine Harvest - Global farming network 2011

Canada: 36,000 HOG
Scotland: 41,000 HOG
Ireland: 10,000 HOG
Faroes: 6,000 HOG
Chile: 24,000 HOG
Norway: 223,000 HOG
Development in industry volumes

Source: Kontali Analyse/MHG mid range estimate for 2010
Strong industry growth since 1990

CAGR – 9.3%

Note: Development in harvested volumes  Source: Kontali Analyse
Marine Harvest - Global sales network

- Canada
- Faeroes
- Scotland
- Ireland
- France
- USA
- Chile
- Norway
- Poland
- Belgium
- Holland
- Czech Rep.
- China
- South Korea
- Japan
- Taiwan
- Singapore
- Spain
- Italy
- France
- USA
- Chile
## Global industry volumes by market

<table>
<thead>
<tr>
<th>Markets</th>
<th>Estimated volumes</th>
<th>Compared to Q1 2010</th>
<th>12 months comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1 2011</td>
<td>Q1 2010</td>
<td>Volume</td>
</tr>
<tr>
<td>EU</td>
<td>146,300</td>
<td>152,200</td>
<td>-5,900</td>
</tr>
<tr>
<td>USA</td>
<td>53,600</td>
<td>59,300</td>
<td>-5,700</td>
</tr>
<tr>
<td>Russia</td>
<td>20,700</td>
<td>18,900</td>
<td>1,800</td>
</tr>
<tr>
<td>Japan</td>
<td>8,700</td>
<td>7,700</td>
<td>1,000</td>
</tr>
<tr>
<td>Brasil</td>
<td>7,500</td>
<td>9,300</td>
<td>-1,800</td>
</tr>
<tr>
<td>China / Hong Kong</td>
<td>9,000</td>
<td>8,600</td>
<td>400</td>
</tr>
<tr>
<td>South Korea/Taiwan</td>
<td>6,700</td>
<td>5,000</td>
<td>1,700</td>
</tr>
<tr>
<td>Ukraina</td>
<td>4,000</td>
<td>3,700</td>
<td>300</td>
</tr>
<tr>
<td>Sum main markets</td>
<td>256,500</td>
<td>264,700</td>
<td>-8,200</td>
</tr>
<tr>
<td>Other markets</td>
<td>46,400</td>
<td>41,500</td>
<td>4,900</td>
</tr>
<tr>
<td>Total all markets</td>
<td>302,900</td>
<td>306,200</td>
<td>-3,300</td>
</tr>
<tr>
<td>Inflow to US from Europe</td>
<td>21,200</td>
<td>23,900</td>
<td>-2,700</td>
</tr>
<tr>
<td>Inflow to EU from Chile</td>
<td>2,000</td>
<td>1,900</td>
<td>100</td>
</tr>
</tbody>
</table>

- Volume distribution to the markets still heavily impacted by supply situation in Chile
  - Volumes redirected away from the other producing regions’ traditional core markets to compensate for Chile’s shortfall
  - Consumption in the EU reduced by ~4% in Q1 2011 and over the last 12 months
  - Supply to the US and Brazilian markets impacted by continued low volumes from Chile
  - Other market generally very competitive
    - Russia and Ukraina continues strong trend
    - Positive trend in Asia despite market disruption in China and earthquake related issues in Japan

**Notes:** (1) Atlantic Salmon (HOG tons) (2) Difference between harvested and consumed volume due to changes in inventory
Fundamental global demand drivers

More people: World population growth
In billions

Developing countries
Industrial Countries

Exceeding 9 billion people in 2050

Everyone eating more protein: Growth in meat consumption
Kg per capita per year

On average we will eat 55% more meat in 2030 than in 1980


And even stronger demand for seafood

"...dietary goals can be met by (...) ensuring a regular intake of fish (one to two times per week)."

World Health Organisation

Source: http://www.who.int/nutrition/topics/5_population_nutrient/en/index12.html

Source: http://www.fao.org/docrep/009/A0699e/A0699E09.htm
Biological drivers to succeed
Success in biology~financial success

• Dream scenario in salmon farming:
  • Low mortality < 10 percent per generation
  • Predictable growth and harvest volumes
  • Low feed conversion ratio
  • Acceptable environmental impact
  • Resulting in a quality product to an increasing group of consumers

• How do we achieve this?
Fundamentals - Temperature

[Graph showing temperature changes from January to December for different countries (Chile, Norway, Scotland, Ireland, Canada (BC)) with a temperature range of 0 to 18 degrees Celsius.]
Fish health

- Survival impacted by many factors:
  - Genetic material
  - Smolt quality
  - Biosecurity management
  - Pathogenic pressure within site and between sites
  - Corrective action and equipment to deal with incidents
R&D together with single year class production

Vaccination and use of Antibiotics (Norway)

Source: Kontali Analyse, Norsk medisinaldepot, Folkehelseinstituttet
Healthy fish are happy fish

- Low stocking densities
- Optimal farm location
- Vaccination
- From medication to biological control
Growth

• Growth rate
  • Temperature

• Genetics

• Adapted smolt, and smolt size

• Feed quality

• Environmental condition and stocking densities

• Fish health status
Feed conversion ratio (FCR)

- FCR impacted by
  - Energy content in feed
  - Nutritional composition
  - Genetic potential
  - Smolt quality
  - Feed quality
  - Trained personnel
Salmon farming is hard to beat in regards to FCR.
Our approach to sustainability
Listen, evaluate and improve
Biological drivers to succeed

- Education and training of personnel
- Resources towards genetics and especially smolt production
- Establish risk management areas (biological barriers) and think risk management
- R&D in regards to vaccines towards viruses
- Develop knowhow in regards to ocean current and effect on diseases
- Be open to new technology
- Study effect of already implemented zones
- Develop national strategies and better regulations based on best practice and R&D to secure future growth and a sustainable production.