

Review of the **Irish** **Rope Mussel Industry**

A report jointly commissioned by Bord Iascaigh Mhara and Enterprise Ireland



Bord Iascaigh Mhara
Irish Sea Fisheries Board



ENTERPRISE
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Executive Summary



Introduction and Approach

After a period of expansion during the 1980s and the 1990s, output from the Irish rope mussel industry has remained relatively stagnant over the past four years. Furthermore, profitability within the sector has declined significantly. Against this background, the Irish Shellfish Association (ISA) called for a comprehensive Review of the rope mussel industry in Ireland which Bord Iascaigh Mhara (BIM) and Enterprise Ireland (EI) jointly commissioned PricewaterhouseCoopers to undertake. The Review was commenced during the autumn of 2005.

The Terms of Reference for this Review encompassed the full industry supply chain and required an analysis of the industry's performance at production and processing level and also within the market place. The key objective of this Review is to inform and guide the future development of the rope mussel industry in Ireland and in particular to identify the various obstacles that may be preventing the sector's development and to make recommendations on potential strategies that might be employed to overcome such challenges.

In undertaking this Review a highly consultative approach was adopted. This included engaging with producers, processors, industry regulators, the industry representative organisation, relevant support agencies and with key retail and foodservice buyers located in the main export markets for Irish mussels.

Industry Profile

The mussel industry in Ireland is the largest aquaculture sector in terms of tonnage and second only to salmon in terms to value. The industry is split into two main production techniques, bottom mussels and rope mussels. In overall terms total production volume in mussels in Ireland in 2004 was 37,315 tonnes. The rope mussel sector, which is the focus of this report, accounted for some 8,755 tonnes of this output with a first-point of sale value of approximately €6.9m. This output was produced by 59 growers farming some 1,188 hectares licensed for rope mussel production. In the region of 90% of output is processed through five main processing plants and exported in a frozen format to a range of markets primarily located in the EU. The balance of production is exported in a live/fresh format. Although accounting for a relatively small percentage of total output (which may be underestimated in the official figures) this live/fresh trade is an important feature of the industry.

Key Review Findings:

Over the past two decades the Irish rope mussel industry has enjoyed considerable success. This success includes the establishment of a core group of highly skilled producers supplying a processing sector that has achieved noteworthy advances in processing technology. In addition, the industry has managed to capture and retain some of the most demanding foodservice and retail customers across a range of international markets. Furthermore, within the various State development agencies/organisations a range of highly skilled professionals have achieved significant success in assisting the development of the industry. This development has also been informed/assisted by a focused industry representative organisation.

Despite this success, the Irish rope mussel industry is currently facing a range of issues which need to be addressed in order to ensure the continued development of the sector. These issues were highlighted during the consultations undertaken for this Review and during the analysis of the industry's profitability. The key findings of this analysis can be summarised as follows:

The key issues currently facing the rope mussel industry can be grouped into two categories: (a) Regulatory related issues – most notably biotoxins and licensing and (b) Industry related issues – most notably the interrelationships and operating modes that exist between the production and processing segments of the industry.

A number of major challenges facing the sector will require a response from the State to address. However, a wide range of issues are within the direct control of the industry (producers and processors) to act on.

At all levels within the industry (production and processing) profitability levels are low – and have declined in recent years. However, significant scope for enhanced performance at both production and processing level exists.

Operating under the existing model (in terms of production efficiency and end market performance), any significant long-term increase in input costs would have a major negative and potentially unsustainable impact on the profitability of the processing sector. In order, therefore, for producers to achieve warranted price increases a significant shift in the current operating model employed by processors will have to occur.

Ensuring the sustainable development of the industry will require all stakeholders to be conscious of the need to work towards improving the profitability of the sector at producer level. In this regard, increased prices should be regarded as only one component in a multi-faceted approach to addressing the issue of poor profitability at producer level. From the perspective of producers, alleviating excessive uncertainty from the industry is a key issue.

Within the market place the industry is facing significant and growing competition from low-cost suppliers most notably Chile. Success in the market place will depend on the industry's ability to define and play to its competitive advantage – which will require a shift in the approach taken to production, processing and marketing along with the commitment of enhanced resources towards innovation at all stages in the supply chain.

Key Review Recommendations:

In order to assist the industry realise its potential and to ensure that the industry addresses the key challenges it is facing, as part of this Review a range of recommendations were identified. These recommendations have been grouped under 12 core development themes supported by an implementation planning theme as set out below and described in detail in Section 7.

Core Theme 1: Issues relating to biotoxins

Define the optimum mix of biotoxin tests; focus increased emphasis and resources towards identifying solutions to the issue of biotoxins - including bay specific strategies; give significant consideration to providing financial support to producers in compensation for the temporary suspension of harvesting; establish a levy-based insurance fund to compensate producers/processors for post-processing biotoxin test failures; further leverage the strength of Ireland's biotoxin control/monitoring regime in marketing/sales activities and increase the level of engagement/communication with the industry in the area of biotoxins.

Core Theme 2: Issues relating to licensing

Undertake a study of the carrying capacity of each bay and ensure that growers' licences reflect the outcome of this study; reduce the bureaucracy associated with the licensing system and define reasonable response timeframes for applications; pre-define areas suitable for mussel production; increase the focus on applicants' business plans/experience in evaluating licence applications; enforce the 'use it or lose it rule' with respect to licences and issue licences on a scale that reflects the potential to establish an economically viable enterprise.

Core Theme 3: Processor / producer relations

Processors should engage with producers on the long-term aim of establishing supply partnerships; processors and producers to work together to plan for the production and harvesting of mussels. Guided by BIM, processors and producers should jointly focus on reducing reject rates and an independent mechanism to monitor reject rates should be established.

Core Theme 4: Producer/producer relations

At producer level, the industry representative organisation should work to establish producer discussion groups. An industry newsletter should be circulated to all producers.

Core Theme 5: Processor/processor relations

An enhancement in the co-operation on the approach to markets by processors on key export markets should occur with BIM supporting/overseeing co-operative promotional/marketing programmes in these markets. A group comprising representatives from each of the processors and the producer representative organisation should be tasked with identifying productive uses for rejected mussels.

Core Theme 6: Buying arrangements

BIM's buying protocol to operate between processors and producers should be implemented on an interim basis. An independent monitor should be appointed to monitor the implementation of the buying protocol and a Mussel Pricing Grid should be established for the purchase of mussels – focused on rewarding the production of high quality mussels.

Core Theme 7: Production efficiency

Demonstration farms should be established, focussed on displaying best-in-class production techniques; a standardised Profit Monitor tool should be made available to growers with individual performances benchmarked against the industry average performance; the removal of labour should be the key focus of any new production technology and producers should explore the merits of group purchasing for selected inputs along with the sharing of harvesting equipment.

Core Theme 8: Processing efficiency

With the support of EI and BIM, processors need to adopt a range of strategies to enhance the efficiency of their processing activities – including outsourcing/sharing of processing activities. Processors may also need to consider the establishment of strategic alliances/joint ventures. Increased planning with producers around production/harvesting and joint purchasing of selected consumables should also occur.

Core Theme 9: Improving quality

BIM should work with the industry to assist with eliminating the obstacles limiting the uptake of the Irish Quality Mussel (IQM) scheme; ongoing promotion of this quality scheme should continue with the objective of achieving a majority of mussel growers/processors operating under the IQM scheme within a two-year period and BIM should engage with producers and processors with the objective of increasing mussel size.

Core Theme 10: Marketing & Sales

BIM and EI should work with the industry to identify and capitalise on any prevailing market opportunities for both frozen and fresh product. Future marketing strategies should focus on differentiating Irish product within the market place and develop recognition for Irish product within the market. Significant increased focus/support should be given to new product development/innovation, and support for marketing activities should focus on a small number of key markets and should be prioritised towards achieving a cooperative approach by processors.

Core Theme 11: State support agencies/infrastructure

Ongoing, but highly focused and results driven, State support for the rope mussel sector should be provided. The impact of this support should continue to be monitored on an ongoing basis.

Core Theme 12: Areas for further development

Consider undertaking further research focused on developing solutions to a range of developmental challenges highlighted during this Review - including a particular focus on azaspiracid (AZA) toxins.

Core Theme 13: Implementation planning

Develop a plan to guide the implementation of the various recommendations presented in this Review.

Despite the challenging market environment and the range of obstacles facing the industry, there is nevertheless significant potential to further develop this important segment of the Irish aquaculture industry and in that regard this sector merits continued support. However, realising this potential will require all stakeholders, including producers, processors and the industry's regulators to work together in a transparent, concerted and united fashion. Approached in such a manner, none of the obstacles faced by the industry are insurmountable.

Section 1 – Introduction



1.1 Background to the Review

After a period of expansion during the 1980s and the 1990s, output from the Irish rope mussel industry has remained relatively stagnant over the past four years. Furthermore, profitability within the sector has declined significantly. Against this background, the Irish Shellfish Association (ISA) called for a comprehensive Review of the rope mussel industry in Ireland. In response Bord Iascaigh Mhara (BIM) and Enterprise Ireland (EI) jointly commissioned PricewaterhouseCoopers to undertake this Review and established a Steering Committee¹ to oversee the project. The Review was commenced during the autumn of 2005.

In that context, the important and valuable role that the Steering Committee made towards ensuring the Review's successful completion is acknowledged. In particular, the direction and assistance of the ISA in defining the Review terms-of-reference and overseeing the focus of this assignment was paramount to its success. The output of this Review has also relied heavily on the support and contribution of a range of producers and processors who were consulted as part of the review process. Their contribution and eagerness to engage in the Review is acknowledged and greatly appreciated.

The key objective of this Review is to inform and guide the future development of the rope mussel industry in Ireland and in particular to identify the various obstacles that may be preventing the sector's development and to make recommendations on potential strategies that might be employed to overcome such challenges.

1.2 Review Terms of Reference

The Terms of Reference encompassed the full industry supply chain and required an analysis of the industry's performance at production and processing level and also within the market place. Specifically they sought:

- A Review of industry structure and performance at production, processing and marketing level
- An appraisal of current and prospective market trends, threats, opportunities and competition for live fresh and added-value products; and the development/recommendation of
- Strategies to address impediments and to avail of opportunities at the marketing, processing and production stages, based on differentiated Irish quality assured mussel products to ensure optimum sustainable output and profitability at all stages in the supply chain.

¹ In Appendix 1 to this Review a list of the Review Steering Committee members is presented along with the contact details of the PricewaterhouseCoopers consultants who undertook this Review.

1.3 Approach and Methodology

In undertaking this Review an extensive consultation process was employed. This included the following elements:

A: Consultations with producers

In order to gain a deep understanding of the issues facing the rope mussel industry at producer level, a representative sample of 18 producers were engaged in face-to-face interviews. These producers were selected based on the location and nature/scale of their respective enterprises and on the destination of their output.

B: Consultations with processors

During this stage of the consultations, senior management at all of Ireland's five rope mussel processing plants were interviewed. These interviews were followed up by subsequent conversations with individual processors, focused on addressing specific issues that emerged during the research phase. In addition to these one-to-one meetings a processors workshop was undertaken. This workshop provided feedback to the issues that merged and produced a collective understanding of the issues that were identified as requiring significant industry attention.

C: Consultations with industry regulators

During this phase of the Review, meetings were held with all of the key organisations that have a regulatory related function relevant to the industry. This included the Department of Communications, Marine and Natural Resources, the Food Safety Authority and the Marine Institute.

D: Consultations with buyers located in key export markets

As a core part of this Review a Voice of the Customer (VoC) interview programme was conducted across five key markets: [France, Italy, Germany the UK and the Netherlands See 2.3 below]. During this programme, BIM conducted 17 face-to-face interviews with a representative sample of key retail, foodservice and wholesale buyers.

The combined outputs from all of these consultations was made available to the project Steering Committee throughout the Review process, following which draft recommendations for the future development of the Irish rope mussel industry were formulated. These recommendations are set out in the final Section of this Review.

Section 2 – Industry Profile



2.1 Introduction

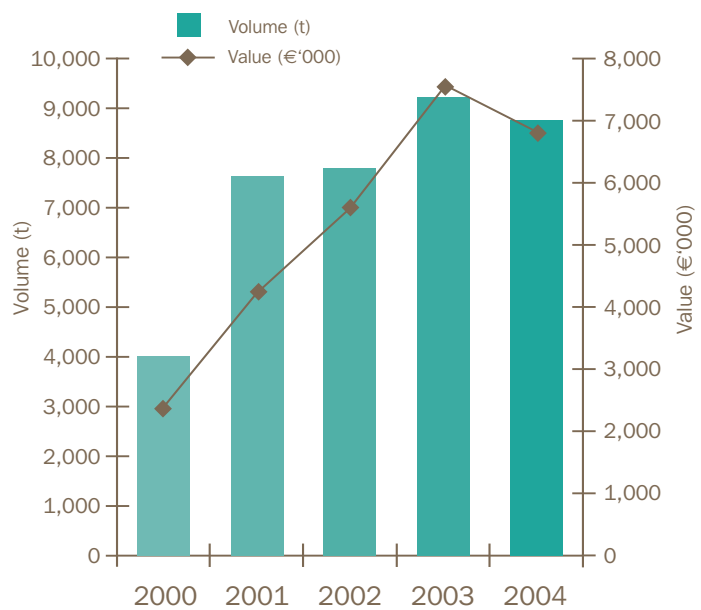
The mussel industry in Ireland is the largest aquaculture sector in terms of tonnage and second only to salmon in terms of value. In overall terms, the total production volume of mussels in Ireland in 2004 was estimated at 37,315 tonnes. The industry is split into two main production techniques: bottom mussel (naturally growing on the seabed and harvested by specialised dredging equipment) and rope mussels (cultivated on rope structures in an aquaculture environment). The rope mussel sector accounts for approximately 25% of overall mussel production and is the focus of this Review.

The rope mussel sector in Ireland originated in the 1970s with early experimental trials in Connemara. Since then the sector evolved through a period of rapid commercial development in the 1980s and 1990s. Today, the main area of cultivation is located around the southwest and west coast of Ireland with some output also concentrated in the northwest (see Figure 2.1).

In 2004, the volume of rope mussels produced was estimated at 8,755 tonnes with a first point-of-sale value of approximately €6.9m. The graph set out in Figure 2.1 provides an overview of recent trends in terms of both volume and value. Between 2000 and 2003, the industry experienced growth in both production volume and value; however production levels in 2004 declined due to prolonged closures caused by biotoxins, resulting in stock losses. While production data for 2005 was not available at the time of writing, the extended closure of bays is expected to result in a further decline in production volumes.

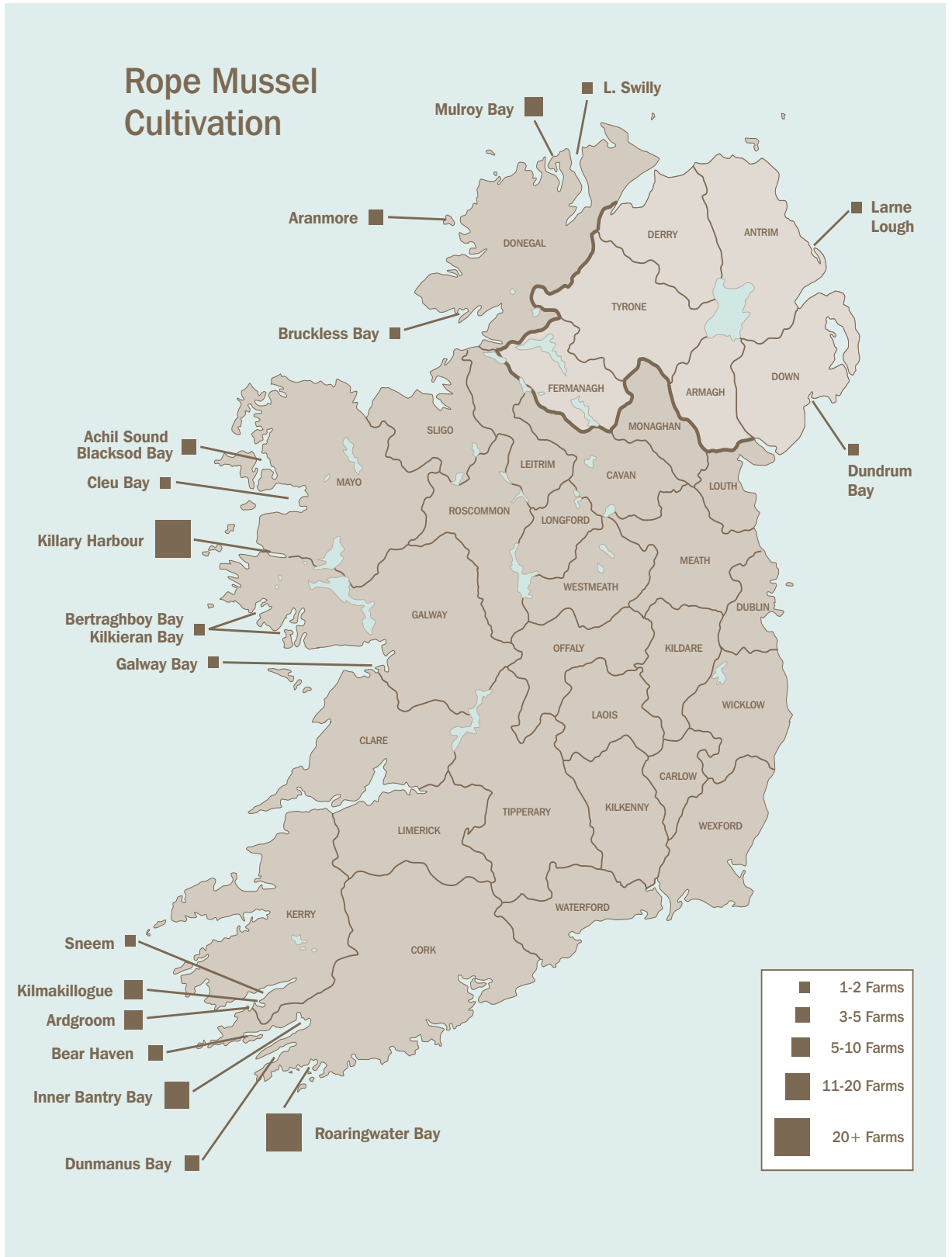
Figure 2.1

Volume and Value of Rope Mussel Production in Ireland 2000-2004



Source: BIM

Figure 2.2
Location of Rope Mussel Production in Ireland



2.2 Structure of the rope mussel industry – Producer Level

A total of 1,188 hectares of foreshore are currently licensed for rope mussel production, involving 59 entities operating 128 mussel farming licences. The farms vary in size from 91.8 hectares to less than 1 hectare in a small number of instances. The average size of a farm is approximately 9.3 hectares.

Based on the annual production of 8,755 tonnes in 2004, the average yield per hectare is 7.4 tonnes. As shown in Table 2.1, the largest category of producers (19) grows between 50 and 100 tonnes of rope mussels annually. In terms of large scale production (500t+) four producers are operating at this level of output.

A review of the data also indicates a gradual increase in average tonnage levels between 2000 and 2004, with the number of small scale producers (<50t) declining from 31 to 12 growers, while the number of medium to larger scale producers (>100t) increasing from 11 to 28 growers. Overall however, the number of rope mussel growers, which increased between 2000 and 2003 (from 56 to 66), declined to 59 growers in 2004.

Table 2.1

Structure of the Rope Mussel Industry by size of Production Tonnage

Year	<50t	50-100t	100-200t	200-500t	500t+	Total
2000	31	14	5	6	0	56
2001	23	19	14	5	4	65
2002	30	20	11	8	3	72
2003	27	12	15	9	3	66
2004	12	19	12	12	4	59

Source: BIM

Table 2.2

Irish Mussel Processors

Processor	Rank	Ownership	Location	Processing Focus
Bantry Bay Seafoods	1	Private	Southwest	Mussels
Fastnet Mussels	2	Private	Southwest	Mussels & other
Connemara Seafood	3	Private	West	Mussels & other
Atlanfish	4	Private	Northwest	Mussels & other
Carrowkeel Seafood	5	Private	South	Mussels & other

² This data is based on official figures which industry sources believe may significantly understate the volume of product sold through the fresh market.

2.3 Structure of the rope mussel industry – Processor Level

Approximately 90% of harvested Irish rope mussels are processed through five main processing plants. These plants are independently owned operations. One processor, Bantry Bay Seafoods, accounts for more than 50% of the total volume processed in Ireland. This company's sole focus is on processing mussels. In contrast, the other operators run multi-product operations with mussels being one of a number of products processed. This position is summarised on Table 2.2 below. The remaining 10% of product is sold through the fresh market².

Given the total volume of mussel produced in Ireland and the relatively small domestic consumption level, the industry is heavily export focused. [In this regard, the main market for rope mussels is France (42%), UK (20%) and Italy (12%). Other markets include Germany, the USA and Japan. [See 1.3D above] The majority of produce is sold to the catering trade (75%), followed by the retail trade (19%) and further processing (6%). (An overview of marketing dynamics is presented later in the Review.)

Section 3 – Key Industry Challenges



3.1 Introduction

Over the past two decades the Irish rope mussel industry has enjoyed considerable success. This success includes the establishment of a core group of highly skilled producers supplying a processing sector that has achieved noteworthy advances in processing technology. In addition, the industry has managed to capture and retain some of the most demanding foodservice and retail customers across a range of international markets.

In recent years, however, output from the industry, in terms of the total tonnage of product produced, has remained constant. Furthermore, this failure to achieve a growth in output has not been offset by any significant increase in the overall value of production. As a consequence, at both production and processing level, significant concerns have been expressed with respect to the low/declining levels of profitability in the industry.

Failure of the industry to expand output/revenues can be explained by understanding the impact of varying challenges that the industry has experienced in recent years. In this Section, an attempt is made to highlight these key challenges that need to be addressed in order to facilitate development and to assist in enhancing profitability for both producers and processors. In Section 7 recommendations are set out focused on addressing each of the identified challenges.

As a means of identifying these various challenges a representative sample³ of producers located in all of the main production bays were consulted. In addition, senior management at all the relevant mussel processing plants were interviewed to obtain their views with respect to the key industry challenges and to gather feedback/response to a range of issues highlighted by growers. Following these consultations, representatives from the relevant regulatory authorities and support agencies along with the producer representative organisation were also interviewed.

3.2 Key Industry Challenges

Based on consultation with industry representatives it is evident that a range/variety of challenges facing the rope mussel sector exists. It is, however, possible to group all of the identified challenges into ten key categories. (See Table 3.1) These challenges are also ranked based on the impact they have on profitability and development of the industry. This table is followed by a brief description of each of the key challenges and forms the context for the various recommendations presented in Section 7.

³ A total of 18 producers were consulted – selected as representative of the industry in terms of scale, nature of their enterprise and the location of their production units.

Table 3.1

Categorisation of the Key Challenges Facing the Irish Rope Mussel Industry

Challenge Category & Rank	Impact on Industry Development & Profitability [Level 1=high, level 2=medium & level 3=low level impact]
1: Biotoxins	Level 1
2: Licensing	Level 1
3: Processor/Producer Relations	Level 1
4: Producer/Producer Relations	Level 3
5: Processor/Processor Relations	Level 2
6: Buying Arrangements	Level 2
7: Production Efficiency	Level 1
8: Processing Efficiency	Level 1
9: Improving Quality	Level 2
10: Marketing & Sales	Level 1

Source: PwC (Derived from industry consultations).

3.2.1 Biotoxins

In terms of the potential to have a negative financial impact on the rope mussel sector, biotoxins out-ranks all other industry issues. This negative impact can be defined, not only in terms of the loss/potential loss of output on the part of individual growers/processors as a result of bay closures, but also in terms of influencing the structure and operation of the rope mussel industry, and its impact on performance in the market place.

In addition, the closure of bays (or specific management areas within bays⁴) for prolonged periods as a result of biotoxins has contributed towards negative and entrenched relationships between producers, processors and industry regulators. As a consequence, an enormous amount of time and energy is dedicated towards this single issue at the expense of addressing other critical 'developmental' issues, which if left unaddressed will have serious negative consequences on long-term development.

Given that a number of management areas had been closed during the Review process it is not surprising that biotoxins were to the forefront for producer/processors during the consultation phase. Feedback therefore had to be considered in this context.

Over a twenty-year timeframe (using data highlighting bay closures from 1984 to 2004 in the southwest) bay closures extending beyond the June to September period occurred in 12 separate years. In addition, prolonged bay closures (occurring for a 3-month period outside of June to September) were recorded on 5 occasions. It is apparent therefore that the biotoxin issue ranks as number one in terms of impact on profitability.

It is worth noting, however, that although relations within the industry on the biotoxin issue can be described as poor on occasions, all of the participants (including producers, processors and the industry regulators) are genuinely focused on the same objective: i.e. to ensure production of a product that does not in any way compromise food safety.

⁴ According to the MI, in an effort to assist the industry in recent years regulatory decisions are made for defined production areas, or specific management areas, within bays in an attempt to move away from whole bay closures.

3.2.2 Licensing

In addition to biotoxins, the next most significant challenge facing the industry and which impacts on the profitability of individual mussel growing enterprises, is licensing. The main issues include:

- Over-licensing in certain bays resulting in reduced growth rates and a consequent reduction in mussel quality, which is manifest in reduced mussel size, lower meat content, increased fouling and higher reject rates
- Inability of growers in certain bays to engage in quality assurance schemes
- Under-utilisation of licences by some growers resulting in a loss of output to the industry/under-utilisation of a State asset
- Slow response to licence applications/perception of excessive bureaucracy surrounding the licensing regime; and
- Poor/fractious relations between growers in bays where over-licensing is a feature.

3.2.3 Processor/producer relations

A feature of the Irish rope mussel industry, which has a significant negative impact on development of the sector, is the absence of a strong working relationship between the processing sector and mussel producers. Whilst there are noteworthy exceptions, in the main this relationship is at best neutral and at worst adversarial and shrouded in suspicion. The absence of strong working relationship is manifest viz:

- Lack of productive dialogue between processors and producers
- Failure on the part of both parties to understand/appreciate the commercial and management difficulties facing each party
- Lack of a joint approach to addressing issues of mutual concern/importance; and
- Complete absence of supply chain planning

This lack of a strong positive working relationship is having a negative impact on the profitability of the sector and is acting against the long-term development of the Irish rope mussel industry. Whilst it should not be used as an excuse to avoid addressing this issue, some of the negative relations that exist are a product of the environment in which both parties operate whereby the impact of biotoxins on harvesting/processing is significant in this context.

3.2.4 Producer/producer relations

In the main a good relationship exists between producers; however, the optimum level of dialogue and information sharing between producers is not occurring. A number of factors contribute to this failing. These include:

- In some bays, difficulties/poor relationships between producers due to issues related to the licensing system/over licensing in certain areas
- Biotoxins – resulting in a narrow window of opportunity for harvesting, with producers competing to ensure that their product is accepted by processors; and
- Geographic isolation of some producers

It is believed, therefore, that a primary need is to address the deficit in communications that exists between producers. In this context, significant scope exists to increase the level of dialogue and information – particularly with regard to the technical aspects of production, including experiences of new production techniques, improving yields, harvesting equipment, ways to improve output quality etc.

3.2.5 Processor/processor relations

Positive relationships have been established between a number of Irish rope mussel processors which has contributed to the development of the sector. Nevertheless, inter-company rivalry between some processors, which is manifest in particular by price undercutting behaviour in the market place and by targeting of certain customers, has had a negative impact and is regarded as a major challenge to the development of the rope mussel industry in Ireland. This inter-company rivalry has contributed to a:

- Less than optimum performance in the market place
- Reduction in the potential profit achievable for both producers and processors
- Failure to maximise processing efficiencies by working in a co-operative fashion; and to
- The establishment of poor relationships with producers

In addition, the existence of unhealthy relations between processors presents significant challenges to the State when it comes to allocating support funding – particularly as this relates to providing market related support/assistance. Whilst healthy competition between processors should be encouraged as a means of ensuring efficiency, given the scale of the challenge that the Irish industry faces in the market place (particularly from low-cost suppliers such as Chile), destructive competition between Irish processors for the same customers is not in the long-term interest of the industry.

3.2.6 Buying Arrangements

Significant weaknesses exist in the current arrangements/processes that are used by processors to purchase mussels from producers – most notably:

- A lack of transparency around the pricing mechanism – particularly with respect to the calculation of reject rates (which can be a significant determinant of price)

- The absence of a clearly defined pricing grid for the purpose of establishing the appropriate price for a given consignment of product; and
- The failure of the current pricing mechanism to reward quality or to encourage producers to focus on improving quality

These shortcomings in the buying arrangements act against long-term development and as such are regarded as major challenges facing the industry.

3.2.7 Production efficiency

Increasing the level of production efficiency is a major challenge. This issue is dealt with in more detail in Section 4; however, suffice to say at this juncture that enormous variation exists between producers with respect to the efficiency of production of their individual enterprises. The key challenge under this heading, therefore, is for the industry to define the optimum level of production efficiency and to put in place strategies focused on achieving this defined level of efficiency.

3.2.8 Processing Efficiency

Increasing the level of processing efficiency is a further significant challenge facing the industry – further details of this challenge are presented in Section 4.

3.2.9 Improving Quality

Product quality is a key requirement of the market place. [However, having a high-quality product offering is rapidly moving from a position of competitive advantage to an essential prerequisite to trade. In an increasingly competitive market place, with growing quantities of low cost product on offer. If they are to continue to realise relatively high prices Irish exporters will have to work hard to keep their reputation as suppliers of a superior quality product offering.

In addition to the above, the pursuit of quality within the rope mussel sector offers a further potential benefit – it provides a mechanism through which the collective support of the State and the industry can be leveraged to differentiate the Irish product offering in a crowded marketplace. This would be done through the establishment of a ‘quality logo/brand’.

Recognising the importance of quality within the market place, and the potential to differentiate Irish products on this basis, BIM has established a quality assurance programme for Irish mussels in partnership with industry. Mussels grown and processed under the guidelines set out in this programme quality to carry the Irish Quality Mussels (IQM) symbol. This label is supported by a clearly defined and independently audited set of procedures and processes.

For the most part, the merits of pursuing a quality focused strategy are accepted by all industry participants. Significant challenges are however acting to prevent both growers and processors fully engaging in the quality assurance programme, viz.:

- On the part of mussel growers, the belief that there is no financial reward for producing high-quality mussels, and that the IQM approach represents increased costs with no obvious returns
- The absence of any significant incentive to improve quality within the current arrangements for purchasing mussels
- In some instances, a lack of appreciation among growers of the dynamics within the market place - in particular as this relates to quality requirements
- The failure of the processing sector to actively promote participation within the quality assurance programme to growers – in some cases, the failure of processors to fully appreciate the benefits of this scheme; and
- In certain bays, due to the increasing length of time required to grow mussels (in the main as a result of overcrowding) the inability of growers to achieve the standards required under the quality assurance scheme

Even for a sector that supports the concept of producing high quality products, due to the challenges listed above, a significant effort will be required to deliver a critical mass of producers and processors into the IQM scheme. Despite the validity of the argument, it is difficult to convince growers that whilst engagement and investment in a quality scheme may not deliver any increased returns for their mussels, failure to engage in such a scheme could result in exclusion from key markets – with a consequent negative impact on the price they receive.

3.2.10 Marketing & Sales

Under this heading the key challenge is competition that the industry faces from low cost production regions on our key export markets – details of this challenge are further developed in Section 5.

3.3 Key industry challenges – conclusions

It is apparent that significant challenges exist which are negatively impacting the development and profitability of the sector. It is also apparent that a number of these challenges will require a response from the State – particularly where the challenges relate to regulatory issues. Nevertheless, some of the challenges presented on previous pages are as a direct result of the operating model that the industry has adopted in recent years. In this regard, addressing these challenges is within the direct control of the industry itself although State support may be required to prompt a resolution to some of the issues identified in this Review

In Section 7 a series of recommendations are set out which, informed by the industry consultations, focus on addressing the key challenges described on the previous pages.

Section 4 – Industry Profitability Analysis



4.1 Introduction

The views of the various producers consulted varied with respect to the extent that they believed some of the challenges described in the previous Section impacted the development of their individual enterprises. These views depended on factors such as the extent that they had been impacted by biotoxins or the extent to which overcrowding in their particular bay was an issue. Nevertheless, producers were united in their concerns that the price they received from processors has remained constant over the past 3 to 4 years, representing a price decline in real terms. In this context producers were anxious to understand the profitability and performance of the industry at processing level, in order to determine the potential to achieve enhanced returns for their supplies.

In response to these concerns, processors highlighted the significant cost increases that they have had to endure in recent years. They also highlighted the increasing competition faced in key markets, which has resulted in downward price pressure within the market. According to processors, the impact of this cost-price squeeze has resulted in a significant decline in profitability, and as a consequence has limited the potential to deliver price increases to suppliers.

Responding to the concerns a high-level processor profitability analysis was undertaken. This analysis focused on developing an understanding of the level and movement in profitability within the processing sector over the past three years. As part of this analysis effort was also made to gain an understanding of the relative performance in terms of manufacturing efficiency of the main rope mussel processors. This included a review of capacity utilisation over the past three years. The results of this processor profitability analysis are presented on the following pages.

An attempt was also made to gain some understanding of the profitability at production level; however this analysis was limited to a significant extent by the lack of detailed and comparable data with respect to production costs/profitability performance. This was particularly the case where individual producers were engaged in activities outside of mussel production, all of which were accounted for within one financial report. Difficulties were also incurred where, due to biotoxins, no/limited harvesting took place in a particular year, and the consequent financial impact was carried forward to subsequent years. Nevertheless, the analysis did highlight issues that served to inform/prompt a number of the Review recommendations set out in Section 5. A summary of the main findings of this analysis of costs/profitability across producers is set out later in this Section.

4.2 Profitability analysis – processor level

4.2.1 Analysis background and context

The rope mussel processing sector profitability analysis set out on the following pages is based on data provided by the four largest Irish rope mussel processors⁵ covering the three year period 2003 to 2005. This profitability analysis relates only to the mussel processing activities of individual processors. A number of mussel processors are also involved in processing a range of seafood products in addition to rope mussels – hence the information set out on the following pages can not necessarily be interpreted as relating to the overall profitability of all of the processors who took part in this Review. It should be noted that whilst the total sales and overall profitability data set out on Table 4.1 relates primarily to ‘rope’ mussel processing some bottom cultured mussel volumes are included in the overall sales volumes reported. Due to supply shortages, heavily influenced by biotoxins, inclusion of bottom mussels in the overall sales mix over the period under review in this analysis was regarded by individual processors as a vital operating strategy.

It should also be noted that much of the data provided by processors for this component of the Review is regarded as ‘commercially sensitive’. For that reason, no individual processor has been identified in this analysis and where possible, data is presented in percentage terms rather than absolute values. This approach, whilst serving to ensure confidentiality for individual processors, does not prevent core messages emerging, which have assisted in informing the recommendations set out in Section 5.

In order to facilitate this analysis, processors were requested to provide information on their processing activities. This included details of total annual sales of mussels over the past three years along with the corresponding profits earned, excluding all non mussel processing/trading activity. In addition, processors were requested to provide information on reject rates, post-processing biotoxin test failures and the cost associated with such failures along with details of the operating capacity of their manufacturing plants.

A further exercise was undertaken to compare rope mussel processing costs between processors. This exercise was facilitated through detailed processing costs data by the four largest processors relating to the cost involved in processing a standard/comparable product (i.e. a 1kg standard vacuum pack of mussels). This product accounts for a significant proportion of overall output from the Irish rope mussel industry.

4.2.2 Overall profitability at processor level 2003 to 2005

Set out below in Table 4.1 is a summary of the overall profitability of the mussel industry at processing level from 2003 to 2005. This table provides an account of the total cumulative value of sales of the four largest Irish mussel processors (who account for the vast bulk of rope mussel processing in Ireland) on an annual basis over the past three years. In addition, based on data provided by individual processors, a cumulative account of the profit before interest and tax (PBIT) earned by these processors is set out in Table 4.1 along with an estimate of the industry operating margin (total sales/PBIT) for this three year period.

⁵ All of the data set out in this section of the Review is based on information provided by the four largest Irish rope mussel processors. This data has not been subjected to a PwC audit.

Table 4.1
**Processing Profitability
Analysis 2003 to 2005**

Year	Total Sales (Euro)	PBIT (Profit before interest & tax)	Operating Margin (Percent)	Operating Margin High-Low Spread
2003	20,072,834	1,615,250	8.0%	9.2%
2004	20,133,596	1,089,232	5.4%	21.3%
2005	19,002,818	188,022	1.0%	5.9%
3 Year Average	19,736,416	964,168	4.9%	-

Source: Data provided by the four largest rope mussel processors

Based on the data set out in Table 4.1 it is possible to draw the following conclusions with respect to profitability:

- Average sales from the four largest Irish rope mussel processors amounted to just over €19.7 million
- Average level of PBIT amount to €964,168 resulting in an average operating margin over the period 2003 to 2005 of 4.9%.
- Prompted by biotoxin activity during 2003 and 2004 and earlier years, some processors engaged in stock building. This resulted in a carry over of sales in 2003 and 2004, which according to the processors impacted, resulted in atypical sales/profit levels during that period
- Operating margins in the industry have declined significantly. During 2005 cumulative operating margins for the four processors amounted to just 1% with two of the four processors recording significant losses during this period
- Losses or marginal profitability levels were recorded by at least one of the four processors during each year over this period. Only one processor recorded an improvement in operating margins; this was a movement from a loss making position to a marginally profitable position

- Across the four processors a significant variation in performance, as measured by operating margin, was recorded. This variation is largest in 2004 when a difference between the highest and lowest operating margin of 21.3% was recorded. During 2003 this difference was 9.2% with a spread of 5.9% recorded in 2005.

4.2.3 Processing production costs trends 2003 to 2005

Changes in processing profitability levels over the period 2003 to 2005 can be explained by understanding movements in both processing costs and in the market prices achieved by processors for their finished products. In this context, an account of the movement in mussel processing costs is set out below. This is followed by an analysis of end market price movements for finished product.

In order to track the movement in processing costs for mussels across the four largest mussel processors, each processor was requested to provide an account of their processing costs for a standard 1kg vacuum pack product. This product format was selected due to the fact that it accounts for a significant proportion of total Irish rope mussel production and the fact that it was produced by all processors – allowing for comparable data to be compiled. This data was collated using a standard processing cost model into which individual

processors input their respective processing costs. Processing costs for the four processors were then combined to arrive at average industry processing cost data. Figure 4.1 presented hereafter provides a summary account of the findings of this analysis.

Based on this analysis, it is possible to conclude the following:

- Total processing costs (for 1kg vacuum packed mussels) increased by 3.4%. This was accounted for by an increase in total direct costs of 1.2% and an increase in total indirect costs of 14.3%.
- With the exception of raw material and production payroll costs, an increase was recorded in all production costs. The reported cost of raw material fell by 1.8% with production payroll costs falling by 3.7%. Raw material accounted for the single most significant production cost item and for more than twice the cost of the next largest single production input cost, i.e. production payroll costs.
- Of the significant costs items, large cost increases were recorded in carriage and storage (12.5%); indirect employee costs (21.8%); power and fuel costs (13.9%) and quality assurance costs (11.8%). In addition, packaging costs increased by 2.5%.
- A number of manufactures have in place a relatively high fixed-cost base. Processors in this position have to endure a relatively high unit production cost in circumstances when output levels are below optimum, i.e. are utilising a low operating capacity level. Due to a lack of raw material supplies, some of the processors have been faced with this difficulty.
- At an industry level, indirect costs accounted for on average 17% of total production costs; however processors recorded significant variation in the level of indirect costs.

4.2.4 Comparison of production costs across processors

All processors have experienced increases in input costs over the past three years and this has impacted negatively on the profitability of the processing sector. Processors for their part have responded by attempting to increase the efficiency of their production processes. As is evident from the data provided however, significant variation exists between processors with respect to efficiency. This position is highlighted in an analysis of the data provided and relates to the cost of processing a standard 1kg vacuum packed mussel product on an annual basis over the past three years. Figure 4.2 illustrates the results of this analysis, the key messages from which can be summarised as follows:

- On average a gap of some 26% in the total cost of processing a standard 1kg vacuum pack of mussels was recorded between the most efficient and least efficient rope mussel processor. The most efficient processors outperformed the second and third least efficient processors by 15% and 7% respectively.
- Under all of the key processing cost headings, the most efficient processor consistently outperformed the least efficient processor by a substantial margin on a number of occasions. This was most notable with respect to production, payroll and packaging costs.
- Inability to utilise production capacity due to a shortage in the supply of raw material contributed significantly to poor production efficiencies recorded by a number of processors (this point is developed later).
- Significant variations in performance in the purchase of key consumables such as power, fuel and packaging was recorded across the processors. With respect to consumables, scale was not always the key determinant of efficient purchasing.

- The cost associated with quality assurance was another area where significant variation between processors was recorded whereby the highest cost processor recorded a quality assurance cost of some three times that of the lowest cost processor.

When considering the corresponding graph (Fig 4.2) it should be noted that comparisons of costs between processors under specific cost headings is not an easy exercise, due to the tendency of different processors to categorise costs in different ways. Recognising this fact however, the overall message from this analysis remains, with respect to total processing cost, that significant variation exists between individual processors.

4.2.5 Trends in market returns over the period 2003 to 2005

In order to determine the change in market prices obtained by processors over the past three years, processors were requested to provide information detailing the average price they received annually for standard 1kg vacuum packed mussels. Figure 4.3 presents a summary of the output of this analysis, which highlighted the following trends:

- All mussels processors experienced a reduction in the price they achieved in the market for their 1kg vacuum packed product offering. On average, the price achieved declined by 3.3%.
- Considerable variation existed however in the extent of the price fall recorded by individual processors. The largest fall in the market prices achieved was 6.1% (recorded by 'Processors 1' as illustrated in Figure 4.3). The smallest price fall recorded was 0.4% (recorded by 'Processor 2' in Figure 4.3).

Figure 4.1 **Percent Change in Processing Cost 2003 to 2005 (Standard 1 kg vacuum-pack mussels)**

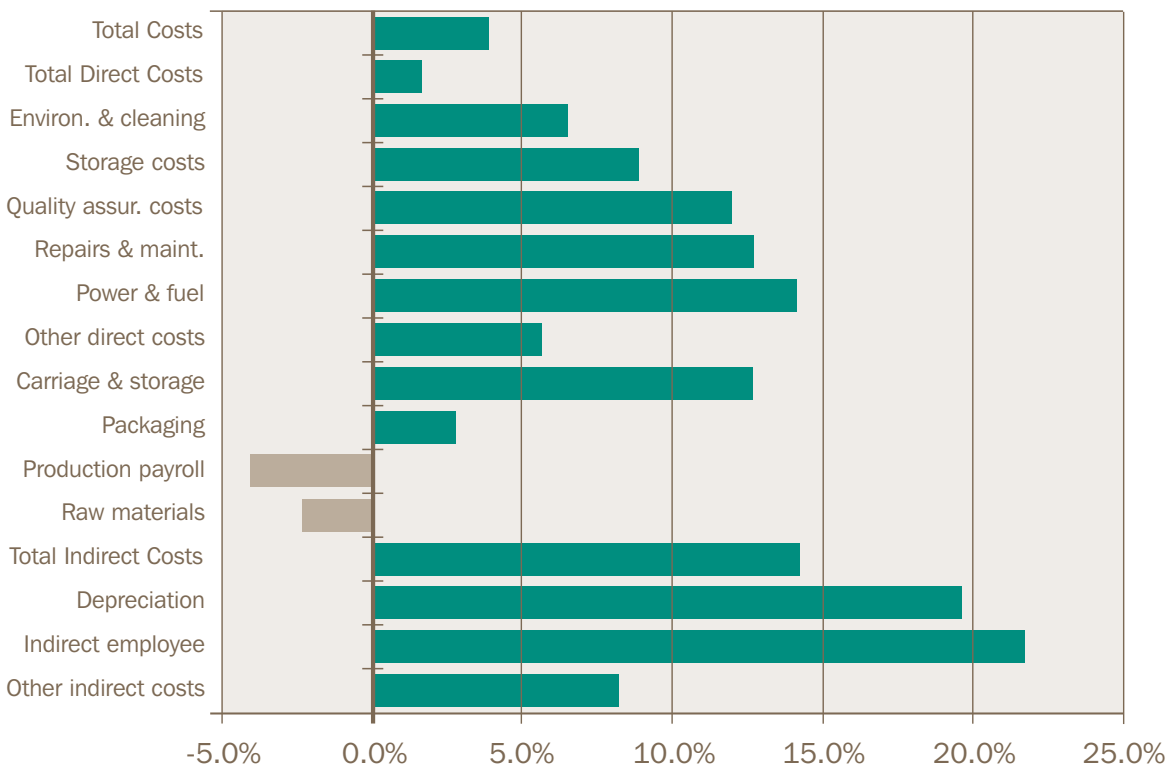
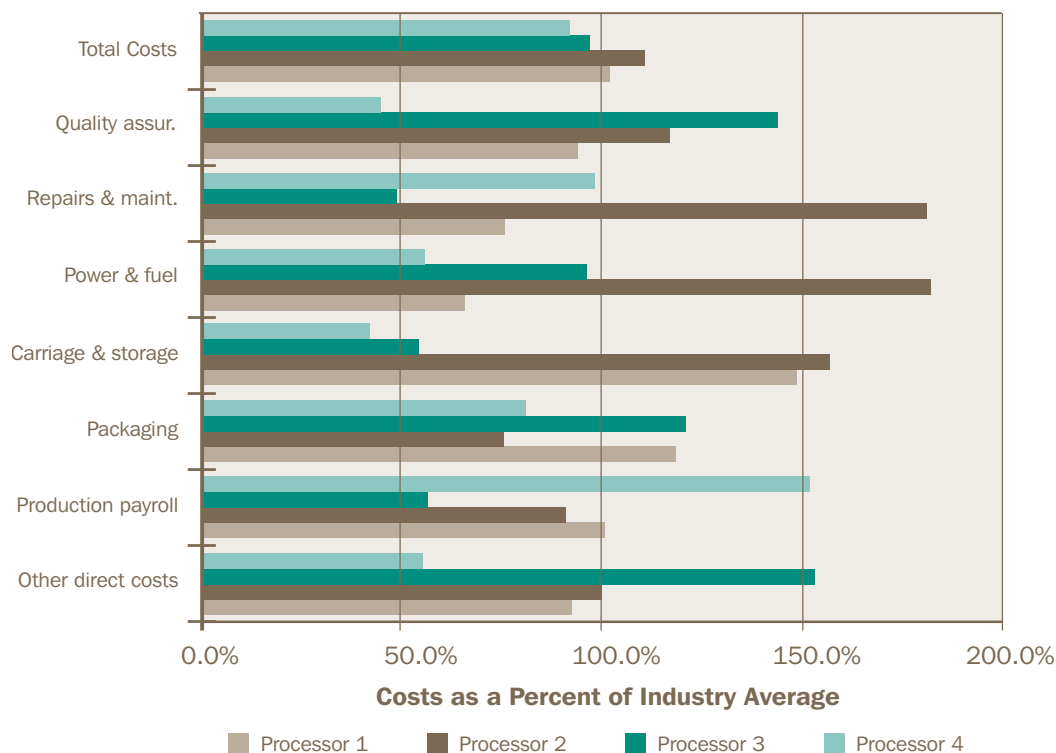


Figure 4.2

Production Cost Comparisons across Processors 2003 to 2005 (for standard 1 kg vacuum pack product)

Production costs compared across processors 2003 to 2005 (as a percent average over this three year period)



- Based on the information provided by processors, it is also evident that significant variation exists in the market performance of individual processors, as measured by the market price achieved for similar products. On average, a difference of almost 7% was achieved by the highest performing processor when compared to the processors achieving the lowest end market price.
- Furthermore, the gap between the highest and lowest end market prices achieved by individual processors has widened. During 2003, this gap stood at 4.9% however, by 2005 the price gap had increased to 10.4% as illustrated on Figure 4.4.

4.2.6 Industry operating capacity

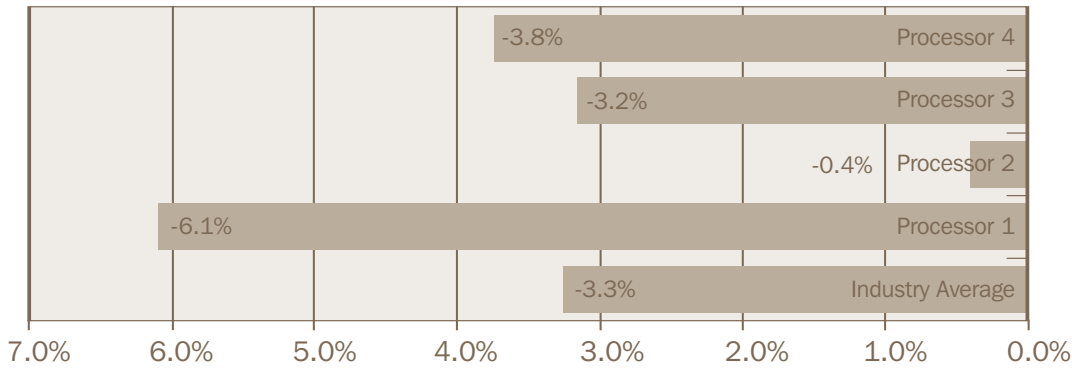
Under-utilisation of processing capacity is a key factor limiting the potential for a number of processors to maximise their processing efficiency. Based on data with respect to processing capacity and tonnage of product processed each year over the past three years, it is evident that the majority of processors have operated below capacity. Some processors recorded production levels that accounted for between only 25% and 55% of their total production capacity. On average, the industry has operated at just close to two thirds of overall processing capacity⁶.

Biotoxins have also had a significant negative impact in terms of the role they have played in limiting the supply of raw material to processors, thus leading to an under utilisation of capacity. Difficulties with respect to obtaining licences, over crowding in certain bays along with inefficient production practice and low output/poor usage of licensed areas (in certain cases) also limited the supply of raw material and hence contributed to under-utilisation of processing capacity.

⁶ Based on data provided by the four largest Irish rope mussel processors.

Figure 4.3

**Percent Change in Market Returns 2003 to 2005
(Standard 1 kg vacuum packed mussels)**

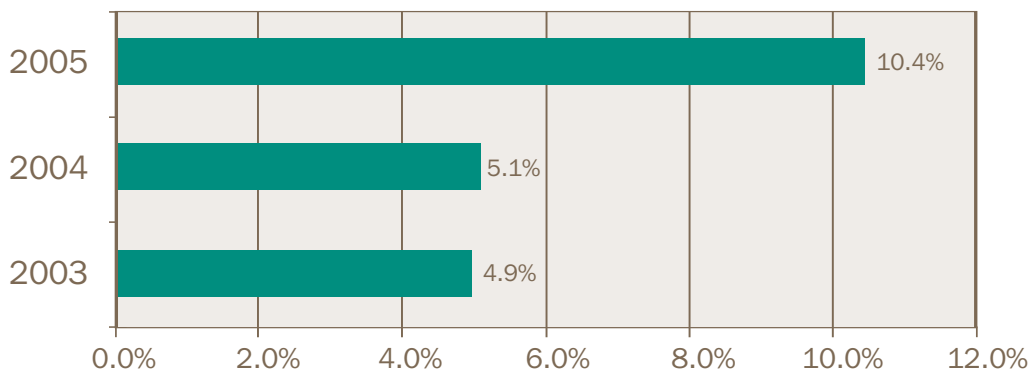


Source: Data provided by the four largest Irish rope mussel processors

Figure 4.4

**Difference in End Market Returns between Individual Processors
(Standard 1 kg vacuum packed mussels)**

Difference between Highest & Lowest Market returns recorded between Processors 2003 to 2005



Source: Data provided by the four largest Irish rope mussel processors

In addition, the almost complete absence of planning around production/harvesting between growers and processors further contributes to the inefficient usage of processing capacity and also contributes to a range of issues/difficulties associated with sales, marketing and product development. In this context, the lack of practical cooperation/facility sharing among processors is also noteworthy (all of these issues are further addressed in Section 7 – Key Recommendations).

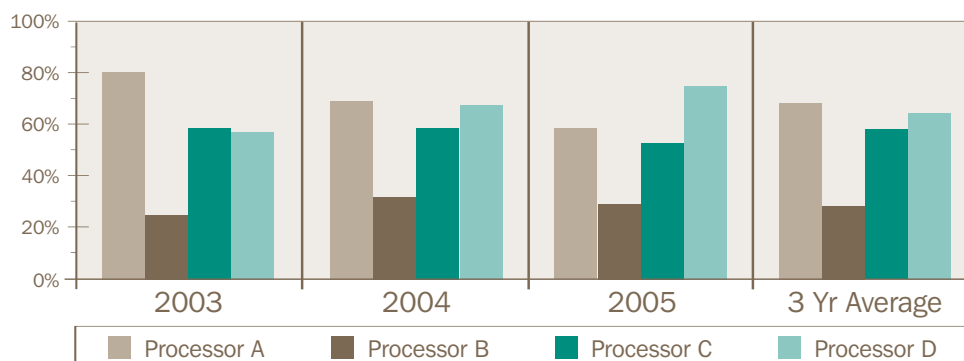
4.2.7 Product reject rates – cost to processors and producers

One of the most significant costs to the sector is the cost associated with the loss of product that is rejected due to fouling, inappropriate size, shell cracking, etc. Based on the data provided by the four largest rope mussel processors over the past three years, between 20% and 24% of all mussels supplied annually were classified as rejects/deemed unsuitable for processing, i.e. between 1,700 and 1,900 tonnes were dumped/rejected.

Figure 4.5

Operating Capacity across the main Rope Mussel Processors

Industry Operating Capacity 2003 to 2005



This level of rejected product represents an enormous loss of potential income to both producers and processors. In addition, according to data provided by the mussel processors, close to €80,000 is paid annually by processors to dispose of the rejected mussels. (This figure does not take account of the negative impact that dealing with rejected product has on the production process itself, which at the level of rejects reported is likely to be considerable.)

Whilst it may not be conceivable that the rate of rejected mussels could be reduced to zero, industry representatives are of the view that the current rate is far in excess of what should be feasible - potentially by a magnitude of more than twice what would be considered an acceptable level. For that reason, a number of recommendations are set out in Section 5 that focus on addressing this issue.

In addition to product being classified as unsuitable for processing, on an annual basis a noteworthy quantity of product fails a post-processing biotoxin test and has also to be disposed of. This failure represents a significant cost to processors. In addition, as producers are not paid for raw material that fails this post-processing test, impacted producers incur a significant loss in income.

4.2.8 Profitability analysis at processor level: overall conclusion

Based on the analysis of profitability and manufacturing costs at processor level, it is possible to draw the following overall conclusions:

- Overall, profitability within the processing sector over the past three years adjusted for the impact of biotoxins on sales can be described as low and declining
- During 2005, rope mussel processing was either a loss making activity or was just marginally profitable
- On average, the cost of manufacturing a standard mussel product increased by 3.4% over the past three years. At the same time the market return for this product declined by 3.3%
- Across the various mussel processors, significant variation exists with respect to processing costs/manufacturing efficiencies and market performance for similar products
- In overall terms the processing sector is operating well below production capacity
- A high level of reject rates represents a significant loss to the industry as well as a significant cost to the processing sector.

In conclusion therefore, it is apparent that 'operating under the existing model' (in terms of production efficiency and end market performance), any significant long-term increase in input costs would have a major negative and potentially unsustainable impact on the profitability of the processing sector. This is particularly the case when considered in the context of the emerging/increasing competition across a range of important markets, thus placing considerable downward pressure on market prices (see Section 5).

From the perspective of producers, therefore, achieving warranted and sustainable price increases will require the processing sector to enhance its performance across a range of parameters. Based on the analysis undertaken for this Review, scope exists to improve performance which over time could better position processors to recompense suppliers. This would include the adoption of a range of recommendations as set out in Section 7. Failure on the part of processors, however, to work towards enhancing performance, including achieving an improved performance in the market place, will not augur well for either the processing sector itself or its suppliers.

4.3 Industry profitability at producer level: background and context of analysis.

In order to gain an insight into the profitability of the rope mussel industry at producer level, 18 rope mussel producers were interviewed. In addition, respondents were requested to provide copies of their financial statements covering the latest three years of trading. The result of this analysis is presented below; however, the following should be noted in advance of considering these results:

- Due to a range of factors, including the lack of a standardised approach to categorising/recording costs; the impact of biotoxins in any one year and the inclusion of other trading activities within individual accounts, an analysis of profitability is an extremely difficult task
- All of the 18 producers were forthcoming in terms of providing information on the profitability of their individual enterprises. A significant number of respondents however were not in a position to provide data in such a fashion that would allow for an accurate analysis of profitability

- Although all respondents agreed that an understanding/appreciation of the financial performance of their individual enterprises is an important management function, in the majority of cases respondents did not have what would be regarded as the requisite level of awareness of their financial performance. Whilst respondents were well versed on issues such as movement in the price paid by individual processors or on issues such as reject rates, individual producers were much less aware of key financial management issues such as trends in production cost per unit of output

4.3.1 Industry Profitability at Producer Level – Results of analysis

Based on a profitability analysis of a sample of rope mussel producers who were consulted, set out below is a summary of the conclusions that can be drawn with respect to production costs and overall industry profitability at producer level.

4.3.2 Production output and cost of production:

- A significant variation exists in the performance of individual growers – both in terms of output levels achieved per licensed hectare and in the cost of production per tonne of output and consequently in the profit achieved per hectare
- At an overall industry level, average yields of close to 7.5 tonnes per hectare are recorded⁷. Although significant variations in production levels per hectare were recorded across the sample of producers consulted most recorded output levels well above this industry average with output levels ranging from a low of 5 tonnes per hectare to a high of some 22 tonnes per hectare (gross output)
- Across the sample of growers consulted, no variation exists in the end price quoted/achieved per gross tonne of mussels. All growers were quoted a gross price of €762 per tonne. This price has remained constant in recent years, representing a decline in real terms/when adjusted for inflation

⁷ Based on data provided by BIM

- The rate of rejected product has a major influence on the overall end price received by producers and in turn on the profitability of individual enterprises. In this regard, significant variation in the reject rate achieved by individual growers was recorded. These rates ranged from a low of 15% to a high of some 24% with average reject rates of approximately 18% recorded. In some instances, however, individual growers managed to 'negotiate' reject rates of around 10%. This ability to negotiate reject rates depended on the scarcity of supply of mussels, usually linked to biotoxin activity in significant production regions
- From the producers perspective, reject rates of 18% have the effect of reducing the actual price paid per tonne of product landed from €762 (gross) to €625 per tonne (net price). Considered at an overall industry level, this represents a significant annual loss to producers. High reject rates also represent a significant cost to processors, in terms of disposal costs and impact on production efficiencies
- As with output levels, growers recorded significant variation in the cost of producing a tonne of mussels whereby an average variable cost per tonne of output of some 46% of the gross price was achieved. This cost ranged from a low of 18% to a high of 82% of the gross price.

4.3.3 Overall profitability at producer level

As outlined earlier, the sample of growers who were in a position to provide detailed financial statements was small. Nevertheless, based on analysis of the data provided by this group of growers and supported by consultations with a range of other producers and industry informants, in terms of overall industry profitability at producer level it is possible to conclude the following:

- Overall profitability levels within the industry are low. This is evident based on the consultations with the 18 producers consulted during this Review. Given that the majority of these producers would be ranked among the top cohort of operators, the average profitability level within the industry is likely to fall below that experienced by those consulted in this Review
- Given that the price received from processors for mussels has remained constant for the last number of years (representing a price decline in real terms) and at the same time inflation has pushed input prices upwards (particularly for energy and labour), overall profitability at producer level has fallen significantly in recent years

- At the same time, producers as a group have failed to achieve any significant productivity gains that would offset increased input costs/static product prices – partly due to biotoxin and/or licence related issues but also, at an industry level, due to a failure to improve production practices
- Nevertheless, individual producers with production units that are not negatively impacted by biotoxins and which are located in bays where overcrowding is not an issue, are capable of achieving sustainable/healthy profit margins. These producers to some degree represent what is possible in terms of profitability. Nevertheless, even for this group of producers, the uncertainties that exist within the industry (particularly in relation to biotoxin incidences and the extent of such incidences) along with the absence of any safeguard to protect their livelihoods in such circumstances, makes for a very difficult environment in which to plan for the development of their enterprises
- It is also apparent that profitability levels within the industry can vary considerably between producers, based on the experience/skill set of individual producers. In this context, the analysis of profitability highlights significant variations in profit levels between individual producers located in the same bay and with units of comparable size.

In overall terms, therefore, it is apparent that ensuring the sustainable development of the Irish rope mussel industry will require all stakeholders to be conscious of the need to work towards improving the profitability of the industry at producer level. In this context, working towards delivering an enhanced product price is important – and from the perspective of the producer such price increases are warranted. This effort however should be regarded as only one component in a multi-faceted approach to addressing the issue of poor profitability at producer level. In this regard, some of the recommendations set out in Section 7 of this Review are concerned with delivering a range of strategies focused on improving profitability at producer level.

Section 5 – Overview of the Market Landscape



5.1 Introduction

Relative to overall output levels, total consumption of mussels in the domestic market is small. For that reason the Irish mussel industry is predominantly export focused. Whilst Irish exporters have secured important markets outside the EU, including a significant volume of trade to the US, the bulk of mussels produced in Ireland are sold into EU markets, with France, Holland, the UK and Italy all importing significant quantities.

Whilst the majority of Irish mussels are exported in a frozen format (close to 90% according to official data – although industry sources suggested that this may be an overestimate), Ireland has managed to establish an important fresh mussel trade. In this context, in developing/supporting an industry marketing strategy, the important role of the fresh trade should not be overlooked.

Irish mussel exporters compete for market share with suppliers from Spain, the Netherlands and to a lesser extent Denmark and Greece. In addition, increasing supplies onto the EU market from outside the EU has become a major industry feature. This includes supplies from established large-scale production regions such as New Zealand and more recently from Chile.

In the following Section a profile of Ireland's export trade in mussels is presented and focuses on the main export markets in volume and value terms. This is followed by a short profile on trade into key export markets. In the context of Chile as a potential major competitor to Irish mussel exporters, a profile of the mussel industry in Chile is presented towards the end of this Section, based on the findings of a recent study visit by BIM to Chile.

5.1 Trends in mussel imports across a range of key Irish export markets

Irish exporters of mussels have secured various markets for their products, both within the EU and in key markets outside the EU – most notably in the US. The bulk of the export trade however is focused on a few EU countries mostly notably France, the Netherlands, Italy, the UK and to a lesser extent Germany.

5.1.1 Irish mussel exports 2003 and 2004

The Irish mussel industry is small in global terms, with total production of rope and bottom mussels in 2004 estimated at 37,315 tonnes – of which total rope mussel was 8,755 tonnes while total bottom mussel production just exceeded 28,500 tonnes. Ireland has become an increasingly important player in Europe, especially in light of the decrease in Dutch mussel production over the last few years.

The table below highlights the main markets for Irish mussels in both value and volume terms in 2003 and 2004⁸. The pattern of exports has remained consistent, with each country remaining in the same position in relative importance to Irish exports. Within the EU, France is the most important export market – accounting for almost 14,000 tonnes of the total volume of mussels exported from Ireland. This is followed by the Netherlands and Germany. Outside of the EU, the US is the single most important market. Total exports in 2004 amounted to 758 tonnes, down 12.4% on 2003.

Table 5.1

Total Exports of Irish Mussels in 2003 and 2004

Country	2003 Tonnes	2003 €'000	2004 Tonnes	2004 €'000
France	10,661	15,498	9,272	16,197
The Netherlands	5,753	5,351	5,336	4,976
The UK	2,150	6,938	1,913	6,561
Italy	1,390	2,975	1,038	2,608
Germany	369	1,213	339	1,178
Other EU	308	577	341	908
Non EU Trade	892	3,477	759	2,873
Of which - US	865	3,425	757	2,858
Total Exports	21,521	36,034	19,006	35,305

Source: Eurostat, 2005

Market summary: France

France is the fourth largest producer of mussels in the EU and the largest importer of mussels. According to statistics from the Food and Agriculture Organisation (FAO), French mussel production in 2003 reached 69,147 tonnes. This production represents just over half of the yearly consumption levels in France.

The French traditionally have a high consumption level of mussels whereby total consumption for 2003 was at estimated 120,400 tonnes. Mussels are not regarded as a sophisticated product in France and as such are enjoyed as an everyday food item. In terms of distribution, restaurants account for 45% followed by the retail sector at 34%, fish shops and markets at 17% and farm sales at 4% (Ofimer, 2005).

Total French imports in 2004 were 59,074 tonnes, valued at €86.8 million. Of this, 44,900 tonnes or 76.1% were in the live, fresh or chilled category. French mussel exports, in contrast, are considerably smaller at approximately 4,500 tonnes per annum.

Table 5.2

Imports of Mussels into France 2003 and 2004

Country	2003 €'000	2003 Tonnes	2004 Tonnes	2004 €'000
Netherlands	29,791	18,088	18,573	31,328
Ireland	15,920	13,982	11,111	14,919
Spain	11,143	7,888	10,361	12,125
Denmark	10,649	3,421	3,869	10,239
Total EU Total				
Non EU Of Which:				
Chile Total Imports	82,745	55,917	59,074	86,813

Source: Eurostat, 2005

⁸ On occasion trade data may fail to capture to final destination of product due to the fact that in some instances product may be transhipped. This potential should be kept in mind when interpreting the trade data presented in this Review.

The Netherlands, Ireland and Spain are the largest suppliers of mussels to the French market. France imported a total of 18,573 tonnes of mussels from the Netherlands in 2004, followed by 11,111 tonnes from Ireland and 10,361 tonnes from Spain. Chile is the largest third country exporter to the France, with total exports of 1,723 tonnes in 2004, followed by New Zealand at 414 tonnes.

5.1.3 Market summary: Italy

Italy is the second largest producer of mussels in the EU after Spain. The general trend in Italian production over the last decade has been one of growth. According to FAO statistics, total output in 2003 reached 142,736 tonnes, representing an increase of 31.7% over the last decade. Total mussel consumption in Italy in 2003 was approximately 178,000 tonnes. Italy is the second largest importer of mussels in the EU after France. Italy imported a total of 40,849 tonnes valued €45.8 million. In terms of importance, Spain, Greece and Chile are the largest exporters of mussels to Italy. Italy imported 21,071 tonnes from Spain; 11,113 tonnes from Greece and 3,692 tonnes from Chile in 2004. Exports of mussels from Italy on the other hand are relatively small. Total exports in 2004 amounted to 4,243 tonnes, valued at €6.4 million.

Table 5.3

Import of Mussels into Italy 2003 and 2004

Country	2003 Tonnes	2003 €'000	2004 Tonnes	2004 €'000
Spain	18,985	19,798	18,234	21,071
Greece	6,581	10,615	7,450	11,113
Total EU				
Chile	4,704	2,355	7,446	3,692
Turkey	4,769	1,894	3,763	1,415
Total Non EU				
Overall Total	45,197	39,448	45,771	40,849

Source: Eurostat

5.1.4 Market summary: Germany

According to FAO statistics, mussel production in Germany in 2003 just exceeded 28,600 tonnes. This is an increase of [256%] on 2002 figures. Output in Germany however has been subject to fluctuation over the last decade. From the table below it can be seen that the Netherlands is the most important exporters of mussels to the German market. Total imports in 2004 were 5,902 tonnes. This was an increase of 47.9% or 1,911 tonnes on year earlier levels. Denmark is the next biggest exporter to Germany followed by New Zealand.

Table 5.4

Import of Mussels into Germany 2003 and 2004

Country	2003 Tonnes	2003 €'000	2004 Tonnes	2004 €'000
Netherlands	6,866	3,991	9,341	6,120
Denmark	7,775	21,278	6,476	25,770
Spain	1,295	456	1,450	437
Ireland	755	225	590	160
France	667	246	534	202
Total EU	18,608	26,885	19,314	33,494
New Zealand	1,508	362	1,475	462
Total Non EU	1,902	607	2,153	878
Overall Total	20,511	27,491	21,468	34,370

Source: Eurostat

5.1.5 Market summary: The UK

According to FAO statistics, mussel production in the UK in 2003 reached 22,325 tonnes, down 34.9% on 2002 levels. Total UK imports in 2004 amounted to 5,665 tonnes or €4.6 million, up 8.9% on 2003 levels. The main import markets for the UK are Denmark and Ireland who supply 1,300 tonnes and 1,200 tonnes respectively. New Zealand and Chile are the largest third-country suppliers to the UK, selling a total of 1,177 tonnes and 1,022 tonnes respectively.

Table 5.5

**Import of Mussels into the UK
2003 and 2004**

Country	2003	2003	2004	2004
	€'000	Tonnes	€'000	Tonnes
Denmark	1,420	4,692	1,300	4,576
Ireland	1,535	3,989	1,200	4,168
Germany	409	1,338	893	3,780
Netherlands	345	1,635	345	1,948
Total EU				
New Zealand	1,022	3,298	1,177	3,313
Chile	134	332	436	998
Total No EU				
Overall Total	5,199	16,639	5,665	19,986

Source: Eurostat

5.1.6 Market Summary: The Netherlands

Mussel production in the Netherlands in 2003 was 56,230 tonnes. Mussel output has witnessed a decline of over 50% from 113,000 tonnes since 1998. This decline can be directly attributed to the European Commission's Directive on Habitat and Birds, which restricts the collection of mussel seed from the dry sand banks in the Waddenzee, one of the major mussel seed production regions in The Netherlands. The Netherlands remains by far the most important exporter of mussels in Europe. Modern packaging techniques and market proximity are the strong points for Dutch exports. Consumption in Holland is estimated close to 36,000 tonnes.

Total exports of mussels in 2004 were 54,321 tonnes, valued at €114.6 million. The principal export markets are Belgium, France and Germany. Exports to Belgium in 2004, the largest single market for the Dutch, were 28,498 tonnes while exports to France and Germany during the same period accounted for 17,968 tonnes and 4,803 tonnes respectively.

Table 5.6

**Exports of Mussels form the
Netherlands 2003 and 2004**

Country	2003	2003	2003	2004	2004	2004
	€'000	Tonnes	€/Tonne	€'000	Tonnes	€/Tonne
Belgium	80,385	32,260	2,491	70,234	28,498	2,465
France	29,523	17,854	1,654	29,405	17,968	1,636
Germany	10,110	5,697	1,775	7,899	4,803	1,645
UK	1,557	473	3,292	2,352	639	3,681
Total Exports	112,829	58,168	1,940	114,645	54,321	2,111

Source: Eurostat

Key Competitor Profile

Driven by a low-cost production environment and very favourable mussel growing conditions, Chile is now a significant potential competitor for Irish mussel exporters. In fact this competitive threat is already apparent across key markets for Irish mussels, where low-cost Chilean product has managed to displace traditional suppliers. For that reason, as part of this Review it was considered important to compile a profile of the Chilean mussel industry. This profile, which was compiled by BIM following a study trip to Chile, is set out on the following pages.

5.2.1 Mussel species grown in Chile and output levels

The cultivated mussel sector in Chile has experienced a very rapid expansion in output over the last 5 years. The species cultivated is the Chilean mussel (*Mytilus Chilensis*). This species is similar in appearance to the Irish cultivated mussel, although it tends to be somewhat larger and has a slightly blacker hue to its shell. It should be noted that the taste and texture of the meat of the Chilean product is slightly different to the Irish offering. It has an excellent appearance but is a little bland and spongy, perhaps because of its rapid growth.

In 1990, 81% of Chilean mussel harvest came from the natural fishery. By 2003 this situation had changed to the point where only 5% of the harvest came from natural sources, and 95% was from the farmed sector. This growth in output from the farmed sector has been dramatic. In 2002, 30,000 tonnes of product was harvested. It is estimated that production for 2005 will exceed 75,000 tonnes (whole or 'in-shell' weight equivalent).

The industry in its current organisational state is clustered in the 10th region around Chiloe Island, close to the provincial capital Puerto Montt. Essentially the mussel farming industry is piggy backing on the established salmon farming sector, which has created an excellent infrastructure base allowing the mussel farmers easy access to landing facilities and the supply of equipment. The sheltered waters around Chiloe have salmon farms at intervals of one and a half miles and increasingly this separation space is being occupied by mussel farms. It is an ideal polyculture situation: the salmon farms enrich the waters while the mussel farms bio deplete them and benefit from the high levels of plankton living in the nutrient rich environment.

5.2.2 The technology employed

Development of the Chilean mussel industry is being led by ex-patriot Spaniards from Galicia who have brought Spanish mussel growing techniques with them. The principal technologies employed are long-line systems constructed following the typical Spanish model.

The long-lines tend to be either 100 or 150 meters in length and have a double head rope suspended from specially made plastic barrels. A heavy re-usable dropper rope (12 meters deep and 10 to 12mm in dia with pegs) is employed, together with biodegradable cotton mesh. Modern steel catamaran type vessels built locally to Spanish designs in the 20 to 30metre size range, equipped with hydraulic arms and winches and utilising Spanish grading and packing equipment, are employed.

Productivity from these long-lines is exceptional, in comparison with Irish norms where output per dropper ranges from 200 to 450 kilos. The output per 100m long-line averages 40 tonnes and has a grow-out time of 12 to 14 months. According to the operators, they expect this output to increase as the drop ropes become increasingly 'biologitised'. When fully mature they expect the droppers to average 500 kilos each per cycle and the long lines to yield 60 tonnes per cycle. As a rule of thumb, the operators estimate that they will harvest about 95 tonnes per hectare per annum.

Meat yields are high and it is not uncommon to achieve a level of 28% or more. Because the mussels grow so quickly and are in the water for only 14 months, shell fouling is minimal and the mussels present to the factory in a very clean state. Consequently they require very little cleaning and are easy to debyss and further process, thus yielding a significant saving in process cost.

Seed mussel is naturally collected by specialist firms who sell the juveniles to the on-growers. A first thinning is carried out after four months and the entire crop is harvested within 12 to 14 months of the initial seeding.

Biotoxin closures do occur and there is a Government-backed monitoring programme to deal with them. DSP type and ASP type toxins have been detected and closures have occurred periodically. From what was reported to us these closures were not prolonged and there is no discernable seasonality to the occurrence of the biotoxins in the shellfish.

The monitoring programme is based on a mouse bioassay carried out at 15-day intervals in the main production areas, backed up with a phytoplankton monitoring programme. If target phytoplankton species are identified then the frequency of the mouse bioassay is increased. Based on the information provided, it would seem that the chemical testing regime is limited to HPLC technology and that LCMS testing is not a feature of the current regime. No cases of human illness arising from exported Chilean mussels have been reported, so it can be reasonably assumed that their regime is effective from a human food safety viewpoint (based on the information provided).

According to industry promoters interviewed, mussel operations are profitable. Based on existing licences and applications pending, the industry is confident that output in the 10th Region will reach or exceed 150,000 tonnes per annum by 2010. On the basis of what was observed during the study trip, there seems little reason to doubt the veracity of this forecast.

While it was not easy to ascertain an actual unit cost of production, there is no doubt that the sector is very competitive in comparison to Ireland. The same assets are turning over five or six times as much production, and the labour costs are very much lower. A site worker costs about US \$550 per month in wages and food.

5.2.3 The marketing of Chilean mussels

It should be noted that the main product forms for exported Chilean mussels are IQF [full title] meats, frozen half shell, canned meats and a relatively small but growing volume of food service type frozen vacuum packed mussels.

Virtually the entire harvest is processed and exported, with only a couple of thousand tonnes being sold as fresh, whole in shell, for immediate consumption on the home market in restaurants. The processing plants visited were modern and to a very high standard, with HACCP in evidence. The sector has not as yet developed an accredited quality assurance scheme. According to those interviewed, a few older plants of lower standard will need to rapidly reinvest or face going under.

In terms of product mix, 89% of the 2004 export was frozen and 11% was canned. In the frozen category, 85% was exported as IQF meat, 9.3% as half shell and 5.7% as food service frozen vacuum pack.

The companies we visited reported that the fob unit price for their exports has been relatively stable over the past 5 years at roughly US\$2.25 per kilo and that price fluctuations encountered were driven more by changes in currency value than by any movements in market demand. A large selling price differential of up to 30% is being experienced by the top quality producing plants as opposed to the older lower quality plants.

The main market for these products is Europe, with Spain accounting for 36% of the export volume followed by Italy at 26%, France and USA at 10% each and the remaining output accounted for by smaller volumes of sales to Belgium, Holland, UK, Argentina, Denmark and others. The value of exports in 2004 is estimated at US\$370 million and the 2005 figure is estimated in the region of US\$420 million.

As yet, the product forms (IQF meat and half shell) do not directly compete with Irish production; however there is a strong interest in food service, whereby vacuum packed product would undoubtedly lead to direct competition with Irish output. The Chilean route to market through seafood companies in Spain is well established, and their knowledge of the ingredients and food service segments of the European seafood market is excellent. As yet none of the companies we spoke to has plans to produce any products more sophisticated than the food service vacuum pack, and there is no obvious focus in terms of penetrating the retail market directly.

5.2.4 Industry structure

A small number of new state-of-the-art plants currently account for a large proportion of the exports. The top three companies together account for almost 60% of total exports, while the leading company, Toralla Sociedad Anonimia, accounts for almost a third of total exports in its own right.

The Toralla plant, which was visited as part of the trip, was clean and modern, and produces 4,000 tonnes of finished product per annum, working two shifts and employing approximately 200 people.

5.2.5 Implications for the Irish mussel sector

It may be seen from the above that the Chilean farmed mussel sector is set to increase in output very substantially over the next five years. Growing conditions are ideal: the country is politically stable and there is an enthusiasm to invest in the sector, based on the very positive experience that investors have enjoyed in aquaculture, represented by the salmon farming industry. Mussels are the next big thing in Chilean aquaculture and the sector is set to grow very rapidly.

Based on the performance of the Chilean industry to date and its future plans, the clear message for the Irish mussel industry is that it will not succeed if it tries to compete with Chilean product on price in the market place. The costs of production advantages enjoyed by the Chileans are substantial and it will not be possible to match them in this regard. This juggernaut will not be stopped and the Irish mussel sector must develop strategies to slipstream it, rather than stand in its path. The lessons learnt from the salmon experience must be taken on-board and acted on quickly while there is still time.

As has happened with farmed salmon, increasing output from Chile will create a rising tide for the mussel category in the market place, and the segment will be much bigger than heretofore. It will be a very competitive market whereby the Chileans are in pole position in terms of being the lowest cost and biggest volume supplier.

On the positive side, Ireland has a product with a fuller, sweeter flavour and this characteristic, together with our elaborate food safety regime and unique IQM scheme can form the basis for a strategy of differentiation. Nevertheless, it will be crucial to place Irish output in a higher value niche. The industry has a head start; Irish players are used to dealing further along the value chain and producing more sophisticated branded products. It will be necessary to leverage these advantages to the maximum extent.

Thus, anticipating the rising mussel tide, it is critical that a highly valorised image around Irish production is created and that Ireland delivers the message that Irish mussels are a premium product, different from the rest. If this can be achieved, then the momentum created by the Chilean expansion should allow the Irish sector to find a higher value niche within a much bigger market place.

Effective implementation of such a strategy will require a cooperative approach amongst producers, such that the overall image of Irish mussel, as a premium higher value product that consumers will pay more for, is supported by all of the players in a determined and concerted manner. All of these factors are taken account of in the recommendations in this Review.

Section 6 – Voice of the Customer Interview Programme



6.1 Introduction

Market intelligence, and in particular feedback from key buyers/customers, is critical in informing the future development of the Irish rope mussel industry. In this context, BIM interviewed foodservice and retail buyers located in key export markets, i.e. France, Italy, Germany the UK and the Netherlands. The information gathered during these interviews in tandem with the existing trade data and the analysis of the competitive landscape, has helped to inform the market related recommendations set out in Section 7.

6.2 Key findings of the Voice of the Customer (VoC) interview programme

During the VoC interview programme, 17 face-to-face interviews involved a representative sample of key retail, foodservice and wholesale buyers across the various markets. The key findings of this analysis are presented under the following headings:

a) Competitive position of Irish supplies within the market place

In the context of increasing competition on EU markets, particularly from low-cost production regions, buyers were asked to comment on Ireland's competitive position within the market. A summary of the feedback under this heading is presented below:

- In the main, Ireland is perceived as having a good competitive position across a majority of the markets where the VoC interview programme was conducted. Nevertheless, some buyers were of the view that given increasing competition from non-EU based suppliers, Irish exporters needed to improve their competitiveness and enhance their performance across a range of business practices in order to continue to successfully compete within the market place
- Greater competition now exists on European markets due to increased imports from third countries such as Chile and New Zealand. In this context, the emergence of Chile as an increasingly active exporter of mussels was noted as a key issue for Irish exporters. Buyers suggest that price has been a key determinant in ensuring increased imports from third countries. Irish mussels were identified by many of the buyers as a relatively expensive product – particularly when compared to product available from low-cost production regions.
- A number of the respondents voiced concern over meat content of the Irish mussel. A real threat now exists due to greater meat content and perceived quality of the Chilean and New Zealand mussel. The darker colour of the Chilean mussel and New Zealand green shell mussel are also preferred on certain markets such as Italy. Nevertheless, this was not the case across all markets. According to interview respondents, improving meat yield will be an important future consideration for Irish mussel exporters

- Buyers identified New Zealand as having a large advertising and promotion (A&P) spend on the UK market, and a clear focus on brand development. According to the buyers interviewed, this has helped to build the image of the New Zealand mussel on the market. Customers now recognise New Zealand product as a brand within the sector. As a result, UK buyers consider it necessary for Ireland to promote and differentiate their mussels within the market place

b) Comparison of various supply sources

During the interview programme, buyers were requested to identify the key attributes that they associated with a range of different mussel supply regions. The following table presents a summary of the feedback from suppliers under this heading:

Table 6.1

Attributes Associated with Key Supply Regions

Supply Region	Key Competitive Attributes
Italy	<ul style="list-style-type: none"> • Consistency in quality • Reasonable price
Denmark	<ul style="list-style-type: none"> • Consistent meat quality • Reasonable price
Spain	<ul style="list-style-type: none"> • Consistent meat quality • Competitively priced
Chile	<ul style="list-style-type: none"> • Very competitively priced • Good meat yield • Quality standards constantly improving • Similarities to the Italian & Spanish product in colour
New Zealand	<ul style="list-style-type: none"> • Good mussel size • Good recognition within the UK market • Demand for New Zealand green shell mussel

- In terms of the key attributes that buyers associated with Ireland as a source of mussels, the following features were most often mentioned:

- Good flavour
- High/superior quality product, and
- Proximity of Ireland as a source of supply when compared with non-EU based suppliers

- In addition, the rope mussel itself was identified by a number of buyers as having the specific benefits of being grit free and having a cleaner shell when compared to bottom mussels.

c) Customer management, communication and logistics

Whilst price is a key feature of the market, the ability of suppliers to establish [deep] relationships with key buyers is considered an important factor in building profitable sales. In addition, establishing and maintaining high levels of customer service is a critical success factor. In this context, buyers were asked to comment on the performance of suppliers in this area. Their responses are summarised below:

- In the main, Irish suppliers have managed to build [significant/deep] relations key mussel buyers across all the important export markets. A number of buyers however identified lack of/poor communications as an issue with some Irish suppliers. It was felt that in some cases, greater effort was needed to build long-term partnerships with customers. In addition, in some cases buyers expressed concern at the lack of warning with regard to product availability
- According to buyers, Irish processors will need to work to a greater extent with the relevant Heads of Department within individual stores in order to maximise their product sales.

- While Ireland has an obvious geographical disadvantage in comparison to other exporting countries within the EU, Ireland has a major advantage in terms of geographical location and delivery times to the European markets when compared to competitors such as Chile and New Zealand. Buyers were of the view that Irish suppliers should leverage this advantage within the market place and that this advantage should also inform new product development activities.

d) Performance in the area of innovation

Performance in innovation, in terms of new product development (NPD) and/or new processing or packaging technology development, is considered vital for the future success of the mussel industry in Ireland. In that context, buyers were requested to provide their views with respect to the area of innovation/NPD. The feedback from buyers on this issue is summarised below.

- Overall, the buyer interview programme revealed a need for Ireland to become more innovative and proactive in new product, processing and packaging development. Whilst ongoing NPD is a key requirement of retailers across all markets, particularly those dominated by large-scale multiples, increasingly the foodservice sector is demanding suppliers to enhance their performance in this area
- According to the VoC interviews, there is a noted shortage of chefs in the UK and Italy, thus requiring suppliers to supply more value-added products to the foodservice sector
- It was also suggested that Irish processors should work more closely with selected buyers/outlets and develop their processing in conjunction with the requirements of the buyers on a range of European markets. According to those interviewed, a better understanding of the buyers end market requirements is needed in order to allow for more focused product development/innovation activity

- Across a number of markets, a need to improve the simplicity of preparation for the convenience buyer was considered important. European society has seen a big change in consumer trends, with people having less time to prepare food, thus requiring convenience in most aspects of food preparation. In this regard, buyers also requested that more serving suggestions should be included on the packaging.

e) Recognition within the market place and the importance of labelling as a marketing tool

In an ever more crowded and competitive market place, product/supplier differentiation is an increasingly difficult task. Nevertheless, developing recognition within the market place is considered an important component of the development strategy for the Irish rope mussel industry. In that context, buyers were asked for their views with respect to the value of developing a unique identity for Irish product. In addition, buyers were asked for their views with respect to the importance of labelling as a marketing tool. The feedback on both these issues is summarised below:

- According to buyers within the UK, a major issue overall for Irish mussels is the lack of differentiation within the market place. Buyers believe that the origin of the product will become an important issue and that better prices could be commanded for product showing origin
- One of the key strengths of the Irish mussel industry identified by a majority of buyers was the Irish image and perception of Ireland as a clean, green and an environmentally-friendly country. It was, however, felt that Ireland has not capitalised on this aspect in their branding and should use it as a tool to differentiate their products. It is used as a marketing tool in many other food products, such as beef in Italy, or butter in Germany but has not crossed over to the seafood sector

- Quality and food safety compliance (and certification of same) are key determinants in the selection of Irish mussels for many buyers on the European market. French buyers in particular expressed an interest in Irish mussels due to the (biotoxin) testing regime. Buyers however were of the view that as Chilean mussels gain greater recognition with regard to certification, Ireland will have to maintain stringent controls in this area.
- Despite scares some years back, Irish mussels are now regarded as an extremely safe product by all European buyers. According to buyers, Ireland should fully exploit this competitive advantage
- Some respondents suggested that an environmental quality standard/labelling system should also be incorporated into the Irish product labelling programme.

f) Ireland's strengths and weaknesses in the EU market place

As part of the VoC interview programme, buyers were asked to comment on what they perceived as Ireland's key strengths and weaknesses within their particular market. A summary of the key findings under this heading are presented in the following tables. One of the key messages emerging from this component of the analysis is that price is considered to be one of the most significant weakness of the Irish supply base. Nevertheless, product safety along with proximity the market (compared to non-EU based supplier) is considered as one Ireland's key supply strengths.

Table 6.2

Buyers Perceptions of Ireland's Key Weaknesses on EU Markets

Summary of Responses Across Markets

(x= an identified weakness, frequency of Xs relates to the number of respondents)

Area of Potential Weakness	France	Germany	Italy	UK
Price	XXX	X	XXX	X
Meat Yield/Quality	X	X	X	
Differentiation within the market	X			
Promotion/PR	XXX	XX	XX	X
Logistics	XXXX			
R&D/NPD	X	X	X	
Communications	XX			
Meat appearance/colour	X	XX		
Product cleanness	X			

Source: VoC Interview Programme

Table 6.3

Buyers Perceptions of Ireland’s Key Strengths on EU Markets

Summary of Responses Across Markets				
<i>(x= an identified strength, frequency of Xs relates to the number of respondents)</i>				
Identified Strengths	France	Germany	Italy	UK
Food Safety	XX	X	X	
Distribution/proximity	XXX	X	X	
Customer Service	X			
Origin of the Product	XX	X		
Irish Branding	X			
Environmental	X	XX		
IQM	X			
Good colour	X			
Good Flavour	XX	X		
Quality	X	XXX		

Source: VoC Interview Programme

g) Important actions

As a final component of the VoC interview programme, buyers were asked to identify what important actions they believed the Irish mussel industry should take in order to allow it

continue to develop on its performance within the market place. The actions most frequently mentioned are summarised in the following table:

Table 6.4

Important Actions for the Irish Mussel Industry

Important Actions for the Mussel Industry
- Conduct more focused new product development. This NPD must be market informed
- Increase awareness of Irish mussels through different points of communications
- Increased innovation in the use of packaging – particularly for the retail market
- Emphasise the positive environmental benefits associated with Ireland as a production location – specifically the production of mussels in the Atlantic
- Focus on improved labelling – at both buyer (trade) and consumer level
- Participants within the sector should work together to improve the meat yield of the Irish mussel

Source: VoC Interview Programme

Section 7 – Industry Vision and Key Recommendations



7.1 Introduction

Based on an analysis of all of the various inputs into this Review, as described in Section 2, and conscious of the many challenges currently facing the sector, it is possible to identify a range of issues crucial to the future development of the Irish rope mussel industry. By way of addressing these issues, a number of core themes for action have been developed. These are designed to establish a sound basis for future development and to assist with delivering on a vision for the industry as set out below.

7.2 Industry Vision

The recommendations contained on the following pages address a wide range of development issues. These recommendations were developed with the objective of establishing an Irish rope mussel industry that in future could be described as having the following characteristics:

A: Market Focused:

Future Industry Description

- All involved in the sector, from producers to processors and those involved in the development and support of the sector, have a clear/informed understanding of the dynamics of the end market for mussels, and all actions are driven by the demands of the market place
- Investment in new product development and product innovation by processors, producers and the State is rewarded by the continued expansion of the industry. Driven by an investment in market-led new product development and focused marketing on an ongoing basis, the industry identifies for itself profitable market opportunities across a range of traditional and new markets

- Supported by a campaign revolving around the quality of Irish rope mussels and particularly focusing on 'a superior eating experience' within the market place, Irish mussels are clearly identified by buyers for a range of positive attributes – notably a consistency in quality, a superior taste, an assurance of product safety and an attractive production/growing environment. In addition, Irish suppliers, recognised for their customer service and their professionalism, have developed working partnerships with a range of leading foodservice, retail and industrial/ingredient outlets

B: Quality Driven:

Future Industry Description

- Quality, in all its manifestations, is the hallmark of the Irish rope mussel industry. In this context, the industry is recognised for excellence in product quality – defined in terms of product safety, meat content, and mussel size. High quality also describes the service provided to customers

- All producers and processors are working within a recognised, market-leading and independently auditable quality framework. This quality framework, developed to ensure a minimum level of bureaucracy and administration burden, is regarded by participants as making an essential contribution to assisting the profitable and sustainable development of the sector
- At processor level, transparent buying mechanisms are defined to reward and encourage the production of high quality mussels – with producers, processors and the State development agencies continually working in partnership in this area
- Regulatory issues relating to licensing, which have a negative impact on quality, have been addressed. All licensing decisions are made, conscious of the impact that the local growing environment has on the quality of mussels produced. In this context, the impact that new licences has on existing growers (in terms of reducing the potential to produce high quality mussels) is considered in advance of issuing any new licences

C: Commercially Aware:

Future Industry Description

- All involved in the industry can be described as 'commercially aware'. This includes producers and processors, who are highly focused on the commercial development of their enterprises
- Commercially aware also describes the approach taken by those bodies involved in supporting the development of the sector and those charged with regulating the industry. In addition, industry regulators, whilst not compromising the regulatory function, continue to be conscious of the commercial implications of their actions, work with the industry to identify 'solutions' to regulatory issues and on all occasions respond to issues impacting the commercial development of the sector on a timely basis

D: Efficiency Conscious and Focused on Achieving long-term Sustainable Profits

Future Industry Description

- The industry consists of a mixture of full-time and part-time producers and of units that vary in scale. In addition, the industry offers an attractive career prospect for young/new entrants – avoiding the potential succession related difficulties.
- All mussel producers are employing relevant best-in-class production techniques to produce a high quality product within a time-frame that optimises local growing conditions and which minimises production costs
- Producers and processors are focused on achieving long-term sustainable profits from their respective enterprises. Decisions on all State support provided to the sector are measured against the contribution that such support makes towards assisting the industry to deliver long-term sustainable profits
- Supported by ongoing training and development assistance, producers are equally adept at addressing production/technical issues as they are at understanding and addressing financial matters of relevance to their enterprises. Furthermore, producers are conscious of the need for succession planning – in this context, all industry stakeholders are actively working to attract (and retain) young entrants into the industry
- Through a dedication to planning, continuous cost reduction and the strategic outsourcing and/or sharing of processing activity among processors, the processing sector is also recognised for its efficiency of operation
- Focused on developing the product offering, extending market reach and ensuring competitiveness, the processing sector continues to seek strategic alliance/joint venture opportunities with domestic/international food/seafood processors

E: Technologically Alert and Adaptive:

Future Industry Description

- At both production and processing level and supported by State development agencies, the industry is continually seeking to understand/adapt leading-edge technologies for the production, harvesting and processing of mussels

F: Collaborative in Nature:

Future Industry Description

- Industry participants are working in a collaborative and transparent fashion focused on ensuring the ongoing profitable development of the industry
- Recognising the significant competitive nature of the market, and in particular the threat from low-cost production regions, producers, processors and the State supporting agencies are working jointly to define and implement development strategies
- Destructive inter-company rivalry is no longer an industry feature and has been replaced by practical co-operation in areas of mutual interest [but with healthy competition an industry feature at processing level]
- The industry has a strong and positive working relationship with its regulators who, whilst maintaining independence, work with the industry to develop practical yet robust approaches to regulatory issues in close consultation with industry participants. Regulators are not regarded as obstacles to development but rather are seen as assisting the long-term sustainable development of the industry
- At producer level the industry is well organised and has a cohesive approach to addressing issues impacting the industry's development

G: Making an Important Economic Contribution in Coastal Communities

Future Industry Description

- Featuring a mix of full-time and part-time operators of various enterprise sizes who supply raw material for local processing, the industry makes an important contribution to the economic well-being of the coastal communities where it is located.

7.3 Core Development Themes and Key Recommendations

In order to deliver on the above vision for the Irish rope mussel industry, twelve core development themes are presented in the following pages. These development themes are supported by an Implementation Planning theme. Under each of the development themes a number of recommendations are set out. These core themes have been prioritised based on the impact that various development challenges have had on the industry over the past three years

Over time, however, it is possible that prioritisation of these recommendations may well change e.g. whilst currently there is a pressing need to address a range of regulatory issues impacting the industry's development, long-term development will depend on the successful implementation of a range of recommendations presented in this Review under the heading of 'marketing and sales' and 'research areas'. The importance of these recommendation areas, however, is currently overshadowed by what is regarded as the 'here and now' concerns relating to such issues as biotoxins and licensing.

Furthermore, whilst a number of major recommendations presented in this Review will require a response by the State, in terms of addressing regulatory and development support related issues, a significant proportion of the recommendations set out on the following pages are within the direct control of the industry to respond to/act on. This is in keeping with the findings of this Review, which has identified issues such as biotoxins and licensing as presenting major challenges to the development of the industry but which also identified a significant range of producer/processor related issues that need to be addressed as a matter of priority.

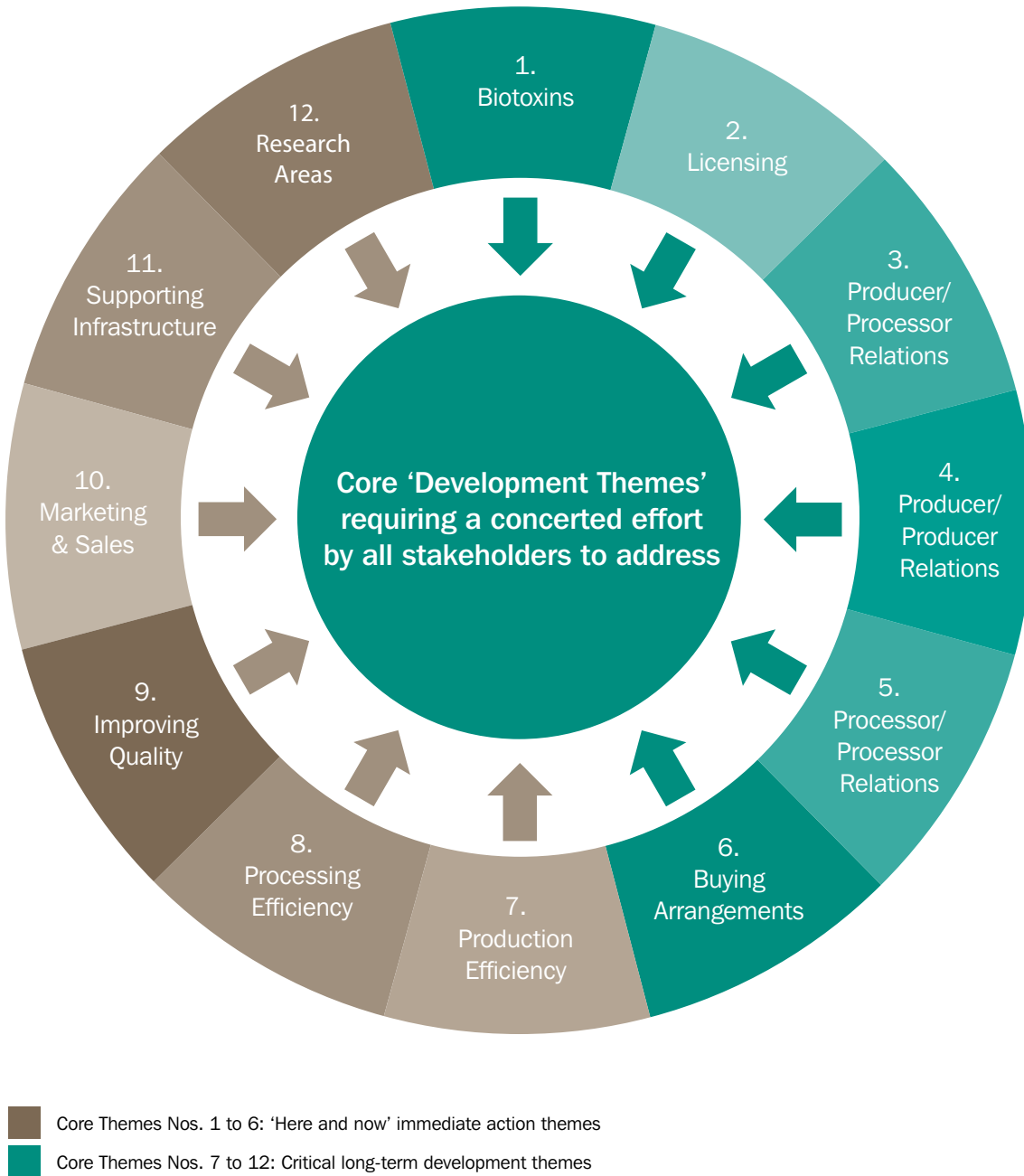
The full implementation of the recommendations presented on the following pages and summarised under Figure 7.1, represents a significant challenge for all involved in the rope mussel industry. Successful implementation of these recommendations will require all stakeholders/key influencers to make a concerted effort to work in a collaborative fashion to ensure the continued development of a profitable, sustainable and market focused rope mussel industry, thus ensuring that producers and processors continue to be viewed as professionals that are making a valuable contribution to the overall output of the Irish seafood industry, warranting continued State support for their endeavours

The recommendations set out on the following pages are designed to address a range of development issues/challenges facing the Irish rope mussel industry. By their nature these recommendations focus on addressing areas of weakness within the sector.

Nevertheless, this is not to suggest that the industry has not achieved a significant degree of success since its establishment in Ireland. On the contrary, over the past two decades this industry has witnessed the emergence of a dedicated production sector consisting of highly skilled mussel growers and a dedicated/focused producer organisation. These growers supply a processing sector that has achieved noteworthy advances in processing technology and has managed to capture and retain some of the most demanding foodservice and retail customers across a range of international markets. Furthermore, within the various State development agencies/ organisations a range of highly skilled professionals have achieved significant success in assisting the development of the industry. This development has also been informed/ assisted by a focused industry representative organisation. In addition, the industry in recent years has managed to establish a strong record in terms of product safety.

These recommendations, therefore, should be seen in the context of assisting the rope mussel industry build on the considerable success it has achieved to date and help to ensure the long-term sustainable development of the industry.

Figure 7.1
Core Development Themes



Core Theme 1: Issues relating to biotoxins

Define the optimum mix of biotoxin tests; focus increased emphasis and resources towards identifying solutions to the issue of biotoxins - including bay specific strategies; give significant consideration to providing financial support to producers in compensation for the temporary suspension of harvesting; establish a levy-based insurance fund to compensate producers/processors for post-processing biotoxin test failures; further leverage the strength of Ireland's biotoxin control/monitoring regime in marketing/sales activities and increase the level of engagement/communication with the industry in the area of biotoxins.

Introduction

With respect to biotoxins, it is possible to identify three broad categories/issues of significant concern to the industry:

- a) the biotoxins themselves
- d) the testing process/regime used to identify/monitor the presence of biotoxins, and
- c) the relationship that exists between the biotoxin regulator and the industry.

Given that the focus of this Review does not include a technical/scientific examination of the approach to biotoxin testing, this Review will not contain any recommendations specific to the issues listed under (a) or (b) above.

Recommendations in this area instead are confined to focusing on establishing a platform through which the industry and its regulators can develop their working relationship and through which the industry can work towards developing strategies aimed at reducing the impact of biotoxins.

It should, however, be noted that regardless of the financial impact that biotoxins have on the industry, any changes to the regime/approach used to monitor this phenomenon should not in any way compromise food safety. Whilst the financial impact of bay closures is significant, a food safety-related issue could irreparably damage the sector.

As indicated in Section 3, it is also worth noting that although relations within the industry on the issue of biotoxins can on occasion be described as poor, all industry participants (including producers, processors and the industry's regulators) are genuinely focused on the same objective, i.e. ensuring that the production of a product does not in any way put consumers at a food safety-related risk. It is against this backdrop that the following recommendations under the core theme of biotoxins are set out:

Recommendation 1.1

The optimum biotoxin testing mix, along with the triggers which will result in bay closures/openings, should be defined and clearly communicated to all industry stakeholders.

Throughout the industry a significant amount of debate revolves around the appropriateness of the various testing mechanisms used to detect the presence of biotoxins, particularly as this relates to the usage of chemical testing versus the traditional mouse bio-assay testing method. As indicated above, this Review does not make any attempt to comment on the merits of any testing methodology.

Nevertheless, it is clear that within the industry significant energies are exhausted on this issue – energies that could be more appropriately channelled towards addressing developmental-related industry issues.

Since this Review commenced, the Molluscan Shellfish Safety Committee (MSSC) has set out the biotoxin testing mix that will be used in Ireland over the next two years. It is recommended that the outcome of this approach should be carefully monitored over the next two years, during which time the MSSC should work to agree a long-term strategy with respect to biotoxin testing, based on the outcome of ongoing local and international research and reflecting any changes to the relevant regulatory framework⁹.

⁹ In this context the industry needs to be cognisant of the long-term sustainability of the mouse bio-assay test in the context of regulatory developments in food safety monitoring.

In addition to the above, it is considered important that:

- The MSSC clearly communicates to industry stakeholders the approach to biotoxin testing, including the mix of texts that will be employed over the next two years¹⁰. The producer representative organisation (ISA) should also actively engage in this process
- The mechanism that will be used to trigger bay closures/openings should be set out in a transparent fashion and clearly communicated to all relevant industry stakeholders
- Any changes to this approach, which might emerge due to ongoing research or changes to the regulatory framework, are agreed in advance with industry participants and are implemented in a transparent fashion

In addition, with respect to the workings of the MSSC, it is recommended that:

- Given the importance of the work of the MSSC, every effort should be made on the part of the processing industry to input into the workings of this group, with ongoing/greater representation/attendance by senior management from the processing sector at MSSC meetings encouraged
- As a means of facilitating attendance at MSSC meetings and improving communications with stakeholders, consideration should be given to holding MSSC meetings on a regional basis and rotating the meetings around the regions
- Essentially there is a need to build on the important and positive work of the MSSC by focusing on improving/enhancing this organisation's links/communication with the industry

Recommendation 1.2

Increased emphasis and resources should be given to developing solutions to the issue of biotoxins, including development of bay specific-strategies.

Biotoxins have a significant potential to negatively impact/limit the development of the Irish rope mussel industry and also have a capacity to undermine all other development strategies. Because of this, an increased effort should be made to develop mechanisms/approaches that the industry can employ to reduce the negative commercial impact of biotoxins. In this context, an increased focus should be given to the development of 'biotoxin solutions' both at an industry level and specific to individual bays. BIM and the Marine Institute along with producers and processors should work in a collaborative fashion with the objective of developing such solutions.

As part of this approach, consideration should be given to classifying bays based on their biotoxin profile (using historic data) and to developing bay-specific strategies based on this profile. Potentially, this could result in the following classification of bays and the corresponding development strategy¹¹:

¹⁰ This approach was agreed by the MSSC at a meeting of the Committee during November 2005.

¹¹ Note – the bay classifications and corresponding development strategies set out in this Section are by way of example only and are not presented as definitive classifications/development strategies.

Bay Biotoxin

Classification Potential Development Strategy

1: Low Incidence

- Producers encouraged engaging in finishing/further growing of mussels only – not to engage in growing seed
- Agreements brokered to encourage producers operating in these bays to purchase seed from producers located in bays classified as ‘high incidence bays’
- Producers encouraged to work with processors to plan output/ harvesting to accommodate early harvesting in medium incidence bays
- Areas looked on favourably/preferentially in terms of licence applications

2: Medium incidence of Biotoxins

- Increased focus on developing early biotoxin warning systems for producers in these bays
- Development of rapid harvesting techniques/equipment – including the adoption of growing techniques to accommodate such equipment/consideration of 24-hour harvesting of mussels
- Increased planning between processors and growers focused on scheduling growing and harvesting periods

3: High incidence of biotoxins

- Producers in these bays encouraged to consider engaging in seed production only – selling seed on for further growing to producers in ‘low biotoxin’ incidence bays
- Producers encouraged/assisted in developing partnerships to supply seed to the bottom mussel sector – the economics of this model should be examined.
- Consideration given to accommodating/encouraging exit of producers located in selected high incidence bays. This might include support for engaging in the production of shellfish less prone to biotoxins e.g. oysters.
- Bays critically assessed in terms of any new licence applications.

Recommendation 1.3

Significant consideration should be given to providing financial support to producers in compensation for the temporary suspension of harvesting as described in the draft EFF guidelines.

Under Priority Axis 2 of the European Fisheries Fund guidelines, a provision is made to allow compensation to shellfish producers impacted by the temporary suspension of harvesting, as a result of the proliferation of toxin-producing plankton. When there is clarity around the overall funding available to Ireland for the future development of the Irish seafood industry under the next National Development Plan, significant consideration should be given to the merits of allocating funding to compensate growers that are temporarily impacted by a suspension of harvesting due to biotoxins¹². This usage/purpose of this funding should be clearly defined/focused on re-investment into the producer’s mussel growing operation.

¹² The exact prompts which would trigger the funding, in terms of duration of bay closures and severity of financial impact as a result of the biotoxin occurrence, are set-out in the EFF guidelines.

Any decision in this regard, however, must be considered in the context of the overall size of the funds available to the Irish seafood industry and the range of investment priorities that exist. It is believed, however, that support of this nature would provide a significant safeguard to growers and would act to encourage further investment in the development of the sector at producer level.

Recommendation 1.4

A levy-based insurance fund should be established to compensate producers and processors for post-processing biotoxin test failures.

In addition to the various biotoxin tests that take place before harvesting, responding to their customer requirements, processors also test their products for biotoxins post-processing. Although confined to a relatively small tonnage of product in overall terms, occasionally batches of product can fail this post-processing biotoxin test, resulting in products that can not be sold. Currently, producers are not paid for the mussels supplied for this product and the processors incur the loss associated with the processing activity. Such an occurrence can have a significant financial impact, particularly for producers.

As a means of addressing this issue/reducing the financial impact, it is recommended that:

- Funded through a levy on all mussels sold for processing, an insurance fund should be established to compensate producers and processors for some of the cost incurred in supplying/processing mussels that fail a biotoxin test post- processing

- This fund should be used to compensate growers at a rate of 75% of the net sale value of the mussels that fail the post-processing biotoxin test. Processors should be compensated at a rate of 75% of the cost of processing the tonnage of product in question. The overall compensation amount available should be capped at a level equivalent to the average of the total tonnage destroyed as a result of post-processing biotoxin test failure, calculated on a rolling annual basis over the previous three years.

A variety of reasons exist why mussels harvested from an 'open bay' could potentially fail a post-processing biotoxin test. This failure may not in any way imply a breakdown of the normal testing procedure. Nevertheless, in order to attempt to reduce the potential for such an occurrence, the Marine Institute should consider working with processors to understand why individual post-processing biotoxin test failures might have occurred.

Recommendation 1.5

Ireland's biotoxin regime should be leveraged to a greater extent to support marketing campaigns/activities.

The safety of Irish mussels, in terms of the absence of biotoxins is a key selling point, particularly in the main export markets. The rigour of the regime operating in Ireland to control/monitor biotoxins should, therefore, be leveraged to the fullest possible extent within the market place. In this regard, when engaging with buyers/key influencers, BIM (and individual exporters) should, as appropriate, seek to engage the Marine Institute to ensure that the robustness of the Irish biotoxin regime is fully appreciated in the market.

Recommendation 1.6

Through enhanced communications and further engagement with the industry, all involved in the control and monitoring of biotoxins need to continue to clearly demonstrate an appreciation for the commercial hardships associated with the issue of biotoxins and to be seen to work with the industry to identify resolutions to the issue of biotoxins.

It is therefore recommended that all those involved in controlling/monitoring of biotoxins review their efforts to engage with the industry. In particular, it is important that the industry regulators continue to demonstrate a commercial awareness in their administration of the biotoxin regulatory regime, essentially by working to eliminate the perception that the regulators are considered to be more anxious to close bays down rather than to work with producers/processors to keep bays open.

As outlined in the introduction to this Section of the Review, all of the stakeholders in the rope mussel industry have the same objective in mind with respect to the issue of biotoxins, i.e. to ensure that mussels harvested from Irish waters meet all obligatory food safety requirements; to ensure that consumers are not exposed to identified food safety related risk and ultimately to protect the image of the Irish mussel industry. Nevertheless, the pursuit of this goal can bring the industry into conflict with its regulators, who on occasion are accused of being overly robust/strict in their interpretation of the relevant regulations, by closing down bays unnecessarily, putting Irish growers at a disadvantage to their EU competitors and not fully appreciating the commercial implications of the biotoxin regime that they administer.

Regardless of the validity of these claims, (which more often than not are as a consequence of the biotoxin phenomenon itself rather than the regulators/regulatory regime) the negative atmosphere engendered by these claims can be damaging to both the regulators relationship with the industry and to the industry itself.

Core Theme 2: Issues relating to licensing

Undertake a study of the carrying capacity of each bay and ensure that grower's licences reflect the outcome of this survey; reduce the bureaucracy associated with the licensing system and define reasonable response timeframes for applications; pre-define areas suitable for mussel production; increase the focus on applicants' business plans/experience in evaluating licence applications; enforce the 'use it or lose it rule' with respect to licences and issue licences on a scale that reflects the potential to establish an economically viable enterprise.

Introduction

Responding to the issues raised by the industry stakeholders who inputted into this Review and reflecting on the outcome of the industry profitability analysis (particularly at producer level), the following set of recommendations are focused on addressing a number of the key issues related to licensing.

Recommendation 2.1

A study of the carrying capacity of each bay should be completed resulting from which (within a set timeframe) the relevant authorities should engage with mussel producers to ensure that their licences reflect the outcome of this survey. All new licences should conform to the outcome of this study.

It is evident from the information provided for this Review that in individual bays, overcrowding has contributed to the significant decline in mussel growth rates and a reduction in mussel quality. This has had a consequent negative impact on the profitability of individual enterprises. Ironically, some of the early investors in this sector have been worse hit by this issue, due to the location of their enterprise within the bays in question.

By way of addressing this issue, and also as a means of ensuring that this issue does not arise in respect to issuing future licences, it is recommended that a study of the carrying capacity of individual bays should be undertaken¹³. Following from this study, all existing licences should be reviewed to ensure that they reflect the outcome of the study¹⁴ – in terms of the overall number of licences/size of the licensed area within a given bay and the stocking density used by individual licence holders.

On a local basis, working groups should be established with the objective of achieving a voluntary conformity to the defined stocking densities – as defined by the carrying capacity study. Chaired by BIM, these groups should be given a set time frame (12 months) to reach agreement on this issue. Failure to reach a voluntary agreement should result in the DoCMNR imposing a solution based on the outcome of the study of carrying capacity in each bay.

Following the completion of this exercise, the DoCMNR should ensure that all licensed areas are strictly policed and that corrective action is taken where transgressions are identified.

Given the importance of this issue to the industry, funding should be made available to the existing State bodies (MI & BIM) to undertake this exercise irrespective of the outcome of the NDP funding application. In addition, the Co-ordinate Local Aquaculture Management Systems (CLAMS) should be leverage to assist in arriving at local agreements.

Recommendation 2.2

All licence applications should be processed within a reasonable and defined timeframe and should be considered in a fashion that demonstrates commercial awareness/ minimises bureaucracy. Pre-defining areas (based on carrying capacity) suitable for mussel production should be used to assist this process.

In making this recommendation it has to be recognised that significant legislative obligations (both Irish and EU) require the regulatory authorities to follow a defined approach when it comes to considering applications for licences. Due process must also be followed in order to allow any interested parties have their views considered with respect to an individual licence application.

Whilst keeping the above in mind, the DoCMNR should set out a clearly defined timetable under which licence applications will be processed. Operating to what would be regarded as a reasonable timeframe, the application processes should be streamlined to minimise bureaucracy and to demonstrate an awareness of the commercial pressures impacting the sector. In this regard, the DoCMNR should continue to seek the input of BIM into the licensing application process as appropriate – particularly in relation to providing views on issues such as stocking density, suitability of a particular location for mussel growing and evaluating the capacity of the applicant to deliver on business plans etc.

As a mechanism to assist with increasing the efficiency of the licensing process, consideration should be given to pre-defining areas suitable for mussel production within all relevant areas in the context of ICZM. The Co-ordinated Local Aquaculture Management System (CLAMS) approach should be utilised in this context along with the output of the carrying capacity study. In this context it is important to note that where the CLAMS model is employed it should be resourced to ensure agreements reached are implemented/monitored.

Recommendation 2.3

Increased focus should be given to an applicant's business plan/industry experience when considering licensing applications.

¹³ At the time of writing this Review, BIM were engaged in a scoping exercise focused on evaluating the carrying capacity of individual bays. The MI has also been in correspondence with BIM on this issue.

¹⁴ It is noted that calculating carrying capacity is a difficult and complex process which will require significant input time by all involved.

Given that a licence to grow rope mussels is permit to utilise a State owned asset, it is important that this asset is put to the optimum use. It is evident from this Review that the utilisation of this asset can vary considerably between individual growers – with a significant variation in the skill set/ability to produce mussels between individual growers apparent. Increased emphasis therefore should be placed on reviewing the business plans of individuals who apply for licences.

In addition, greater consideration should be given to the industry experience/training of individual applicants. Failure to demonstrate a reasonable competence (i.e. relevant industry experience/training) or the absence of a robust business plan should significantly reduce the potential for an individual to obtain a mussel growing licence. It is important to note that regardless of a producer's intention to engage in mussel growing on a part-time or a full-time basis, the enterprise itself should have a commercial focus and be operated along sound business lines.

Recommendation 2.4

The 'use it or lose it' licence rule should be strictly enforced and development support/advice should be given to licence holders failing to achieve a set minimum level of output.

All license holders who fail to utilise their licence within a reasonable timeframe should have their licence revoked/made available to the industry as appropriate – except in the case of predefined exceptionable circumstances. Furthermore, licence holders who fail to achieve a minimum level of output within their licensed area should be identified and offered support/advice to assist them in reaching industry average output levels.

Recommendation 2.5

Licences should be issued on a scale that reflects the potential to establish an economically viable enterprise.

In order to ensure the long-term development of the Irish rope mussel industry, it will be important that a strong, commercially-focused and profitable production base is established. Establishing such a production base has implications for licensing policy.

Nevertheless, when considering the appropriate scale of licence that should be issued, there is also a need to be cognisant of the important contribution that small-scale and part-time producers make to this industry, along with the important role that rope mussel production on a part-time basis plays in supporting incomes in coastal areas. In addition, there is also a need to be mindful of the contribution that existing producers have made to the establishment of the current industry.

Responding to all of these issues, a twin-track approach should be taken to licensing in the future. In the first instance, preferential consideration should be given to existing producers attempting to upscale their enterprises in order to maintain/improve their economic viability. Alongside this category of producer, the licensing system should facilitate and encourage entities (either existing licence holders or new entrants) wishing to establish large-scale commercial enterprises – particularly in less sensitive growing areas.

Core Theme 3: Processor/ producer relations

Processors should engage with producers on the long-term aim of establishing supply partnerships; processors and producers to work together to plan for the production and harvesting of mussels. Guided by BIM, processors and producers should jointly focus on reducing reject rates and an independent mechanism to monitor reject rates should be established.

Introduction

In order to ensure the future development of the industry it is vital that every effort is made to improve the relationship that exists between processors and producers. It is in that context that the recommendations set out on the following pages are presented.

Recommendation 3.1

Processors should make a concerted effort to engage with producers with the long-term objective of establishing processor/producer partnership arrangements.

In an ideal scenario, each mussel processor would have associated with them a committed core group of suppliers with whom they would enter into a contract arrangement for the supply of raw material – based on an agreed, market responsive and transparent pricing arrangement. Producers would agree to commit a substantial proportion of their output to their partner processor under this arrangement, with the balance of their output available for offer to the market. This contract arrangement would be reviewed on an annual basis, well in advance of the harvesting period, and any contract adjustments would be made on an agreed basis.

Whilst a version of the above scenario should be considered as a long-term target position, it is evident that the industry has not yet evolved to a position where it would accommodate such a recommendation. In the interim, processors should engage in substantial dialogue with producers on a regular and planned basis, with the objective of establishing a greater level of trust between both parties.

Producers for their part should respond by seeking to engage with processors. In particular, producers should take the time to understand the challenges facing the processing sector and in particular to gain a greater appreciation for the dynamics of the end market for mussels – and should jointly explore with processors how their activities could positively influence/support the activities of processors in the market

Recommendation 3.2

Processors should work with producers in a joint effort to plan production and harvesting periods.

One of the key features of the Irish rope mussel industry is concentration of the harvesting period around a relatively short timeframe and the consequent peak in supply of raw material to the processing sector. This feature is a product of two key factors (a) the life cycle of the mussels themselves and (b) the forced concentration of harvesting due to the presence or threat of biotoxins.

This concentration has a significant negative impact on the financial performance of the sector – leading to a need for significant storage space; increased demand for seasonal labour supply (increasingly difficult to secure); a lack of efficient usage of expensive harvesting equipment; a difficult sales/marketing environment and difficulties in managing cash flow. Furthermore, concentration of harvesting into a narrow timeframe can lead to tensions within the industry.

As a starting point to addressing this issue, processors should initially work with a small group of producers in an attempt to plan their production/harvesting cycle, and focus on identifying ways to stagger their production/harvesting timeframe.

Processors/producers should seek to engage the technical expertise/advice of BIM in this exercise. This approach may require processors to develop an imaginative pricing mechanism to compensate producers for any loss in yield/lower yields for producing outside the traditional timeframe.

Recommendation 3.3

Under the guidance of BIM, processors and producers should jointly focus on reducing reject rates to a set target.

The issue of reject/reject rates¹⁵ is extremely contentious within the rope mussel industry. This issue is the cause of significant tension and mistrust between producers and processors. During this Review a significant volume of evidence was presented by both producers and processors to support their relative positions/views with respect to rejects. Whilst this Review does not attempt to comment on the validity of claims/counter claims on the issue of rejects/reject rates, it is evident from the consultations undertaken that:

- The overall level of rejected product occurring within the sector is excessively high and represents a significant financial loss to producers/processors and a growing cost to the processing sector (in terms of disposal costs and impact on the processing operation)
- The systems/approach used to determine and communicate the level of rejected product is not sufficiently transparent
- Currently, the level of financial risk associated with this issue is balanced in favour of the processing sector. Furthermore, at present there is insufficient direct incentive/motivation for processors as a group to invest in addressing this issue

¹⁵ Mussels which are supplied by producers but are deemed unsuitable for use by processors, due to a range of reasons including the small size of the mussel, shell cracking, product fouling etc. Rejected product, which can account for anywhere between 10% and 24% of the total quantity of mussels supplied by a producer, are disposed of by processors with the producers not receiving payment for the disposed/reject product.

- The different policies/approaches taken by individual processors with respect to determining reject rates is leading to significant confusion at producer level
- Producers do not have a sufficiently informed understanding/appreciation of the impact of high rates of rejected product on the operation of the processing sector
- For the most part, processors have not engaged sufficiently with producers on this issue nor have all producers responded appropriately where such invitations to engage on this topic have been issued
- In the main, the attention to detail by producers during the mussel growing and harvesting process is not sufficiently focused to achieve an optimum (low) level of rejected mussels
- Likewise, not all processors are sufficiently focused on ensuring that the rate of rejected mussels caused by improper product transport, handling, storage and processing is kept to a minimum
- Shortcomings in the licensing regime, resulting in overcrowding in certain bays, along with the challenges presented by biotoxins (as described under Core Theme 1 and Core Theme 2) are contributing to high reject rates
- The practice used where reject rates are 'negotiated' as part of the buying process, rather than determined by factual analysis, does not assist the process of reducing the rate of rejects. (See Recommendations under Core Them 6.)

Given the high rate level of reject rates reported, a significant financial incentive exists for producers to work towards addressing this issue. Likewise for processors, given that the disposal of rejected product represents a significant (and increasing) cost and also the fact that high reject rates impact negatively on the processing operation, a strong case exists for working to reduce reject rates. In addition, progress in this area would have a significant positive impact on processor/producer relations.

Therefore, under the guidance of BIM, producers and processors should actively and energetically work together with the objective of reducing reject rates to a set target. This initiative should include:

- BIM & Enterprise Ireland working with processors to develop a code of best practice for handling product post collection from producers through to storage and processing (including the correct usage/setting of processing equipment and staff training)
- Processors working jointly with producers and BIM to develop a transparent mechanism for tracking and reporting reject rates – at each stage of processing. The key issue in this context is the issue of 'transparency'
- Processors on an annual basis publishing the rate of rejected product for their factory and providing details of the number of suppliers/quantity of product falling under a range of reject bands
- Processors clearly informing producers of their individual product specification requirements, which might vary between processors or for the same processors there might be a different raw material specification requirement, depending on the end market for the product. This development would provide producers with an opportunity to evaluate their product suitability for a particular processor. It might also feed into a raw material pricing grid (See Recommendations under Core Theme 6 – Buying Arrangements.)
- BIM working with producers to develop a code of best-practice for the production, harvesting and landing of mussels on the quay wall – focused on minimising the potential rate of product rejection
- The training of producers on product sampling and reject rate calculations (See recommendations under Core Them 6 – Buying Arrangements), and

- Producers visiting processing facilities to develop and inform understanding of the raw material specification/product requirements of processors

Recommendation 3.4

Focused solely on improving the industry's overall performance in this area on an interim basis, an independent mechanism to monitor reject rates should be established.

The successful implementation of Recommendation 3.3 above should result in the industry arriving at an acceptable level of rejected product. In addition, the implementation of this recommendation should significantly enhance producer/processor relationships and trust. In the interim, however, an independent mechanism should be established to monitor the rate of rejected mussels occurring at each of the processing facilities – focused less on enforcement/policing and more on the identification of shortcomings/areas for improvement.

Under this recommendation it is envisaged that working on an unannounced spot check basis, an independent arbitrator would visit processing facilities, identify supplies from individual producers and evaluate the level of rejected product arising from the processing operation and report the findings to both the producer and processor. Where reject rates exceed a defined target, the independent monitor would request BIM to work with either the producer or processor to identify and address the underlying reason. This independent arbitrator would also be responsible for monitoring the implementation of the BIM buying protocol (See Recommendation 6.2.)

Core Theme 4: Producer/ producer relations

At producer level, the industry representative organisation should work to establish producer discussion groups. An industry newsletter should be circulated to all producers.

Introduction

As indicated in Section 3, significant scope exists to increase the level of dialogue and information sharing between producers – particularly as this relates to the technical aspects of production including experiences of new production techniques, improving yields, harvesting equipment, ways to improve output quality etc. It is in this context that the following recommendations are set-out.

Recommendation 4.1

The industry representative organisation should take in a lead in establishing producer discussion groups.

The industry representative organisation should take a lead in establishing producer groups and should leverage the experience/expertise of BIM in this regard. Potentially, these discussion groups could be based in each of the major production areas¹⁶ with the members meeting on three to four occasions each year. Ideally, group meetings would rotate around the farms of the group members with the dialogue prompted by a group facilitator. Group members would be encouraged to share information and experience on all aspects of their enterprises, including their technical and financial performance. [Group members would also meet at and leverage the experience derived from demonstration farms (see Recommendations under Core Theme 7).

¹⁶ In the short-term, it may be desirable to encourage groups with members from different bays throughout the country to overcome some local difficulties associated with licensing.

Recommendation 4.2

An industry newsletter should be re-established and circulated to all producers and processors.

As a further means of enhancing the level of dialogue and information sharing throughout the industry, the previously existing industry newsletter should be re-established and circulated to both producers and processors. In addition to covering issues of a local/topical interest, occasionally it could provide information on:

- Latest developments in production and harvesting techniques
- Market trends and developments, and
- Relevant regulatory developments

Core Theme 5: Processor/ processor relations

An enhancement in the co-operation on the approach to markets by processors on key export markets should occur with BIM supporting/overseeing co-operative promotional/marketing programmes in these markets. A group comprising representatives from each of the processors and the producer representative organisation should be tasked with identifying productive uses for rejected mussels.

Introduction

It is considered critical that a concerted effort should be made by processors to work together in terms of approaching key markets and also in addressing other key industry development obstacles. This view forms the background the following recommendations:

Recommendation 5.1

An enhancement in co-operation in the approach to markets between processors on key export markets should occur with BIM overseeing co-operative promotional/marketing programmes in key markets.

In overall terms, the Irish rope mussel industry is relatively small, particularly when compared to the scale of the key retail and foodservice buyers, and it lacks clout in terms of processing scale. Furthermore, the industry is facing a substantial and growing threat from low-cost producers, most notably Chile. On key export markets, therefore, processors should make a concerted effort to work in a co-operative fashion as a means of increasing their bargaining power with key buyers and to avoid under-cutting each other in price negotiations. In response, BIM should support and oversee co-operative promotional/marketing programmes in key markets.

Recommendation 5.2

A working group comprising representatives from all of the processors and the producer representative organisation should be established to investigate the potential to productively utilise rejected products.

Whilst the overall objective of the industry should be to minimise the level of rejected products, inevitably some level of rejected product will remain. Whilst the scale of rejected product at the level of an individual processor may not justify a 'product solution', this may not be the case at industry level. A group comprising representatives from each of the processors and the producer representative organisation, including input from both BIM and the MI should be established and tasked with identifying a productive use for rejected product.

Core Theme 6: Buying arrangements

BIM's buying protocol to operate between processors and producers should be implemented on an interim basis. An independent monitor should be appointed to monitor the implementation of the buying protocol and a Mussel Pricing Grid should be established for the purchase of mussels – focused on rewarding the production of high quality mussels.

Introduction

Since this Review commenced and in recognition of its importance, BIM has engaged in a project to establish an agreed process/mechanism for the purchase of mussels. The recommendations set out on the following pages draw on the work completed to-date by BIM in this area and supports the agency's ongoing efforts in this context.

Recommendation 6.1

BIM's buying protocol to operate between producers and processors should be implemented.

With respect to the process/arrangements used by processors to purchase mussels from growers in countries outside of Ireland, a number of different arrangements are employed, ranging from:

On the pier purchases from individual growers, with product sampling and price agreements occurring in situ and monitored by an independent third party

The establishment of producer groups who agree pricing terms with processors on a collective basis on behalf of all group members

In theory it would be possible for the Irish industry to adopt either of these models. Nevertheless, the current lack of scale of the industry at producer and processor level, geographic distribution of production areas and the current lack of a strong co-operative approach at producer level would render it difficult to achieve success with either of the above approaches.

Conscious of the significance of this issue, BIM has been working to develop a buying protocol¹⁷ over the past months, which would operate between processors and producers. This protocol takes account of the current stage of development of the Irish rope mussel industry.

This protocol envisages producers self-sampling their product on the quay, documenting the results in a standardised format and providing a duplicate of the results to the processors collecting agent. Under BIM's protocol, on arrival at the processing plant the processor would complete a similar sampling exercise and retain the sample for later inspection/confirmation of results if required. The results of the processors sampling, which determines payment, would be made available to the producer within a defined timeframe, thus allowing the producer to cross-check this result against his/her own records.

BIM buying protocol should be rolled out on an industry-wide basis, supported by the provision of the requisite training for both producers and processors. The impact of this protocol should be reviewed following a suitable period of operation and alterations made as appropriate.

Recommendation 6.2

On an interim basis, an independent arbitrator/referee should be appointed to monitor the operation of the buying protocol.

As a means of enhancing the level of trust between producers and processors and to ensure a high degree of support for the operation of the buying protocol, an independent arbitrator/referee should be appointed to oversee the workings of the new buying arrangements. (See Recommendation 3.4)

Recommendation 6.3

A pricing grid should be established for the purchase of mussels – focused on rewarding the production of high quality mussels.

Currently the key factor determining the price paid to producers for mussel relates to the availability of supplies at a particular point in time – often heavily influenced by the presence or absence of biotoxins in a particular bay. More often than not, the characteristics that determine the quality of the mussel are totally disregarded in the current pricing arrangements and the reject rate is often the subject of negotiation rather than factual analysis.

Given that the long-term development of the Irish mussel industry will be determined by the ability of the industry to supply high-quality product offerings, it is critical that the appropriate incentives are put in place to encourage and reward producers for the production of high-quality mussels. In this context, both producers and processors should work together to develop a 'Mussel Pricing Grid' which would focus on rewarding producers for the production of high-quality mussels. Quality in this context would be defined in terms of mussel size, meat content, fouling, shell cracking etc. with variations in the standard price occurring for mussels, depending on where the mussels were placed on the Mussel Pricing Grid.

Whilst the same grid definitions should be adopted on a national basis, the actual price paid for achieving a particular grade on the grid should be independently determined by each individual processor – to reflect their individual mix of markets, products and processing capability. Each processor should make their individual pricing grid freely available to the industry, with workings of the grid/volume of product falling into each grade made available for inspection/verification by the independent monitor (as per Recommendation 6.2).

¹⁷ The development of the BIM protocol is an ongoing exercise and when complete will cover a wide range of areas only some of which are highlighted under this Recommendation.

Core Theme 7: Production efficiency

Demonstration farms should be established, focussed on displaying best-in-class production techniques; a standardised Profit Monitor tool should be made available to growers with individual performances benchmarked against the industry average performance; the removal of labour should be the key focus of any new production technology and producers should explore the merits of group purchasing for selected inputs along with the sharing of harvesting equipment.

Introduction

Based on the consultations undertaken for this Review, it is evident that significant scope exists to increase profitability at production level. Much of this potential is within the control of individual growers and will be delivered through the employment of appropriate technology, upskilling of management practices and through the measurement and control of costs – all areas that the recommendations set out below focus on.

Recommendation 7.1

Demonstration farms should be established where best-in-class production techniques will be employed and the results made available to all mussel growers.

Located in each of the main production regions, a small number of mussel growing demonstration farms should be established. Selected from among the current leading producers, operators of these farms should be encouraged to utilise best-in-class production techniques – focused on maximising profitability per hectare. Supported by BIM and working in close partnership with their local processor, these farms should be used as reference points for growers to benchmark their own performance against and to gain an understanding of various production/management techniques. Essentially these farms would be along the same principles/model as used by Teagasc in the dairy and beef sectors.

The operators of these farms should work in partnership with BIM and their local processor to define the ideal carrying capacity of their farm in order to produce the optimum quality mussel – in terms of growth rates, mussel size, meat content, etc. The results of this initiative should be made available to the industry.

Over time, consideration could be given to rotating the demonstration farms around a number of growers in a given area, in order to provide an opportunity for a number of producers with the potential/desire to operate their units as demonstration farms to become involved in this initiative.

Recommendation 7.2

A standardised profit monitor tool should be developed and made available to all mussel growers. Leveraging this tool, growers should be facilitated in benchmarking their performance against best-in-class operators.

A user friendly tool/template should be developed, which would allow growers to capture critical production and financial data related to their enterprise in a standardised fashion. Producers should be encouraged to compare their own results with the published results of demonstration farms. Producers should also consider providing this information to BIM with the objective of obtaining data on their performance compared to the industry average performance within their scale cohort. Producers should be encouraged to share the results from the Profit Monitor in discussion groups.

Recommendation 7.3

In the adoption of technology at production level, the removal of labour should be a key industry focus.

The availability and cost of labour are among the key factors that will determine the level of output and profit to be derived from existing mussel producers. Many of the existing players have limited their production ambitions to reflect the current supply of labour – with most unwilling to exceed an output level that will require any additional labour above the current one-man operation level - with perhaps occasional part-time employees.

In that context, ongoing focus should be given to the adoption of production and harvesting techniques that minimise the requirement for labour – such as the continuous rope system.

Recommendation 7.4

Producers should explore the merits of group purchasing of selected inputs and, for selected growers, sharing of harvesting equipment.

Facilitated by their representative organisation, or indeed a partner processor, producers should explore the merits of group purchasing for selected inputs such as insurance, fuel, ropes, etc. In addition, particularly for small-scale processors, the planned sharing of harvesting equipment should be further explored.

Although biotoxins, by reducing the time available for harvesting, tend to act against the sharing of harvesting equipment, nevertheless this concept deserves further consideration on a local level – indeed the sharing of equipment capable of rapid harvesting/operating on 24-hour basis could warrant consideration in certain bays.

Core Theme 8: Processing efficiency

With the support of EI and BIM, processors need to adopt a range of strategies to enhance the efficiency of their processing activities – including outsourcing/sharing of processing activities. Processors may also need to consider the establishment of strategic alliances/joint ventures. Increased planning with producers around production/harvesting and joint purchasing of selected consumables should occur.

Introduction

Based on the consultations undertaken for this Review at processor level, and from the analysis of both manufacturing cost and profitability, it is evident that a pressing need exists to focus on increasing processing efficiency. It is in this context that the recommendations set out on the following pages are presented.

Recommendation 8.1

Supported by EI and BIM, processors need to adopt a range of strategies to enhance the efficiency of their processing activities – including the outsourcing/sharing of processing activities; establishment of strategic alliances/joint ventures and increased planning with producers around production/harvesting.

The future success of the Irish rope mussel industry is critically reliant on the existence of a strong, profitable and market-focused rope mussel processing sector. In this context, it is paramount that processors are operating at maximum efficiency. Based on the consultations undertaken for this Review, however, it is apparent that not all processors are achieving maximum efficiency within their respective operations. There a number of factors that are contributing to this lack of efficiency, including:

- Underutilisation of processing capacity due to the lack of supply of mussels for processing
- Absence of significant processing scale/range of small volume of product lines
- Highly seasonal nature of rope mussel processing – not helped by the prevalence of biotoxins
- Absence of planning between producers/processors

Going forward, therefore, it will be important that processors focus on improving their overall level of efficiency. In this context, processors should:

- Explore the potential of entering into an agreement to outsource/share processing activities. This envisages selected processors processing mussels on contract for a third party/specialising in certain processing activities. In this context, improving the utilisation of processing capacity within the sector is considered an important industry goal
- Work in partnership with suppliers to plan production and harvesting periods (see Recommendation 3.2), and
- Explore the potential for group purchasing of selected consumables

Furthermore, it is paramount that each individual processor should examine in detail the efficiency of their individual operations – with the objective of improving overall efficiency. This is an area where EI should provide assistance/guidance to processors.

In addition, individual processors need to consider various strategies to enhance their own production efficiencies and to increase their capacity utilisation. This might include increasing the breadth of products processed so as to avoid the potential exposure associated with a single product/product type operation. It has also to be recognised that individual processors may seek to expand their operations outside of Ireland as a means of securing supplies or to service selected markets. Indeed, in other sectors of the food processing industry

this approach has proved an important development strategy. The focus of this Review, however, is not concerned with making recommendations for individual operators, although the legitimacy of such a strategy is recognised. From the perspective of the Irish rope mussel industry, however, should such a development arise it is paramount that every effort is made to ensure that:

- Product processed/sourced from such arrangements does not displace/compete with product of an Irish origin
- Product sourced from such arrangements is clearly differentiated from Irish sourced product in the market place and in no way negatively impacts the integrity/image of Irish mussels
- A transparent approach to any sales/marketing effort (and the approach to its support) is employed.

In essence, processors who decide to pursue such a strategy should clearly recognise the vital importance of a strong and profitable Irish supply base to the long-term development of their Irish based operations. In that context, if processors decide to engage in arrangements outside of Ireland, care should be taken to ensure that their actions do not negatively impact Irish producers. Indeed, failing to take such steps would be short-sighted in the extreme and would counteract much of the positive development/support effort that this sector has benefited from over the years. However, at the same time it has to be recognised that a strong, profitable and competitive processing sector is also vital to the success of the Irish rope mussel industry. Delivering such a processing sector will require the employment of a range of strategies among which may include greater internationalisation of processing activities.

Core Theme 9: Improving quality

BIM should work with the industry to assist with eliminating the obstacles limiting the uptake of the IQM scheme; ongoing promotion of this quality scheme should continue with the objective of achieving a majority of mussel growers/processors operating under the IQM scheme within a two-year period and BIM should engage with producers and processors with the objective of increasing mussel size.

Introduction

In the belief that the pursuit of quality is essential for the future development of the Irish mussel industry, and in the belief that there is a real need to ensure that Irish mussels are recognised and differentiated in the market place on quality grounds, the recommendations set out below focus on establishing and delivering on the IQM initiative.

Recommendation 9.1

BIM should work with the industry to assist in eliminating the obstacles limiting the uptake of the IQM scheme. Ongoing promotion of the scheme should continue with the objective of achieving a majority of mussel growers operating under the IQM scheme within a two-year period.

- As outlined above, there are a number of obstacles limiting the uptake to the IQM scheme. In order for the scheme to have a measurable impact however, it requires a critical mass of participants. BIM therefore should work with the industry to address the identified obstacles preventing participation. This will include BIM engaging with the industry to:
- Address the issues related to growing mussels, which prevent producers from participating in the scheme (see Recommendation 2.1), and
- Work with processors to develop a pricing mechanism that rewards/incentives producers to focus on the production of high quality mussels¹⁸ (see Recommendations 6.1 and 6.3).

In addition, BIM should seek to work in partnership with mussel processors to promote the uptake of the IQM scheme on a local basis. Furthermore, the IQM scheme should be a key feature of the operation of the various demonstration farms – as described under Recommendation 7.1.

In addition to the above, BIM and EI should assist/facilitate the industry in engaging with the relevant authorities to address the issue of poor/inadequate infrastructure (related to the pier/landing infrastructure) which negatively impacts the development of the sector and has a consequence for product quality.

¹⁸ In this context, in assisting producers improve mussel quality BIM should work to ensure that Irish growers are capable of meeting recent French legislative requirements on mussel size.

Core Theme 10: Improving quality

BIM and EI should work with the industry to identify and capitalise on any prevailing market opportunities. Future marketing strategies should focus on differentiating Irish product within the market place and develop recognition for Irish product within the market. Significant increased focus/support should be given to new product development/innovation, and support for marketing activities should focus on a small number of key markets and should be prioritised towards achieving a cooperative approach by processors.

Introduction

The Irish mussel industry is selling into a market place that is rapidly evolving. Based on the feedback from the VoC interview programme and from consultation with key informants in the Irish market, it is evident that within the market place a range of new dynamics are becoming established. These include:

- Buyers and consumers who are much more discerning in terms of mussel quality and food safety standards. Buyers constantly require the highest level of assurance that the products which they purchase are of a high quality and that product safety can be assured at all times
- Product quality and safety guarantees are increasingly becoming prerequisites to trade, as opposed to competitive advantages
- Ongoing new product development and innovation ability is increasingly a concern of both retail and foodservice buyers. Buyers are responding to changing lifestyles, reflected in a decline in the time available for food preparation and are demanding increased emphasis on the supply of convenience products/meal solutions

- The market place is becoming ever more competitive as countries such as Chile, New Zealand, Greece and Turkey increasingly compete with Irish suppliers on a range of key export markets. Chile in particular, given its potential as a low-cost supplier, poses a significant threat to Irish exporters
- Ability to respond to buyer demands, in terms of supplying the required volume of product within a defined timeframe, is an increasingly important selection criterion for retail and foodservice buyers
- In a crowded and competitive market place, product/supplier differentiation is an increasingly difficult task.
- Facilitating Irish processors to work together to leverage their collective strength in order to achieve an enhanced market performance, and
- Encouraging the industry to work together in a cooperative fashion to promote a positive image of the Irish mussel industry

Against this background, suppliers of Irish mussels are coming under increasing pressure – a position not assisted by growing commoditisation of mussels within the market, with price a key buying consideration. In this environment, Irish suppliers suffering from a lack of scale and a relatively high cost production base are at a significant disadvantage. This position is further compounded in some markets by Irish suppliers competing with each other for selected customers, and in the process managing to place additional downward pressure on the price they receive.

In this context, the recommendations set out on the following pages focus on improving the marketing performance of the rope mussel industry. Essentially these recommendations focus on assisting the industry achieve four key objectives:

- The differentiation of Irish mussels within the market place
- Moving the Irish product offering up the value chain and out of what is increasingly becoming a commodity product market

It should be noted, however, that the recommendations set out on the following pages must be considered in the context of the industry working in a focused fashion to significantly improve its supply chain efficiency at both production and processing level. Given the current and anticipated future market dynamics, regardless of the resources employed to develop new products; to differentiate Irish products within the market place or to build strong customer relationships, all of these efforts will ultimately fail if they are not supported by an efficient supply chain – particularly at processing level.

Recommendation 10.1

On an ongoing basis, BIM and EI should work to assist the industry to identify and capitalise on any prevailing market place opportunities.

Based on the market analysis undertaken for this Review, and in particular the VoC interview programme, it is evident that Irish mussel exporters are selling into an extremely challenging market. Identifying heretofore unexplored market opportunities that might offer significant scope to increase sales and enhance the sectors profitability is by no means an easy task. Nevertheless, supported by both BIM and EI, there is need for the industry on an ongoing basis to seek new opportunities – both within traditional markets (notably in the UK, France, Italy and Germany) and in new markets that might provide niche opportunities (e.g. Japan and Russia).

In seeking to identify new market opportunities there is a need to focus on those markets where we can play to our competitive advantage – which might be in terms of definable unique characteristics of the Irish product offering or potentially due to proximity to the market place lending an advantage with respect to a particular product format. Competitive advantage could also be in areas where the Irish industry can achieve a technology advantage (in terms of packaging or processing technology) or with respect to a unique value-added offering. In this context, the potential of the live/fresh sector, despite its size (which may be underestimate in the official data) should be further explored – see paragraph below on live mussel opportunities.

As outlined earlier, success in the market must be underpinned by an efficient supply chain – particularly at processing level. Given the scale of even or largest supplier, competing on price/efficiency alone is not a long-term sustainable strategy for the Irish rope mussel industry.

In this context, consideration should be given to exploring the opportunities that might exist in the following areas:

Live Mussels:

Whilst currently live mussels only account for a small proportion of overall exports from Ireland, they nevertheless represent a significant niche market opportunity. In addition, given the nature of this product, it is not subject to competition from suppliers based in low-cost production regions – due to the shelf life sensitivities. This market (despite its current scale), therefore, should be further explored – and the need for supporting infrastructure, or indeed the potential to work towards achieving the appropriate classification of bays, should be considered further.

Within the fresh mussel category a further market opportunity that warrants consideration/further research relates to the use of modified atmospheric packaging (MAP) as a mechanism to deliver product to the market. Whilst there is some debate within the industry as to the potential of this form of packaging/product to deliver significant opportunities, the evidence would suggest that the concept deserves to be explored further. In this regard, should it be proven that the MAP technology is capable of providing the requisite shelf-life advantage, and that it can be supported by an appropriate distribution chain, then consideration should be given to providing support for the establishment of this technology in such a fashion that its use could be leveraged in an efficient fashion by the industry.

Cooked Mussels:

Based on interviews with the various buyers across the main markets for Irish mussels, a number of market opportunities were identified for cooked mussel products. [Primarily these opportunities relate to cooked frozen whole mussels IQF particularly in France and Italy with some opportunities also emerging in the UK.] Realising these market opportunities within an attractive price band however will require a focus on delivering a very high quality product offering. Opportunities were also identified in the UK for vacuum packed cooked fresh whole mussels, but with new/innovative sauce/recipe ideas required. There may also be some potential for this type of product offering on the German market.

Prepared Dishes:

Across a range of the markets where buyers were interviewed, potential opportunities were highlighted for prepared dishes that would include mussels as an ingredient. To fully capitalise on this opportunity, Irish mussel processors should explore the potential to establish joint ventures with existing providers of meal solutions – acting either as an ingredient supplier or, preferably, as a partner in a joint approach to capturing this market. In fact, a number of Irish based food companies are leading players in the provision of meal

solutions into a range of large-scale retail and foodservice customer both in the UK and on continental EU markets. Some of these companies may warrant consideration in this context. (See Recommendation 10.2)

Recommendation 10.2

Achieving recognition/differentiation within the market place; promoting/supporting innovation and establishment of a positive platform for trade should be key components of the supporting agencies marketing strategy for rope mussels.

Based on an analysis of the dynamics of the markets into which Irish rope mussels are sold, and in particular an understanding of the increasingly competitive market landscape, it is clear that support for market-related activities will need to focus on a range of strategic initiatives. Such initiatives will include:

Product Differentiation:

As outlined earlier, competing in the market place on the basis of price is not a long-term sustainable strategy for Irish rope mussel exporters. The focus needs to shift towards product differentiation and product recognition within the market place. In this context, a key component of any future marketing strategy should be to work towards differentiating Irish mussels within the market place – potentially on the grounds of:

- Quality
- Safety
- Positive environmental attributes, and
- A distinctive taste/pleasurable eating experience

In this regard whilst it is correct to focus on developing recognition for product quality and safety, it should be kept in mind that these attributes are increasingly becoming prerequisites to trade rather than a unique competitive advantage. Therefore, product taste/pleasurable eating experience along with positive environmental production/processing aspects will provide greater scope for the development of a unique selling proposition. A concerted effort, therefore, should be made to exploit and promote these attributes in any marketing strategy – with a particular focus on trade customers.

Innovation:

Ongoing market-led innovation and the commercialisation of such innovation should be a further key component in a development strategy for the industry. Innovation in this context should include:

- Innovation in terms of technology, i.e. focused on processing and/or packaging innovation, and
- Innovation in terms of new product development

In this context, the supporting organisation should focus not just on assisting the industry in the technical aspects of the innovation process but also with respect to identifying opportunities for innovation and in the commercialisation of innovation – an area that can be prone to high failure rates.

Establishing a positive platform for trade:

By focusing on promoting a positive image of Ireland as a 'source of excellence' for seafood through: attendance at international trade fairs; facilitation of communication with key buyers, and through the organisation of study trips to Ireland for key influencers, the supporting organisation play a vital role in the creation of a positive platform for trade for all seafood exporters – including rope mussel exporters. This type of activity should continue as a key component of any future marketing strategy for the rope mussel industry.

Provision of leading-edge marketing intelligence

Access to leading-edge market intelligence relating to key developments/trends within the market is vital to achieving continued success within the market place. In this context, continued provision of assistance should form a key component of any future industry support.

Recommendation 10.3

The industry should significantly increase its focus on new product and processing development/innovation – an area which should receive ongoing/increased EI and BIM support. Mussel processors should seek to work in partnership with other established convenience food processors.

Increasingly, mussel products sold by Irish suppliers are becoming commoditised – this is particularly the case for frozen vacuum packed products. A pressing need now exists for the industry to invest in market-led innovation, focussing on product, packaging and processing technology. In this area particular focus should be given to the potential to develop high-value product offerings, exportable chilled products and the creation of meal solutions using mussels as a core ingredient. Mussel processors should also explore the potential to work with other leading Irish food processors in this area – particularly those who have developed successful convenience food operations.

Given the limited funding available to support marketing activities, such support, which is provided by the State, should be focused on a few key initiatives/markets – with the impact of the marketing support kept under review. Furthermore, ongoing investment in marketing support should be conditional upon processors operating in a fashion focused on maximising the impact of this support.

Recommendation 10.5

Support for marketing-related activities should be prioritised towards ensuring an overall positive impact on industry profitability for all participants.

Ultimately, all rope mussel processors operating in the Irish market are privately-owned independent operators who are free to decide on the particular markets they want to focus on and the individual customers they want to target. Whilst arguably, given the relatively small scale of the Irish processing sector, significant benefit could be derived from a co-operative approach to key markets, decisions in this regard rest with individual processors.

Given the limited resources available to support development of the total Irish seafood industry, however, care has to be taken to ensure that all investments made by the State derive the maximum positive return. In this context, it is important that any support provided to the rope mussel industry for market-related activities has an overall positive impact on the profitability of all industry participants – including both producers and processors. The State, therefore, needs to be cognisant of the dynamics occurring in the market place between Irish processors and to ensure that any support provided is prioritised towards ensuring actions/behaviour that will result in an overall positive outcome for all industry participants.

Core Theme 11: State support agencies/ infrastructure

Ongoing but highly focused and results driven, State support for the rope mussel sector should be provided. The impact of this support should continue to be monitored on an ongoing basis.

Introduction

Over the past fifteen years the Irish rope mussel industry has benefited from significant State support. This support has taken the form of capital grants paid to both producers and processors to purchase production, harvesting and processing equipment. In addition, technical and management support/advice provided by the State, and informed by ongoing State sponsored research, has made an important contribution in the development of the sector. The rope mussel industry has also benefited from the support provided for the development of quality schemes, product development and sales and marketing-related initiatives. In addition, on an annual basis, the State makes a substantial investment (relative to the value of the industry) into control/monitoring of biotoxins, which is critical to the sector's operation.

Notwithstanding the critical development issues that have yet to be addressed, a significant and worthwhile dividend has been derived from this investment. This dividend includes the establishment of a core group of highly skilled and dedicated producers supplying a processing sector that has achieved noteworthy advances in processing technology and has managed to capture and retain some of the most demanding foodservice and retail customers across a range of international markets. In addition, utilising a natural resource, growers and processors make an important contribution to the local coastal communities in which they are located.

Future State support should therefore focus on continuing to assist in developing the sector and in particular helping the industry address the significant challenges faced by rope mussel producers and processors.

Recommendation 11.1

Ongoing, but highly focused and results driven, State support for the rope mussel sector should be provided. The impact of this support should continue to be monitored on an ongoing basis.

Given the stage of development of this industry; the important economic contribution it makes in the coastal areas where it is located; the development challenges it faces and the potential market opportunities that exist for rope mussels, ongoing State support is warranted. Nevertheless, this support should be highly focused and the impact should be the subject of review on an ongoing basis.

Future State support should focus on continuing to assist the development of the sector and in particular help the industry address the significant challenges it faces. In particular this should include the development of programmes and the provision of support, focused on addressing the following key areas:

1: Biotoxins:

With respect to biotoxins, the focus should be on:

- Developing 'biotxin solutions' aimed at reducing the potential impact of biotoxins, and
- Subject to the availability of appropriate level of funding (as described in Recommendation 1.3), providing support to reduce some of the hardships associated with prolonged bay closures due to biotoxins

2: Licensing:

Under the heading of licensing there is a need to focus attention on two important areas:

- Addressing the critical issue of over crowding in selected bays, and
- Enhancing the efficiency of the current licensing application system

3: Enhancing the efficiency of both production and processing

Under this heading, specific programmes should be developed and focus on:

- Continuous cost reduction
- Increasing yields/output
- Reducing rejects/waste
- Identification/development adoption of new production and processing/packaging technologies
- Business planning
- Increasing capacity utilisation, and
- Benchmarking performance against best-in-class operators

4: Sales and Marketing

Under the heading of sales and marketing, State support should focus on:

- Assisting the industry differentiate its product within the market place/develop an identification for Irish mussels within the market
- Innovation and the commercialisation of innovation
- Creation of a positive platform for trade, and
- The provision of leading-edge market intelligence

5: Improving Quality

This area should be addressed through further development and roll out of the IQM scheme.

Core Theme 12: Areas for further development

Consider undertaking further research focused on developing solutions to a range of developmental challenges highlighted during this Review – including a particular focus on azaspiracid (AZA) toxins.

Recommendation Context

During the consultation phase of this Review, opportunities for developing the Irish rope mussel industry were highlighted. These opportunities have been captured under a range of recommendations as set out on the previous pages. In addition, a number of potential opportunities and/or solutions to developmental challenges were highlighted during this Review. Some of these opportunities/solutions will require further research to validate/develop into workable solutions. It is in this context that the recommendations set out below are presented.

Recommendation 12.1

Consideration should be given to undertaking further research into a range of topics/potential solutions to developmental challenges highlighted during this Review.

As a means of assisting further development of the rope mussels industry, and by way of developing solutions to a range of challenges impacting the sector's development, consideration should be given to undertaking further State-sponsored research across a range of topics, including those listed below.

<i>Research Topic</i>	<i>Related Developmental Challenge</i>
The potential to grow mussels off-shore.	Bay Overcrowding
Usage/potential of purification tanks.	Biotoxins
Economics related to the transfer of mussels to the bottom sector.	Biotoxins
Scope for the productive usage of rejects/ development of out-of shell products	Loss due to rejects
Techniques/technologies for the removal of labour at production level.	Increasing production efficiency.

In addition to the above, a further area of research that warrants significant and priority attention relates to the Azaspiracid (AZA) toxin. AZA is a biotoxin which has become a major problem in the Irish shellfish industry over the past six years but only a limited knowledge of this toxin exists. Currently the Marine Institute, along with a range of research partners, are engaged in a significant research initiative focused on AZA the results of which should be available in 2006. From the perspective of producers and processors, research that would enable a greater understanding of the causes and potential solutions to this toxin should continue to be supported.

Core Theme 12: Implementation Planning

Develop a plan to guide the implementation of the various recommendations presented in this Review.

Recommendation 13.1

A detailed implementation plan that will guide the successful execution of the various recommendations set out in this Review should be developed.

A detailed implementation plan that will guide the successful execution of the various recommendations set out in this Review should be developed. This plan should set out the various tasks necessary to implement the recommendations presented in this Review and should assign responsibility for each task along with providing a timeframe for completion.

This implementation planning process should involve input from all the relevant industry stakeholders including the DoCMNR, BIM, MI, FSAI, the mussel processors and producers/producer representative organisation.

Appendix 1:

Review Steering Committee Members & PwC Consultants

Review Steering Committee

Pat Keogh	BIM Chief Executive Officer
Jim Mulcahy	EI Consumer Foods Manager
Donal Maguire	BIM Aquaculture Development Manager
Helen Brophy	BIM Market Development Manager
Majella Fitzsimons	BIM Planning & Information Executive
Richie Flynn	ISA/IFA Executive Secretary, Fish Farming Section
Tom Geoghegan	National Secretary, Irish Fish Processors and Exporters Association

Review Consultants Contact Details

The Review was undertaken by the Strategy Advisory Services Unit of PricewaterhouseCoopers. Contact details for the PwC consultants who conducted the Review are listed below:

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