

AQUACULTURE ECONOMIC UPDATE

MARCH 2004

Overview

The aquaculture industry in the Highlands and Islands has experienced substantial expansion since its inception in the 1960's and now comprises fish farming and processing. This expansion has taken place amid intensifying global competition, technological advance and changing safety and environmental regulations. The industry is predominantly located in rural coastal and fragile areas, where it is an important source of skilled and permanent employment. The current importance of the sector to the Highlands and Islands economy is summarised below:-

Employment

- Salmon, smolt and trout production in Scotland supports 1,690 FTE's, around 75% (1,267) of which are located in the Highlands and Islands¹.
- Salmon and trout processing in Scotland is estimated to support around 4,728 FTE's, of which 46% (2,162) are estimated to be located in the Highlands and Islands².
- Shellfish production supports 216 FTE's in Scotland, of which 56% (120) are located in the Highlands and Islands. There is a high proportion of part-time employment in this activity³.
- Average full-time weekly earnings in fishing and aquaculture in Scotland are £325, lower than the all industry average of £427⁴.

Units/Businesses

- In 2002, there were 84 companies involved in Atlantic salmon production, farming 328 active sites, compared to 104 companies in 1997¹.
- In 2002, there were 55 freshwater salmon production companies in Scotland, with 173 farms in commercial production. This compares to 65 freshwater salmon production companies in 1997¹.
- Ownership is increasingly concentrated in a small number of international companies⁵.
- Shellfish farming is dominated by small locally based producers in Scotland, although large companies are increasing their market share³.

Output

- Total production of Atlantic salmon in Scotland was 145,609 tonnes in 2002, an increase of 47% from 1997. This is the 10th consecutive annual increase in production¹.
- Total table Pacific oyster production in Scotland (2002) was valued at £0.5-£0.8million (3.1million oysters) of which 14% were produced in the Highlands and Islands³.
- Total table mussel production in Scotland (2002) was valued at £2.6-£4.2million (3,236 tonnes) of which 61% were produced in the Highlands and Islands³.
- Total output at basic prices for fishing in Scotland is approximately £590 million⁶.
- GVA at basic prices for the fishing sector in Scotland is approximately £192 million⁶.
- This represents c. £32,000 GVA per employee for the fishing sector⁶.

Product Markets/Exports

- The value of fish exports from the Highlands and Islands was £39.4 million in 2001 (£50.6 million in 1997)⁷. The USA, France and Germany are the top three salmon export destinations⁸.
- Average salmon prices have fluctuated, but had an overall downward trend over recent years⁹.

Workforce/Skills

- Hygiene and disease control continue to be increasingly important skill requirements¹⁰.
- Business, general management, ICT skills are needed, as well as production technology skills required to anticipate species diversification⁵.

¹ Source: Scottish Fish Farms Annual Production Survey 2002 (Fisheries Research Services)

² Source: Salmon & Trout Processing 2001 (SEERAD)

³ Source: Scottish Shellfish Farm Production Survey 2002 (Fisheries Research Services)

⁴ Source: Source: Futureskills Scotland Industry Profile: Aquaculture and Fishing in the Highlands and Islands 2003

Note 1 – Earnings data taken from New Earnings Survey 2002 (ONS)

⁵ Source: Growing Businesses and Developing Skills Group 2004 (HIE)

⁶ Source: Scottish Annual Business Statistics: Scotland by Division 2001 (Scottish Executive & ONS)

Note 1 – Based on ABI employment data which excludes self-employed

⁷ Source: Survey of Highlands and Islands Manufacturing and Exports 2001/02 (Scottish Council for Development and Industry)

⁸ Source: Business and Trade Statistics 2003 (Scottish Quality Salmon)

⁹ Source: www.intrafish.com 2004

¹⁰ Source: Skills Foresight 2001 (Lantra National Training Organisation)

SWOT Analysis

The following analysis illustrates the main issues facing the development of the aquaculture sector in the Highlands and Islands.

Strengths	Weaknesses
<p>High quality resources</p> <ul style="list-style-type: none"> - Sheltered coastal waters and high quality freshwater resources provide an ideal environment for aquaculture <p>Existing base</p> <ul style="list-style-type: none"> - The UK is the largest aquaculture producer in the EC (mostly Scotland) - Supports technical jobs in rural areas <p>Current skills training</p> <ul style="list-style-type: none"> - 3 centres in the area (Lews Castle College, Highlands School of Aquaculture & North Atlantic Fisheries College) specialise in aquaculture training - An increasing number of companies are participating in work-based training - Modern apprenticeship pilot programme is underway <p>Tripartite working group</p> <ul style="list-style-type: none"> - Set up to ensure farmed and wild salmon stocks are maintained and these industries are sustained 	<p>Lesser productivity in smaller firms</p> <ul style="list-style-type: none"> - Productivity in small firms, highly prevalent in Scotland, can be up to eleven times less than in larger firms - Larger firms continue to invest in high-tech production facilities which will increase their advantage <p>Foreign ownership</p> <ul style="list-style-type: none"> - Many of the large companies are increasingly foreign owned <p>Job losses</p> <ul style="list-style-type: none"> - Job losses where automated labour-saving economic efficiencies have been introduced <p>Distance from point of sale</p> <ul style="list-style-type: none"> - It is logical to process fresh fish close to the point of sale, which is mostly the EU market
Opportunities	Threats
<p>Integration</p> <ul style="list-style-type: none"> - Expansion into primary/secondary processing or provision of freshwater facilities opens opportunities to improve profitability - Mergers and contract growing allows firms to reduce costs and develop economies of scale <p>Market diversification and differentiation</p> <ul style="list-style-type: none"> - Developing the culture of new species, e.g., cod and halibut - Developing new and added-value products to meet consumer needs - Potential to differentiate into niche markets to reduce competition over price <p>Technology advance</p> <ul style="list-style-type: none"> - Automation will improve health and safety and bring productivity improvements - Selective breeding could drive down costs <p>Sustainable practice</p> <ul style="list-style-type: none"> - Adoption of sustainable practice is beneficial to reduce environmental impact <p>Promotion of exports</p> <ul style="list-style-type: none"> - Increasing the volume and value of exports could improve industry profitability - UK retailers are moving abroad, with potential benefits for Scottish producers 	<p>Market instability</p> <ul style="list-style-type: none"> - Narrow margins reduce willingness to invest in the future and make the industry highly sensitive to changes in costs, eg, fish feed <p>International competition</p> <ul style="list-style-type: none"> - Chilean salmon producers are keen on increasing their European market share - UK regulation may constrain the ability of local companies to adopt different strategies to increase competitiveness <p>Lack of price control</p> <ul style="list-style-type: none"> - Norwegian producers exert a strong influence on the price of salmon - Multiple retailers are active in price setting. - The changing value of sterling has a direct effect on the value of UK exports <p>Health and safety issues</p> <ul style="list-style-type: none"> - Infectious disease outbreaks could impact production and consumer confidence - Aquaculture is subject to high levels of scrutiny by the media and lobbyists impacting on consumer confidence

Priorities for Action

Factors identified for positive development of the aquaculture sector in the Highlands and Islands include the following:-

- Promotion and branding of Scottish food products
- Attraction of investment and new business starts necessary to develop new species
- Encouragement of investment in R&D to continually develop the industry
- Encouragement of product differentiation (and diversification into new species)
- Opportunities for continuous skills development including improved hygiene and disease control, and production technology skills