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The logic behind the deepening of economic links is based on a clear economic rationale that increased co-ordination of trade and business development activity can help engineer the realisation of economic spillovers and synergies that will mutually benefit both the North and the South.

In the context of the deepening of economic links on the island of Ireland these benefits will be achieved through:

- co-operation, alliances and trade between firms,
- the opportunity to address a larger overall market,
- exposure of products and services to a wider range of demanding customers; and
- improved supply-side characteristics such as skills, training, technology and telecommunications infrastructure.

InterTradeIreland's mission is 'to lead the development of the island economy through distinctive knowledge-based interventions which will produce significant returns in the areas of cross-border trade and business development'.

Knowledge - its creation, dissemination and exploitation - is the key to unlocking the potential of trade and business development.

InterTradeIreland's strategic framework is built on the use of knowledge to accelerate trade and business development across the island economy.

One of InterTradeIreland's key strategic goals is 'to develop the capability of businesses to trade within the island economy by increasing the quality and quantity of knowledge and information on the dynamics of cross-border trade and business development', in our corporate terminology to increase knowledge capital.

The 'InterTradeIreland policy research series' (IPR) is designed to contribute to the achievement of this objective by creating a bank of knowledge capital that will guide policy makers, inform business decisions and stimulate a wider debate on the benefits of North/South economic cooperation.

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**EXCHANGE RATE**

2001 - GBP1.00 = EUR1.59

2002 - GBP1.00 = EUR1.61

Bank of England

## EXECUTIVE SUMMARY

### Industry Overview

The horticulture industry is described in terms of its economic value, capacity and employment. The review covers how the industry meets the challenges of the marketplace and offers a brief summary of the outlook for the future. The report highlights:

- Market conditions
- Value of the horticulture industry
- Horticulture land use
- Reaching the marketplace
- Employment in the horticulture industry
- Outlook for the industry

### Critical challenges

The consultation process highlighted a number of critical challenges facing the horticulture industry in Ireland and Northern Ireland. These are summarised under the following categories:

- Policy cohesion
- Meeting consumer demand
- Quality and traceability
- Product development and R&D
- Human resources and training
- Seasonality issues
- Emerging clusters
- Wider social and economic benefits of horticulture

### Key sectors

The review presents an overview of the key sectors within the horticulture industry in Ireland and Northern Ireland.

- Mushrooms
- Potatoes
- Field Vegetables
- Protected Crops
- Fruit
- Organic Produce
- Amenity

### Public infrastructure

The review presents an overview of the public infrastructure that supports the horticulture industry in both Ireland and Northern Ireland. It also covers areas where cross-border cooperation is already quite advanced.

- Legislation
- Policy formation
- Implementation bodies and agencies
- Incentive schemes
- Training and education
- R&D resources
- Cross-border links

### Recommendations

The review presents recommendations on how the challenges facing the industry might be met by policy makers, implementation bodies and by the industry itself.

	POLICY MAKERS / IMPLEMENTATION BODIES	INDUSTRY
<b>POLICY COHESION</b>	<p>Remodel implementation structures in Northern Ireland to achieve parity with those in place in Ireland.</p> <p>Support horticulture clusters with export market development potential through their programmes and overseas networks.</p> <p>Develop specific programmes aimed at increasing sales of prepared fresh fruit and vegetable produce via the Food Service sector. (Bord Bia and Invest Northern Ireland).</p>	<p>Increase awareness amongst policy makers of the wider role of horticulture in the creation of wealth and enhancement of the environment.</p>
<b>MEETING CONSUMER DEMAND</b>	<p>Conduct a biannual in-depth census of grower output, using common data collection and analysis methods North and South.</p> <p>Conduct market research to focus on identifiable opportunities.</p> <p>Expand the Garden Ireland generic marketing concept.</p>	<p>Develop new, value-added products to meet identified consumer demand.</p> <p>Scale up Organic sector.</p>
<b>TRACEABILITY AND QUALITY</b>	<p>Make support mechanisms available to enable producers to meet the EU traceability requirements.</p> <p>Standardise an all-island quality scheme.</p>	<p>Improve procedural management systems to ensure traceability.</p>
<b>R&amp;D AND INVESTMENT</b>	<p>Separate horticulture R&amp;D from general agriculture R&amp;D.</p> <p>Develop an all-island market-led R&amp;D strategy.</p> <p>Target specific R&amp;D initiatives.</p>	<p>Focus R&amp;D on storage, extension of the growing season, more suitable varieties.</p>
<b>HUMAN RESOURCES AND TRAINING</b>	<p>Promote and extend the Seasonal Agricultural Workers Scheme (SAWS) and the Seasonal Horticultural Workers Scheme (SHWS) schemes to attract more student / seasonal labour.</p> <p>Facilitate skills transfer programmes particularly on supply chain issues and on new technologies.</p>	<p>Pool resources to establish skills transfer programmes.</p> <p>Take up opportunities for business skills training.</p>

## 1 INTRODUCTION

### Objectives of this report

The primary purpose of this report is to highlight market trends, opportunities, and barriers to development and to determine the current state of cross-border cooperation and trade in the horticulture industry.

This report is the outcome of that research and consultation, and it has been developed with the following objectives in mind:

- Provide a comprehensive evaluation of the current state of the industry in Ireland and in Northern Ireland and to determine the current levels of North/South cooperation;
- Prepare the foundations for higher levels of cooperation across the industry both within and between the two jurisdictions;
- Highlight the challenges facing the industry;
- Identify the opportunities and threats to the industry; and
- Recommend policy development and planning initiatives that will ensure the future sustainability and growth of the sector.

### Research methodology

This report involved three main phases of work:

- Desk and primary research;
- Consultation; and
- A telepostal survey.

The desk research phase was the starting point for the project. It involved the collection of information relating to policy, legislation and governmental responsibilities in respect of the horticulture industry in Ireland and Northern Ireland.

Consultations were undertaken with key stakeholders in the horticulture industry - these included representatives from growers, processors and industry associations, from research, training and academic areas, and from government and implementation bodies. This consultation consisted of approximately 25 consultations with representatives from government departments, horticulture sector associations, R&D centres and academics.

The interviews were supplemented by a telepostal survey of 33 companies involved in the production, processing, marketing and retailing of horticulture products in Ireland and Northern Ireland.

For details of the respondents see Appendix C.

### Definitions and scope of report

What sectors and sub-sectors are covered by the term horticulture? Early consultations with stakeholders taught us that there is no single agreed answer to this question. For example, some stakeholders would include sectors as diverse as the production of peat-based growing media and architectural landscaping under the umbrella of horticulture. For the purposes of this report, however, we have focused on the production of the following Food and Amenity items:

FOOD	AMENITY <sup>1</sup>
Potatoes	Christmas trees
Mushrooms	Hardy nursery stock
Field vegetables	Outdoor flowers and bulbs
Protected crops	Protected plants and flowers
Fruit and protected fruit	

### What's in this report

This report contains the following main sections:

#### INDUSTRY OVERVIEW

An overview of the horticulture industry, its size and capacity, the market conditions it operates in and how it satisfies market demand, and a summary of the outlook for the industry.

#### KEY CHALLENGES

An overview of the key challenges affecting the industry.

#### KEY SECTORS

A summary of the key sectors in the horticulture industry and case studies on the Mushroom and Amenity sectors.

#### PUBLIC INFRASTRUCTURE

An overview of the public infrastructure within which the industry operates - this covers policy formation, implementation bodies and support schemes.

#### CONCLUSIONS AND RECOMMENDATIONS

A summary of the conclusions derived from the consultation process, together with recommendations on how the challenges identified in Chapter 2 might be addressed by policy makers, implementation bodies and by the industry itself.

#### APPENDICES

- SWOT Analysis
- Sources
- List of people and organisations consulted

<sup>1</sup> The Amenity sector also includes landscape contractors and retailers such as garden centres.

## 2 INDUSTRY OVERVIEW

This Chapter presents an overview of the horticulture industry in terms of its economic value, capacity and employment. It also outlines how the industry meets the challenges of the marketplace and offers a brief summary of the outlook for the future.

<b>MARKET CONDITIONS</b>	The factors that determine the production and distribution decisions that are essential to the industry.
<b>VALUE OF THE HORTICULTURE INDUSTRY</b>	An overview of the farm gate value of the industry broken down by sectors.
<b>HORTICULTURE LAND USE</b>	A summary of the land available to horticulture with a crop by crop breakdown of land use.
<b>REACHING THE MARKETPLACE</b>	An overview of the means by which the horticulture industry makes its produce available to the market.
<b>EMPLOYMENT IN HORTICULTURE</b>	Details of the number of businesses and the number of people working in the industry.
<b>CROSS-BORDER TRADE IN HORTICULTURE PRODUCTS</b>	A summary of the current levels of cross-border trade in horticulture.
<b>INDUSTRY OUTLOOK</b>	An overview of current developments and the prospects for the industry North and South over the next few years.

### Market conditions

The factors that impact on the horticulture markets in Ireland and Northern Ireland are common to all consumer food and non-food markets and sectors. Changes in market conditions require producers to change what they produce, how they produce, and when they produce. The following section summarises some of the more significant market conditions affecting the industry.

<b>CHANGING CONSUMER LIFESTYLES</b>	Changes in work practices, increased female participation in the workforce and longer commuting times to work are impacting on sales of produce from the horticulture sector. Consumers are increasingly demanding food and amenity products that offer greater convenience and suit their changing lifestyles.
<b>HIGHER DISPOSABLE INCOMES</b>	Higher disposable incomes have led to an increase in the proportion of people who eat out of the home and on the move. This is serving to drive greater consumption of fruit and vegetable produce from restaurants and other catering outlets.
<b>CHANGING POPULATION STRUCTURES</b>	On both sides of the border, the population is becoming more aged. Older, increasingly health conscious consumers represent a growing opportunity for domestic growers. Health and diet is already a huge growth area in the food market.
<b>HOUSEHOLD SIZES</b>	Smaller households are helping to drive growth in ready prepared, convenience fruit and vegetable products and in easy to maintain amenity products.
<b>EATING AT HOME</b>	Food manufacturers have responded to changes in the in-home eating occasion by supplying food that is increasingly pre-prepared. As a result, meals are quicker to cook and serve. Fruit and vegetable growers and processors are adapting to meet these demands.
<b>MORE INFORMATION</b>	Consumers are becoming more informed about the food they eat, asking where it comes from, what it contains and what its effects might be on their diet. Standardisation of labelling and traceability have been developed to meet consumers' information requirements.

**MEDIA EXPOSURE**

The media plays an important role in shaping the opinions and views of people towards food, and towards the built and natural environment in general. Gardening programmes on television and radio have helped to drive growth of the amenity sector. Similarly, cookery programmes and newspaper features have encouraged consumers to experiment with a wider range of foods, including fruit and vegetables.

**DOMINANT RETAILERS**

The dominant position of supermarkets in the marketplace and the change to central purchasing and distribution have had a major impact on the location, production and supply of horticultural produce. In summary the dominant retailers have:

- raised standards significantly;
- standardised quality levels across stores;
- widened the product range;
- improved the packaging and distribution network;
- made positive attempts to buy Irish produce;
- improved, reorganised and increased the size of the fruit and vegetable sales sections in retail outlets;
- overcome seasonality through imports; and
- become technically aware and organised.

**SMALLER OUTLETS**

Distribution of horticultural produce from greengrocers and other independent outlets is in decline. By contrast, sales from garage forecourts are increasing. A small proportion of horticultural sales are direct from the farm or via urban/country markets.

**Value of the horticulture industry**

In 2002, Horticulture represented 1.2 per cent of overall agricultural output (not including amenity output) by value in Ireland<sup>2</sup> and 7 per cent in Northern Ireland.<sup>3</sup> The farm gate production value of this in monetary terms is shown in Tables 1 and 2; Figures 1 and 2 show the percentage breakdown of production value across sectors, for both Northern Ireland and Ireland.

<sup>2</sup> Bord Glas, Facts and Figures: Overview of Irish Horticulture, 2002

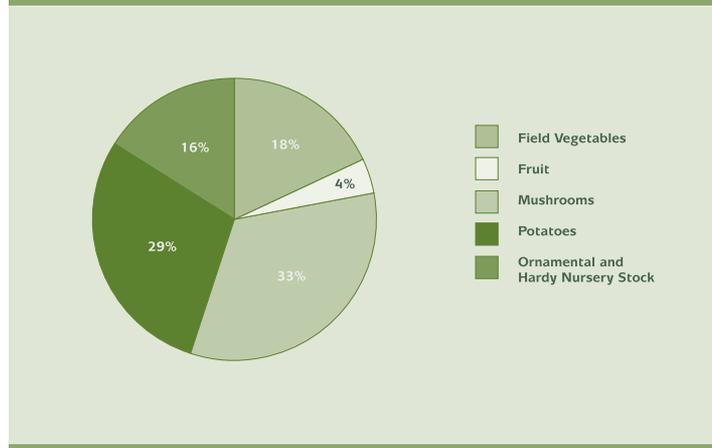
<sup>3</sup> DARD, Northern Ireland Agri-Food Statistics, 2002

**TABLE 1:  
NORTHERN IRELAND FARM GATE PRODUCTION VALUE, 2002**

SUB-SECTOR	€M	€M
Field Vegetables	14.90	23.98
Fruit	3.00	4.83
Mushrooms	27.60	44.43
Potatoes	23.90	38.47
Ornamental and hardy nursery stock	13.10	21.09
<b>TOTAL</b>	<b>82.50</b>	<b>132.82</b>

SOURCE: DARD, Statistical Review of Northern Ireland Agriculture 2002

**FIGURE 1:  
BREAKDOWN OF NORTHERN IRELAND FARM GATE PRODUCTION  
BY SEGMENT, 2002**

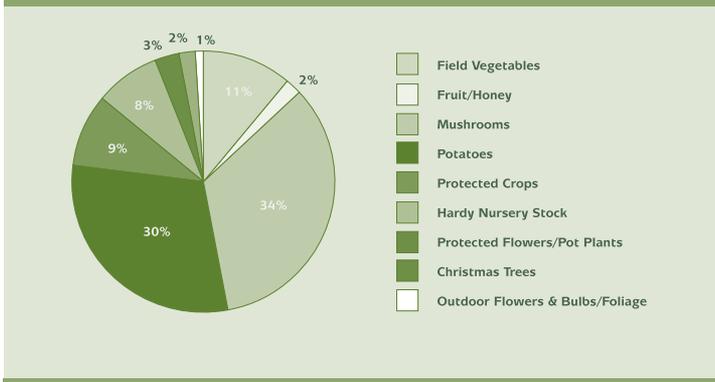


**TABLE 2:  
IRELAND FARM GATE PRODUCTION VALUE, 2002**

SEGMENTS	€M	£M
Field Vegetables	44.20	27.45
Fruit/Honey	8.80	5.46
Mushrooms	137.60	85.46
Potatoes	123.20	76.52
Protected Crops	36.00	22.36
Hardy Nursery Stock (HNS)	33.40	20.74
Protected Flowers/Pot Plants	11.30	7.01
Christmas Trees	7.50	4.65
Outdoor Flowers & Bulbs / Foliage	4.50	2.79
<b>TOTAL</b>	<b>406.50</b>	<b>252.44</b>

SOURCE: Bord Glas, Production Statistics, 2002

**FIGURE 2: BREAKDOWN OF IRELAND FARM GATE PRODUCTION BY SEGMENT, 2002**



In Ireland, the output of total horticulture produce increased by 25.2 per cent in value between 1998 and 2002 - much of this was accounted for by an increase of 11.1 per cent between 2001 and 2002. Six of the nine sub-sectors showed growth in 2001-2002, especially mushrooms (19.1 per cent growth) and potatoes (12.5 per cent growth).

In Northern Ireland, by contrast, production value declined by 1.6 per cent between 1998 and 2002. Three of the five sub-sectors declined or, in the case of mushrooms, stayed the same. Hardy nursery stock showed a small rise (3.9 per cent) while the potato sector in Northern Ireland has been volatile over the last 5 years - it has shown a recovery from the very low £17.3m production value of 2000 and rose by 11.1 per cent in 2001-2002.

**The importance of mushrooms and potatoes**

Mushrooms and potatoes between them accounted for over 60 per cent of output value in both Ireland and Northern Ireland in 2002.

**TABLE 3:  
IMPORTANCE OF MUSHROOMS AND POTATOES TO HORTICULTURE PRODUCTION, NORTH AND SOUTH, 2002**

	IRELAND	NORTHERN IRELAND
Mushrooms	€137.6m/£216.3m (34 per cent)	£27.6m/€43.3m (33 per cent)
Potatoes	€123.2m/£78.3m (30 per cent)	£23.9m/€37.5m (29 per cent)

### Horticulture land use

Tables 4 and 5 below show the decline in horticulture land use in Northern Ireland and in Ireland between 1998 and 2001. In Ireland the hectares used have fallen by 3,391 to 23,380, a fall of 12.7 per cent. The fall in Northern Ireland was slightly less, from 10,800 to 9,800 hectares, a decline of 9.2 per cent.

Only mushrooms (in tonnes of compost used) and hardy nursery stock have shown an increase in Ireland, while hectares used for field vegetables rose slightly in Northern Ireland (where there are no available figures for mushrooms). The most significant falls in both Northern Ireland and Ireland were recorded in potatoes and fruit - this is probably due to the decline in the numbers of growers in both jurisdictions.

**TABLE 4:  
CHANGE IN HORTICULTURE LAND USE IN IRELAND,  
1998-2001**

IRELAND	1998	2001	% CHANGE 1998-2001
	AREA (HECTARES)	AREA (HECTARES)	
*Mushrooms	280,000 tonnes	294,742 tonnes	+5.2
Potatoes	16,000	13,700	-14.4
Field vegetables	5,364	5,299	-1.2
<sup>†</sup> Protected crops	250	237	-5.2
Fruit crops/honey	1,395	1,005	-27.9
<sup>‡</sup> Hardy nursery stock	400	465	+16.3
<sup>§</sup> Protected flowers and pot plants	22	18	-18.2
Outdoor flowers and bulbs	340	228	-33.0
Christmas trees	3,000	2,428	-19.1
<b>TOTAL AREA</b>	<b>26,771</b>	<b>23,380</b>	<b>-12.7</b>

SOURCE: Bord Glas / Goodbody Economic Consultants

\* Figures for mushrooms relate to the number of tonnes of compost in production.

<sup>†</sup> Refers to area under glass/polythene - actual production area is greater due to multi-cropping.

<sup>‡</sup> Bord Glas/Goodbody Economic Consultants estimate.

<sup>§</sup> Refers to area under glass/polythene - actual production area is greater due to multi-cropping.

**TABLE 5:  
CHANGE IN HORTICULTURE LAND USE IN NORTHERN IRELAND,  
1998-2001**

NORTHERN IRELAND	1998	2001	% CHANGE 1998-2001
	AREA (HECTARES)	AREA (HECTARES)	
Potatoes	7,500	6,700	-10.6
Field vegetables	1,400	1,500	7.1
Fruit	1,700	1,500	11.7
Other horticultural crops	200	100	-50.0 <sup>†</sup>
<b>TOTAL AREA</b>	<b>10,800</b>	<b>9,800</b>	<b>-9.2</b>

SOURCE: DARD, Statistics of Northern Ireland Agriculture in 2001

### Reaching the marketplace

Horticulture food produce in Northern Ireland and Ireland reaches the marketplace via three distribution channels:

**TABLE 6:  
MAIN CHANNELS TO MARKET**

<b>RETAIL</b>	<ul style="list-style-type: none"> <li>• Supermarkets;</li> <li>• Symbol groups;</li> <li>• Greengrocers; and</li> <li>• Other outlets open to the general public.</li> </ul>
<b>FOOD SERVICE</b>	<ul style="list-style-type: none"> <li>• Restaurants;</li> <li>• Hotels;</li> <li>• Work canteens; and</li> <li>• Hospitals.</li> </ul>
<b>PROCESSING</b>	<ul style="list-style-type: none"> <li>• For integration into value-added products</li> </ul>

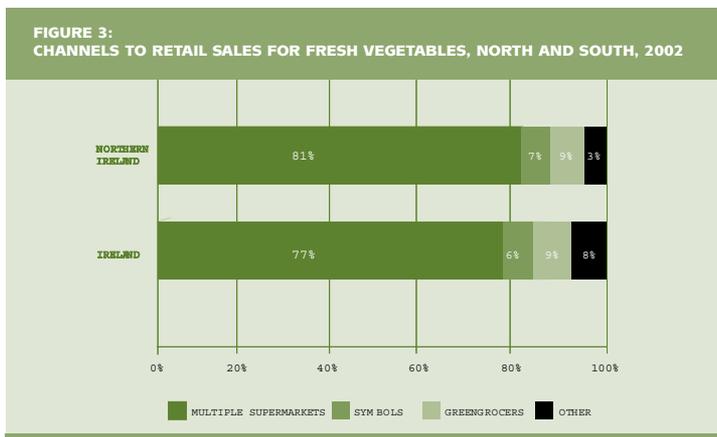
Each of these channels is profiled in the following section.

<sup>†</sup> The high percentage change here is not significant, given the very small base of this sector.

### RETAIL SALES, North and South

The value of the Northern Ireland retail market for fresh horticulture produce was estimated at £234.9/€375.8m in 2001. The Ireland retail market for fresh horticulture food produce is estimated at €532m/£330.4m in 2001. In both jurisdictions the market is dominated by sales of fresh vegetables, which account for over 60 per cent of sales by value.

The multiple supermarkets dominate the distribution of fresh vegetables in both Northern Ireland and Ireland - see Figure 3 below.



### FOOD SERVICE SALES, North and South

Despite the size of the Food Service sectors, there is limited information on the value of fruit and vegetables purchases in both Northern Ireland and Ireland.

It is estimated that the Food Service sector in Northern Ireland spends £320m/€515m on fruit and vegetable produce per annum while in Ireland it is estimated at €800m/£496m.

There is growing consolidation in the Food Service sector in Northern Ireland and Ireland with fewer, larger suppliers serving the existing customer base.

Consultations have identified a demand in the Food Service sector for good quality pre-prepared horticultural food produce. Fruit and vegetable producers targeting the Food Service sector need to add value to their products and services, tailor them to specific requirements, develop long-term partnerships with their customers, and also to provide marketing support.

### PROCESSING SALES, North and South

There is limited statistical information on the fruit and vegetable processing industry in Ireland. However, it is estimated that turnover in the fruit and vegetable processing sector in Ireland stood at €269m / £164m in 2000. In Northern Ireland gross turnover of the fruit and vegetable processing sector stood at £123.3m/€202.2m in 2000, down by 1.8 per cent from 1999.

The growth in the processing sector in both Northern Ireland and Ireland stems from the increased demand for pizza toppings, salads and prepared foods. Prepared consumer products (cleaned, chopped vegetable products) are particularly important. Consumers are demanding quality fruit and vegetable products that are healthier and more convenient, and fresh pre-prepared fruit and vegetables have increased in popularity relative to traditional processed fruit and vegetable products such as canned vegetables. The potato sector, which has the economies of scale of a commodity product, has the most potential to supply the processed value-added market.

Of the forty-five businesses involved in fruit and vegetable processing in Northern Ireland in 2000, the vast majority (93 per cent) had turnover less than £10m/€15.7m, with full-time employment recorded at 1,365.

The manufacturing and processing industries in Ireland typically look to international suppliers to supply their needs for frozen ingredients at commodity prices, leaving little opportunity for domestic horticultural producers to serve the needs of this sector.

For domestic producers, supplying prepared value-added produce through retail outlets is perhaps the most positive future market opportunity.

### Employment in the horticulture industry

In Ireland in 2001, there were over 3,688 businesses engaged in horticulture, employing over 10,000 full-time equivalents<sup>9</sup>. In Northern Ireland in 2001, there were 331 businesses in the horticulture food sector (excluding mushrooms) employing over 1,300 full-time equivalents<sup>10</sup>. This figure, however, includes only businesses who derive over two thirds of their standard gross margin from horticulture - these account for only 18 per cent of all growers.

Economic growth in Northern Ireland and Ireland has increased competition for labour across all industries. The manual work, low pay, competing occupational options and seasonal nature of horticulture work have made it difficult to recruit and retain staff. Many sectors in the horticulture industry in Ireland are now making use of foreign labour, employed through government-funded schemes such as the Seasonal Horticultural Workers Scheme (SHWS).

The lack of available labour has created a demand for greater automation and mechanisation to increase productivity, improve consistency and lower costs. The current shortages are also providing the opportunity to develop and introduce improved human resource management practices for the industry.

<sup>9</sup> Bord Glas, Facts and Figures, 2002

<sup>10</sup> Department of Agriculture and Rural Development

### CROSS-BORDER TRADE

Table 7 shows the trade in fruit and vegetables between Northern Ireland and Ireland in 1999 and 2002. In this period, cross-border trade has increased in both directions: from Northern Ireland to Ireland by 6 per cent, and from Ireland to Northern Ireland by 5.5 per cent.

TABLE 7: CROSS-BORDER TRADE IN HORTICULTURE PRODUCE, 2001-2002					
		2001		2002	
		€M	£M	€M	£M
<b>NORTH/SOUTH TRADE</b>	Vegetables	7.47	4.63	6.12	3.82
	Fruit	1.08	0.67	1.22	0.76
		<b>8.55</b>	<b>5.30</b>	<b>7.34</b>	<b>4.58</b>
<b>SOUTH/NORTH TRADE</b>	Vegetables	12.07	7.49	14.44	9.02
	Fruit	20.63	12.81	20.07	12.54
		<b>32.70</b>	<b>20.31</b>	<b>34.51</b>	<b>21.56</b>
<b>SOURCE:</b> CSO / DAF					

### OUTLOOK

- A range of factors including economic growth, changing consumer lifestyles, increased disposable incomes, demographic changes and the shift to smaller households is driving growth in the horticulture market, and attention has focused on horticulture products that offer convenience, value-added and time-saving solutions.
- The value of horticultural produce is showing good growth in both Northern Ireland and Ireland even though there has been a decline in the land area used for horticulture production.
- There is growing consolidation of the retail market, especially with multiple grocery retail outlets controlling a significant share of the market.
- The growth of the food service sector represents a key market for fresh produce in both Northern Ireland and Ireland.
- The processing sector has an opportunity to develop more pre-prepared consumer products.

### 3 CRITICAL CHALLENGES

The consultation exercise uncovered a number of critical challenges across all sub-sectors of the horticulture industry both in Northern Ireland and Ireland. These include the following:

AREA	CHALLENGE
<b>Policy cohesion</b>	To bring greater all-island cohesion into the industry at a policy level.
<b>Meeting consumer demand</b>	To develop opportunities for greater import substitution.
<b>Quality and traceability</b>	To establish uniform quality and product traceability standards throughout the whole of the island.
<b>Product development and R&amp;D</b>	To review existing product development, R&D and market research requirements.
<b>Human resources</b>	To address the constraints in the labour market and the need for structured training.
<b>Clustering</b>	To target resources to existing regional sector clusters.
<b>Wider benefits</b>	To create recognition among policy makers of the wider social, economic and environmental benefits of horticulture.

Each of these key challenges are dealt with in turn in this chapter.

#### POLICY COHESION

In Ireland Bord Glas is responsible for the development of the horticulture industry, while Teagasc, Enterprise Ireland and Bord Bia also have supporting roles. Northern Ireland, by contrast, lacks a dedicated agency directly serving the industry with the Department of Agriculture and Rural Development (DARD) and Invest Northern Ireland having some responsibility for areas within the industry. The establishment of an agency offering proactive support to the industry in Northern Ireland could address the current imbalance between the two jurisdictions. Alternatively, an all-island agency with a similar remit to that currently offered by Bord Glas in Ireland might be an attractive proposition.

Existing cross-border cooperation between industry organisations and the small but important cross-border trade provide the foundations for greater cooperation and cohesion at a policy level.

### Meeting consumer demand

Horticultural goods are free-market commodities, so there are no restrictions on where a retailer or wholesaler can source produce. There are a number of factors that influence the supply and demand of horticultural goods and the balance between domestic and imported supply, including:

- Centralised procurement by the large supermarket multiples;
- Price competition from imported produce;
- Requirement for increased quality standards;
- Seasonality of produce; and
- Heightened consumer/retailer expectations.

On the demand side some of these factors lead to increased costs to the grower - for example, in packaging and delivery scheduling from the supermarket multiples - making it more difficult to compete with importers.

Significant investment is needed in both Northern Ireland and Ireland to put in place a modern processing infrastructure. This will enable the industry to respond to growing consumer demands for value-added produce, in a sector which is currently very exposed to international competition.

### Quality and traceability

Driven by the demands of the supermarket multiples and by changes in EU food law, delivering traceable produce of uniform quality is becoming the accepted norm in the horticultural industry.

The European Commission's *White Paper on Food Safety*, published in January 2000, sets out a legislative action programme for EU food production covering all links of the food chain from 'farm to fork'. The European Commission has already made it obligatory for retailers to indicate the area of origin of fresh fruit. Looking ahead, the General Principles on Food Law (EU Regulation 178/2002) means that all food and its ingredients must be traceable with effect from 1 January 2005.

Direct targeting of agency support for growers to meet these new demands has been more apparent in Ireland than in Northern Ireland. For example, the development of a quality scheme by Bord Glas as well as access to grants that aid investment in packaging, washing and grading machinery, have helped the industry in Ireland respond appropriately to demands for greater quality.

While funding is available for the horticulture industry in Northern Ireland, gaining access to it is more difficult, as horticulture growers and processors have to compete with other agri-food funding applications. Consequently, more targeted assistance is required to help horticulture growers and processors in Northern Ireland to respond to market demands.

There may be an opportunity to widen the remit of the quality scheme operated by Bord Glas to cover Northern Ireland growers and processors. This could either replace or compliment the voluntary Assured Produce Scheme (currently running in Northern Ireland as part of a UK-wide certification scheme) and lead to uniformity in quality standards and ensuring greater consistency of produce quality throughout the island.

### Product development and R&D

The decline of government investment in R&D over the past number of years poses a major threat for the industry, especially with increased competitiveness in markets and changes in consumer trends. There is a need for greater investment in R&D, supported by both government and industry.

There is also a need to develop market research and marketing support for horticulture on an all-island basis. Bord Glas have already set an excellent example of what can be achieved in Ireland in their market profile publications, and there is opportunity to mirror this in Northern Ireland.

### Human resources and training

The horticulture industry has persistent, structural problems in the area of human resources; these include:

- The lack of available labour, especially for seasonal work within the industry.
- The lack of employment structure - for example, in career paths, job descriptions, pay scales and so on.
- Limited supply and delivery of on-the-job training programmes.

### Seasonality issues

The seasonal nature of horticulture presents its own set of challenges, familiar to everyone involved in the industry:

- How can producers maintain continuity of supply?
- How can producers source labour at peak times?
- How can producers reduce dependence on weather?

In recent years, however, increased investment in both storage and greenhouse facilities has helped combat some seasonality issues, and improved market coordination has helped maintain a better balance between supply and demand.

Given that problems of seasonality, crop yield and weather dependence are shared across the island, there is now an opportunity to develop a cross-border R&D forum amongst agencies and trade associations to address means of alleviating the impacts of seasonality, of identifying realistic solutions, and of building an R&D agenda in this area.

### Emerging clusters

Naturally, a range of factors (including climate and soil type) influences the location of growers. However, there is an opportunity to consolidate existing sector clusters in the horticulture industry. Table 8 below highlights the main horticulture clusters on the island and highlights the lack of Northern Ireland participation except in mushrooms and apples.

TABLE 8: HORTICULTURE CLUSTERS ON THE ISLAND	
SECTOR	LOCATIONS
Potatoes	Dublin / Meath / Louth Cork Wexford Donegal for seed production
Mushrooms	Monaghan / Cavan / Armagh
Apples	Armagh / Louth / Monaghan Tipperary / Waterford / Kilkenny
Field vegetables	Dublin / Meath Cork Wexford
Fruit (excluding apples)	Dublin / Meath / Louth Cork Wexford
Protected crops	Dublin / Meath / Louth Cork Wexford
Amenity	Kildare Tipperary Waterford / Kilkenny Cork / Kerry

Over the past five to ten years, the major supermarket multiples have moved to a system of Centralised Distribution Centres (CDCs): Tesco via Keelings; Superquinn and Spar via Donnelly's; Dunnes Stores via Dennigans; and SuperValue/Centra via Musgraves. This means that producers deliver to a single CDC location, and the CDC then arranges for distribution to its own outlets.

This has inevitably led to a clustering of producers within easy range of the major CDCs, most of which are close to the large urban areas centred on Dublin, Belfast and Cork.

### The wider benefits of horticulture

Horticulture has a much broader role in society beyond the production and processing of food and amenity products, and it is imperative that policy makers and the wider community understand the contribution that the industry makes in areas such as the following:

- Creation of wealth in rural communities;
- Improvement of the physical appearance of properties;
- Enhancement of the environment; and
- Encouragement of healthier living.

The amenity sector has benefited from the growth of outdoor living and in environmental awareness as evidenced by increased emphasis on landscaping. Trees and plants are increasingly being planted on new infrastructure developments, and more and more plants and trees are being incorporated into the design of hotels, office buildings, hospitals, enterprise parks and housing estates.

The move towards greater outdoor living has encouraged more and more people to plant trees and plants in their gardens, so improving the physical environment, particularly in urban areas.

Horticulture also has a role in the encouragement of healthier eating. The consumption of fresh fruit and vegetables is important to the maintenance of a balanced diet, and is actively promoted by health agencies, North and South.

## 4 SECTORS

In this chapter we review the key sectors that make up the horticulture industry in Ireland and Northern Ireland. We look at the current scale and value of each of the sub-sectors, and outline key issues to develop the sector that were discussed during consultation.

**TABLE 9:  
OVERVIEW OF THE ALL-ISLAND HORTICULTURE SECTOR, 2002**

SECTOR	ALL-ISLAND MARKET SIZE (MILLIONS)	GROWTH TREND	ESTIMATED NUMBER OF BUSINESSES	DEVELOPMENT ISSUES
Mushrooms	€182 / £113	Positive	>500	<ul style="list-style-type: none"> <li>Dutch competition in British market;</li> <li>Pressure to increase scale of production; and</li> <li>Pressure to shorten growing cycles.</li> </ul>
Potatoes	€161 / £100	Stable	>1100	<ul style="list-style-type: none"> <li>Competition from other carbohydrate-based products;</li> <li>Very labour intensive;</li> <li>Low margins; and</li> <li>Limited scope for differentiation.</li> </ul>
Field Vegetables	€68 / £42	Stable	>500	<ul style="list-style-type: none"> <li>Maintaining continuity of supply to CDCs;</li> <li>Plant Protection Products (PPP) Regulations; and</li> <li>Low margins.</li> </ul>
Protected Crops	€33 / £21	Positive	<150	<ul style="list-style-type: none"> <li>Energy costs;</li> <li>Maintaining continuity of supply to CDCs; and</li> <li>Glasshouse obsolescence.</li> </ul>
Fruit	€22 / £14	Positive	<50	<ul style="list-style-type: none"> <li>Competitive pressure from imports;</li> <li>Variable weather / yield;</li> <li>Varieties of range; and</li> <li>Quality and presentation.</li> </ul>
Organic	€25 / £15.9	Positive	<100	<ul style="list-style-type: none"> <li>Meeting demand;</li> <li>Certification; and</li> <li>Production costs.</li> </ul>
Amenity	€75 / £47.7	Positive	>300	<ul style="list-style-type: none"> <li>Margins;</li> <li>Quality assurance; and</li> <li>Fragmentation of supply base.</li> </ul>

## Mushrooms

**TABLE 10:  
OVERVIEW OF THE MUSHROOMS SUB-SECTOR, 2002**

	NORTHERN IRELAND	IRELAND
No of producers	226	335
% Change	-33.5% (1998-2002)	-36.6% (1998-2002)
Value	€27.6m / €44.4m	€137.6 / €85.46m
% Change	-9.5% (1998-2002)	+20% (2000-2002)

**SOURCES:** Bord Glas, Department of Agriculture and Rural Development

The Mushrooms sub-sector has been a very successful example of how other sectors in horticulture could be developed. It is the largest of all the sectors, has critical mass, has good cross-border links between its representatives, and has an excellent record of export market development.

The Mushrooms sub-sector is currently facing some major challenges in Great Britain (GB) (its main market) from competitors with higher production efficiencies and shorter cycles. Further investment and possible consolidation or diversification to specialty mushrooms may be necessary for the sub-sector to continue to grow.

An analysis of the Mushrooms sector on the island is detailed in the following case study.

CASE-STUDY: THE MUSHROOMS SUB-SECTOR	
<b>SITUATION</b>	<p>The all-island Mushrooms sub-sector produces 90,000 tonnes of mushrooms per annum, worth €182m/£113m, with 80 per cent of produce being exported to GB.</p> <p>The success of the Mushrooms sub-sector can be attributed to a number of factors:</p> <ul style="list-style-type: none"> <li>• The adoption of new technology and growing systems;</li> <li>• Focus on quality and consistency;</li> <li>• Focus on the Great Britain market;</li> <li>• Low cost labour availability and flexibility;</li> <li>• Favourable exchange rates (in the case of Ireland); and</li> <li>• Economies of scale and product specialisation.</li> </ul>
<b>ISSUES</b>	<p>In the last few years, a number of market developments have converged against mushroom growers on the island.</p> <ul style="list-style-type: none"> <li>• The opening up of Eastern Europe has led the powerful Dutch producers to shift their attention away from the German market and more towards Great Britain, creating more competition for growers in Northern Ireland and Ireland. (The Netherlands is Europe's largest exporter of mushrooms, and produces over 250,000 tonnes per annum. The strength of the industry in the Netherlands has historically been in the processed sector, rather than the fresh/quality sector.)</li> <li>• The scale of production and the potential for profitability go hand in hand - and a minimum of 5 growing tunnels is seen as the threshold for long-term viability. Most growers in Ireland and Northern Ireland started out with 3 tunnels, and now need to expand to keep up.</li> <li>• Economic success has led to labour shortages and higher costs, undermining the competitiveness of growers.</li> <li>• Developments in growing material/compost have considerably shortened growing cycles. In the Netherlands, for example, Phase 3 compost predominates, and this is up to 35 per cent more productive than the Phase 2 compost used by most growers in Ireland and Northern Ireland.</li> </ul> <p>These have led to increasing consolidation within the industry - in both Northern Ireland and Ireland, the number of producers has fallen by over 30 per cent since 1998.</p>
<b>ACTIONS FOR FUTURE DEVELOPMENT</b>	<p>Despite the threat from Dutch growers, Ireland and Northern Ireland producers remain well positioned at the fresh/quality end of the market in Great Britain. There are, however, a number of options that producers need to consider for the industry to hold its position and thrive:</p> <ul style="list-style-type: none"> <li>• Identify and exploit opportunities in the food service and convenience market - for example, pizza toppings, salads, pre-prepared meals and so on;</li> <li>• Broaden the range of varieties - for example, oyster mushrooms, shitakes and other specialist varieties can attract much higher unit prices;</li> <li>• Continue looking at ways to reduce costs and increase yields; and</li> <li>• Consider ways of pooling the costs of R&amp;D, training, and of quality and standards programmes between growers on an all-island basis.</li> </ul>

## Potatoes

TABLE 11: OVERVIEW OF THE POTATOES SUB-SECTOR, 2002		
	NORTHERN IRELAND	IRELAND
No of producers	1,007	832
% Change	-22.7% (1998-2002)	-26% (1998-2002)
Value	€23.9m / £38.5m	€123.2m / £76.53m
% Change	-5.9% (1998-2002)	+16.9% (2000-2002)

A core issue for the potatoes sub-sector is declining margins in a tightening market. This historical staple of the Irish diet is under competition from more convenient and easier to prepare carbohydrates such as pasta and rice.

In value terms, the potatoes sub-sector is the second most important (after Mushrooms). North and South, potato production has a much higher labour intensity than mushrooms and offers limited added value. In terms of the number of producers, however, potatoes are the single biggest sub-sector, with over 1,800 producers on the island.

Competitive pressure from imports has led to the concentration of potato producers around the CDCs, close to the major cities.

ACTIONS FOR FUTURE DEVELOPMENT
<p>To ensure long-term viability, the potatoes sub-sector needs to:</p> <ul style="list-style-type: none"> <li>• Address the issue of year-round availability, (perhaps through better storage); and</li> <li>• Find ways of adding value to the basic commodity - for example, washing, peeling, chipping and ready meals.</li> </ul>

### Field vegetables

**TABLE 12:  
OVERVIEW OF THE FIELD VEGETABLES SUB-SECTOR,  
2002**

	NORTHERN IRELAND	IRELAND
No of producers	176 (includes Protected Crops)	294
% Change	+3.8% (1998-2002)	-22% (1998-2002)
Value	€14.9m / €23.9m	€44.2 / €27.4m
% Change	+37.9% (1998-2002)	-6.9% (2000-2002)

Field vegetable producers share many of the problems affecting potato producers - changes in eating habits, seasonal labour dependence, limited value-added and lack of critical mass to supply CDCs.

A further problem is the difference of interpretation between Northern Ireland and Ireland on the EU guidelines on the use of Plant Protection Products (PPPs). A stricter interpretation in Ireland means higher production costs for Southern producers.

#### ACTIONS FOR FUTURE DEVELOPMENT

For the future, the Field Vegetables sub-sector needs to:

- Ensure better quality control; and
- Find ways of adding value to the basic commodity - for example, prepared vegetables (washed, sliced and ready to cook) and ready meals.

### Protected food crops

**TABLE 13:  
OVERVIEW OF THE PROTECTED FOOD CROPS SUB-SECTOR,  
2002**

	NORTHERN IRELAND	IRELAND
No of producers	See Field Vegetables	153
% Change		-22% (1998-2002)
Value		€36m/€22.3m
% Change		+95%

Healthier eating habits, changing consumer lifestyles and year-round availability favour the cultivation of protected crops. In particular, strawberries and salad ingredients (including lettuces, tomatoes, radishes and herbs) have shown an increase in recent years.

Energy costs and the cost of investment in glasshouses have inhibited the development of the sector, but better and more cost-efficient growing tunnels and crop diversification are likely to sustain the sector.

#### ACTIONS FOR FUTURE DEVELOPMENT

For the future, the Protected Crops sub-sector needs to:

- Satisfy the retail trade's requirements for continuity of supply; and
- Extend the range of crops grown.

**Fruit**

**TABLE 14:  
OVERVIEW OF THE FRUIT SUB-SECTOR,  
2002**

	<b>NORTHERN IRELAND</b>	<b>IRELAND</b>
<b>No of producers</b>	331	218
<b>% Change</b>	-21% (1998-2002)	-9.1% (1998 - 2002)
<b>Value</b>	€3.0m / €4.8m	€8.8m/€5.5m
<b>% Change</b>	-50% (1998-2002)	+25.7% (2000-2002)

The major components of the fruit sub-sector are apples (eating and cooking), strawberries, raspberries and blackcurrants. Fresh fruit is increasingly popular with health-conscious consumers, and the outlook for the sector is positive. However, the sector is vulnerable to competitive pressure from imports, and must address issues such as variety of range and continuity of supply.

Variable weather has traditionally been the enemy of the fruit sector. In an effort to alleviate the impact of weather on production, the Irish Apple Growers Association, Teagasc and Bord Glas have been researching varieties of apple that are more suited to the Irish climate.

The Northern Ireland apple industry is heavily export-orientated and accounts for nearly half of the island’s fruit output. The importance of the sector in Northern Ireland is shown by DARD’s commitment to ongoing R&D into apple production at Loughgall.

**ACTIONS FOR FUTURE DEVELOPMENT**

For the future, the fruit sub-sector needs to:

- Ensure product consistency and quality of presentation;
- Satisfy the retail trade’s requirements for continuity of supply;
- Increase the range of varieties offered to the market; and
- Extend the range of crops grown.

**Organic produce**

The organic sub-sector has evolved from its origins as a cottage industry and is struggling to come to terms with the demand for produce being expressed by the major multiple retailers. In particular, there are problems meeting the retailers’ requirements for capacity and continuity of supply.

Organic farming is typically more labour intensive than non-organic farming. There are still major issues to address in terms of accreditation and genuine organic authenticity. Against a continuing background of food scares and resistance to genetically modified crops, the outlook for the sub-sector is extremely positive.

There is considerable cross-border cooperation within the organic sector, and ventures such as the Organic Centre at Rossinver, Co. Leitrim have received support, under the Special Support Programme for Peace and Reconciliation, 2000-2006.

**ACTIONS FOR FUTURE DEVELOPMENT**

For the future, the organic sub-sector needs to:

- Scale up operations to meet the increasing demand from retailers; and
- Address the issue of accreditation and organic authenticity.

**Amenity**

Currently valued at €77m/£54m at trade prices, the amenity sub-sector in Ireland and Northern Ireland has developed considerably in recent years underpinned by huge consumer interest in gardening and home improvement and by increased awareness of the environmental value of planting and landscaping.

The main components of the sub-sector are hardy nursery stock, followed by pot plants, Christmas trees and bulbs/cut flowers. Despite the inherent quality of the Irish output in this sector, there are credibility problems arising from the lack of consistent branded quality in the retail sector - this is explored in more detail in the following case study.

The future of the amenity sector looks very attractive in both Ireland and Northern Ireland, as the public and commercial sectors and private consumers continue to demand plants and landscaping services.

**CASE-STUDY: AMENITY SECTOR**

**SITUATION**

There are 3 main types of producer in the Amenity sector:

- Producers of non-edible horticultural crops;
- Retailers, including garden centres; and
- Landscape contractors.

During consultation, the major problems identified in the sub-sector were the absence of quality standards and accreditation schemes that consumers know about and can trust.

Across all 3 categories, most businesses are run professionally, but low entry barriers mean that rogue operators have the opportunity to undermine the reputation of the whole sector.

These problems are compounded by the absence of producer operations of any real scale who could independently set the benchmark standards by which the sector could measure itself. And at the retail end, consumers are not offered the kind of consistent branded quality that they can come to trust.

**ISSUES**

In the last decade, Bord Glas and DARD have been striving to raise standards and improve the image of the Amenity sector. The most tangible evidence of success is the Garden Centre Awards Scheme (DARD) where garden centres from both Ireland and Northern Ireland compete across a range of categories. Each year there is a special award for the top garden centre on the island - in 2003, the top prize went to The Landscape Centre, Antrim.

Earlier in 2003, Bord Glas launched a Nursery Quality Programme which had been running successfully as a pilot for over a year. The objectives of the programme are to assist nurseries achieve international best practice standards in crop production and management systems. Each participating nursery receives a quality manual that benchmarks the standards against which they will be certified.

The landscape sector remains the only sector without an independent quality programme. The Association of Landscape Contractors of Ireland (ALCI), which draws members from both Northern Ireland and Ireland, has developed a code of professional conduct for the industry, and is in an ideal position to facilitate the further development of standards for the sector. The consultation process identified the development of a code of practice manual as an essential requirement for the Landscape sector.

**ACTIONS FOR FUTURE DEVELOPMENT**

In cooperation with DARD and Bord Glas, the Amenity sub-sector has developed standards and quality programmes that are gradually filtering into the industry.

More work needs to be done, however, to ensure that such standards apply across the industry - this will lead to improved commercial performance, customer loyalty and consumer confidence.

**5 PUBLIC INFRASTRUCTURE**

In both jurisdictions, horticulture is supported by the public sector including policy makers, implementation bodies and regulatory authorities. There are also a number of publicly-funded R&D agencies and training colleges that offer specialised R&D and training in horticulture, so widening the knowledge base available to the industry. The role and function of all of these bodies have developed over time, and the agency provision for horticulture differs considerably on each side of the border: they differ in their policy objectives, their remit, and their ability to provide financial assistance and resources to the industry.

This chapter presents an overview of the public infrastructure that supports horticulture on the island. It also covers areas where cross-border cooperation is already quite well advanced.

AREA	DESCRIPTION
<b>LEGISLATION</b>	Summary of legislation of relevance to the horticulture industry.
<b>POLICY FORMATION</b>	Overview of the role of the two Government departments in relation to policy formation and direction.
<b>IMPLEMENTATION BODIES</b>	Introduction to the specialist agencies who give effect to public policy on a day to day basis - these include both enterprise support bodies and regulatory authorities.
<b>INCENTIVE SCHEMES</b>	There are different incentive schemes available to people in the industry. A selection of these is outlined here.
<b>TRAINING AND EDUCATION</b>	Overview of the specialist training and education available in horticulture.
<b>R&amp;D RESOURCES</b>	Overview of the main R&D centres.
<b>CROSS-BORDER LINKS</b>	Summary of institutional and trade links.

## Legislation

In both Northern Ireland and Ireland, there is an enormous body of legislation and regulations, both National and European, covering the activities of the horticulture industry. These include consumer law, plant protection law, plant health regulations, labour legislation, health and safety, food safety, environment and waste management legislation, and so on.

Table 15 summarises some of the more important legislation currently in force.

TABLE 15: PRINCIPAL LEGISLATION COVERING HORTICULTURE NORTHERN IRELAND / IRELAND / EUROPEAN UNION		
NORTHERN IRELAND	IRELAND	EUROPEAN UNION
<b>Horticulture Act</b> (Northern Ireland) 1966	<b>The Food and Environment Protection Act</b> 1985	<b>Directive 79/117/EEC of 21st December 1978 and Directive 91/414/EEC of 15th of July 1991</b> (regulation of plant protection products)
<b>The Plant Health Order</b> (Northern Ireland) 1993	<b>The Product Liability (Amendment) Act, 1991</b>	<b>Directive 98/8/EC of 16th February 1998</b> (regulation of biocidal products)
<b>Consumer Protection</b> (Northern Ireland) Order 1987	<b>International Carriage of Perishable Foodstuffs Act</b> 1976	<b>EC Marketing Standards</b>
<b>Food Safety</b> (Northern Ireland) Order 1991	<b>Food Safety Authority of Ireland Act, 1998</b>	<b>EU regulation 2092/91</b> (the EU definition of the regulation of organic production methods).
<b>The Food Safety (General Food Hygiene) Regulations</b> (Northern Ireland) 2001	<b>Registration of Potato Growers and Potato Packers Act, 1984</b>	
	<b>Consumer Information Act, 1978</b>	

## Policy formation: Northern Ireland

Within Northern Ireland, DARD has overriding responsibility for the formation and direction of horticulture policy. It fulfils this responsibility within the context of its wider responsibilities to promote economic growth and the development of the countryside in Northern Ireland.

In its Business Strategy for 2003/4, DARD sets the performance target of implementing the recommendations of the Horticulture Review. These recommendations cover the following areas:

- Development of trade associations in the various horticulture sectors with a view to setting the strategic direction for the industry;
- Undertake a review of labour requirements in the industry, including skills gaps and training priorities;
- Identify investment and R&D requirements; and
- Establish goals and performance targets.

A number of divisions in DARD have key roles in the development of the horticulture industry in Northern Ireland. These include the following:

<b>AGRI-FOOD DEVELOPMENT SERVICE (AFDS)</b>	The AFDS works to assist all sectors within the agri-food industry to encourage innovative and cost-effective production methods, to facilitate sustainable development and to ensure that products and services are developed to meet market requirements.
<b>SCIENCE SERVICE</b>	The Science Service is a division of DARD that offers an agri-science and technology service integrated with teaching and research support in Queen's University, Belfast. The Service runs a plant breeding centre at Loughgall, Co. Armagh, and a plant testing centre at Crossnacreevy, Co. Antrim.
<b>MODERNISATION UNIT</b>	The Vision Steering Group within the Modernisation Unit has produced a report which includes a number of specific policy recommendations for the horticulture industry in Northern Ireland. It places particular emphasis on competitive issues in relation to horticulture grant support, potatoes and innovative environmentally friendly technologies.

*'In light of substantial grant support for commercial horticulture available in Ireland, the Northern Ireland horticulture industry could face a very difficult future. The Northern Ireland Assembly should be alerted to the unfair competition facing horticultural growers and encouraged to provide similar financial support.'*

- Vision for Future of Agri-Food Industry: Report from the Agri-Food Sector Structures Sub-Group, Section 4.35 (2002).

### Policy formation: Ireland

In Ireland, horticulture policy formation is directed by the Department of Agriculture and Food (DAF) in conjunction with An Bord Glas (the National Horticultural Development Board). This policy framework is complimented by the horticulture policies of Teagasc, Bord Bia and Enterprise Ireland. This is in contrast to Northern Ireland where DARD has a more centralised role in policy formation and implementation.

### Implementation bodies: Northern Ireland

#### INVEST NORTHERN IRELAND

Invest Northern Ireland provides business guidance and, where appropriate, financial assistance to companies who supply value-added horticultural products. This includes companies involved in the processing of potatoes, mushrooms, apples and vegetables. Invest Northern Ireland also provides development and funding assistance to companies involved in the production and marketing of peat, and mushroom compost and casing companies.

#### FOOD STANDARDS AGENCY

The Northern Ireland Executive of the Food Standards Agency was launched on 3 April 2000 as part of the new, UK-wide independent body, accountable both to Parliament and the Northern Ireland Assembly. It carries out those food safety functions formerly discharged by public health and agriculture staff of the central government departments. Its aims include improving food safety and standards, and improving consumer choice and diet.

### Implementation bodies: Ireland

#### BORD GLAS

Bord Glas has responsibility for the development of the horticultural industry in Ireland, both in the amenity sector (trees, shrubs, flowers and bulbs) and in the food sector (fruit and vegetables, including mushrooms, potatoes and glasshouse crops).

Bord Glas has set its targets for the horticulture industry in its Development Plan, 2000-2006 - this runs parallel to the National Development Plan (NDP). The industry-wide targets focus on output, domestic market share and exports; its aims are to<sup>11</sup>:

- Increase domestic output by €62m in constant terms;
- Maintain and increase domestic share for horticulture produce; and
- Increase Amenity exports by €10m.

#### BORD BIA

Bord Bia (Irish Food Board) is a statutory body with responsibility for market development and promotions for the food industry, including horticulture. Bord Bia helps to develop and foster contact between Irish companies and international buyers. This involves coordinating inward buyer visits and participating at international trade exhibitions under the 'Ireland - the Food Island' umbrella branding. Bord Bia also develops promotional programmes to support marketing activities.

<sup>11</sup> Bord Glas Development Plan 2000-2006

### Planned amalgamation of Bord Bia and Bord Glas

**In March 2003, the Minister for Agriculture announced that the Government has decided to proceed with the amalgamation of Bord Glas and Bord Bia by legislation in 2004.<sup>12</sup>**

#### HORTICULTURE INDUSTRY FORUM

The Horticultural Industry Forum has been in operation since 1996. It brings together representatives from all areas of the industry with a view to encouraging greater coordination, cooperation and communication between key stakeholders in the industry. Its membership includes representatives from the Department of Agriculture and Food, the statutory bodies (including An Bord Glas), and participants at all stages of the industry supply chain: producers, wholesalers, retailers and service providers.

#### TEAGASC

Teagasc is a statutory body providing integrated research, advisory and training services for the agriculture and food industry in Ireland. It operates in partnership with all sectors of the agriculture and food industry and with rural development agencies. Teagasc's Five-Year Rolling Business plan 2004-2008, identifies key research strategies for tillage crops and horticulture including using biotechnology to tackle plant diseases and growth efficiency.

Teagasc works closely with growers and its Horticultural Advisory Programme is delivered in a variety of ways, including specific development and advisory services, national and regional seminars, crop walks, and on-farm demonstrations and consultations.

Teagasc's Horticultural Advisory Service includes four teams dedicated to horticulture, each with its own well-defined strategy objectives: Mushroom Development, Nursery Stock Development, Fruit Development and Vegetable/Potato Development.<sup>13</sup>

#### ENTERPRISE IRELAND

Enterprise Ireland works with companies in the horticulture industry who are actively seeking to grow their businesses both indigenously and through exports. The agency offers funding to horticulture processing businesses for building capacity, R&D, commercial evaluation and the development of partnerships.

The most active companies are those that offer value-added products, including mushroom producers, potato processors, carrot processors and prepared salad producers.

#### FOOD SAFETY AUTHORITY OF IRELAND

The principal function of the Food Safety Authority of Ireland (FSAI) is to ensure that food produced, distributed or marketed in Ireland meets the highest standards of food safety and hygiene reasonably available and to ensure that food complies with legal requirements, or where appropriate with recognised codes of good practice. There are currently over 50 pieces of national and EU legislation on food safety in force in Ireland.

The FSAI's Code of Practice For Food Safety in the Fresh Produce Supply Chain in Ireland presents comprehensive standards of food safety practices for the production, management and handling of fruit and vegetables. It is aimed at producers, processors, wholesalers and retailers involved in the provision of horticultural produce to consumers.

<sup>12</sup> Dáil Debates, 26 March 2003.

<sup>13</sup> Teagasc, Advisory Services 2002 Programme of Activity

### Incentive schemes and funding

In both Northern Ireland and Ireland, there are many different types of incentive schemes and sources of funding available to the horticulture industry. Some schemes are particular to horticulture, while others are general rural development or farming support schemes. Many are part of EU-wide general support and incentives for rural development.

#### NORTHERN IRELAND

In Northern Ireland, many schemes are available through the Northern Ireland EU Structural Programme, Building Sustainable Prosperity, and through the EU Programme for Peace and Reconciliation. For a summary of these, see the Directory of Funding Sources for Rural Northern Ireland 2002-2006 (available on the DARD website).

The following are areas of particular interest to horticulture where support is available:

#### MARKETING

- Support for collaborative marketing ventures;
- Support for developing/marketing speciality foods or organic products; and
- Support for developing quality assurance and traceability systems.

#### CAPITAL EXPENDITURE

- Assistance for potato farmers to invest in storage, packing and processing facilities; and
- Assistance for horticulture generally to improve processing facilities.

#### IRELAND

As in Northern Ireland, there are a number of general incentive and rural development schemes that are appropriate for the horticulture industry in Ireland. These include a range of capital investment and marketing schemes, and the Rural Environment Protection Scheme (REPS).

- Capital Investment Scheme for Marketing and Processing of Agricultural Products;
- Scheme of Investment Aid for the Development of the Commercial Horticulture Sector; and
- Scheme of Investment Aid for the Development of the Potato Sector.

(See the Agriculture and Food Development page of the DAF website for details of these and other schemes that may be appropriate).

### Training and development: Northern Ireland

The School of Agriculture and Food Science (SAFS) of Queen's University Belfast offers a number of degree-level courses in agriculture. DARD also has three agricultural colleges at Greenmount, Loughry and Enniskillen. The Greenmount campus offers a range of diploma, certificate and short courses in horticulture.

The current training infrastructure in Northern Ireland, however, is likely to change as the Government responds to the recommendations of the O'Hare Report on the Arrangements for the Provision of Agri-Food Education and R&D in Northern Ireland. In particular, it is likely that the three DARD colleges will be combined into a single college.

#### HORTICULTURE AT GREENMOUNT CAMPUS

Situated just outside Antrim town, Greenmount Campus provides education and training in agriculture, horticulture and countryside management. It offers a range of full-time, part-time and short courses to people entering and those already working in the agri-food industry; its horticulture courses include:

- Higher National Certificate in Horticulture;
- Higher National Diploma in Horticulture;
- First Diploma in Amenity Horticulture;
- National Certificate in Floristry;
- National Certificate in Horticulture; and
- National Diploma in Horticulture.

### Training and development: Ireland

University College Dublin's (UCD's) Department of Crop Science, Horticulture and Forestry offers degree level courses in Horticultural Science and Landscape Horticulture. UCD are also exploring the possibility of progression into their degree courses for graduates from Greenmount College in Northern Ireland.

Teagasc, the national body responsible for providing research, training and advice for the agri-food industry in Ireland offers courses in horticulture at Kildalton and at the Botanic Gardens in Dublin.

There are also a number of private colleges offering horticulture training, including the Irish Countrywomen's Association College of Horticulture (an Grianán) at Termonfeckin, Co. Louth

and an t-Ionad Glas, the Organic College at Drumcollogher, Co. Limerick. There have also been significant developments in horticultural education in Ireland with the commencement of the National Diploma in Horticulture (NDH) accredited by the Higher Education Training and Awards Council (HETAC), and the Vocational Certificates in Horticulture accredited by the Further Education Training and Awards Council (FETAC). The following provides information on where these courses are available:

COURSES	NATIONAL DIPLOMA IN HORTICULTURE	VOCATIONAL CERTIFICATES IN HORTICULTURE
<b>AVAILABLE IN</b>	<ul style="list-style-type: none"> <li>• Kildalton Horticultural College</li> <li>• Salesian College of Horticulture</li> <li>• National Botanic Gardens / Institute of Technology, Blanchardstown</li> </ul>	<ul style="list-style-type: none"> <li>• Kildalton Horticultural College</li> <li>• Salesian College of Horticulture</li> </ul>

NDH students registered at the Institute of Technology Blanchardstown (ITB) also attend Warrenstown Horticultural College, Co. Meath, or the College of Amenity Horticulture at the Botanic Gardens in Dublin. The Waterford Institute of Technology offers a similar arrangement with Kildalton College, Co. Kilkenny. Progression from the NDH into the two horticulture degree courses at UCD will be available from 2004.

**R&D facilities: Northern Ireland**

There are two main sites in Northern Ireland that perform R&D on horticultural produce. These are:

- Northern Ireland Horticulture and Plant Breeding Station (NIHPBS) at Loughgall, Co. Armagh; and
- Northern Ireland Plant Testing Station at Crossnacreevy in Belfast.

Both operate under the control of DARD's Applied Plant Science Division at the Agriculture and Science Division, Belfast.

The NIHPBS undertakes R&D into all areas of horticulture, including

**MUSHROOM RESEARCH**

- Pest and disease control and the reuse of Spent Mushroom Compost (SMC).

**APPLE RESEARCH & DEVELOPMENT**

- Centred on the Bramley's Seedling variety.

**SPECIALIST HORTICULTURAL PRODUCTION**

- Research on alternative growing media, and Plant Protection and the reduction of inputs of agrochemicals.

**LABORATORY SERVICES**

- A range of analytical services to support the local industry.

**POTATO BREEDING**

- Development of new varieties with a range of end uses.

The Northern Ireland Plant Testing Station in Crossnacreevy incorporates the Northern Ireland Official Seed Testing Station and is a centre of expertise on seed and cultivar science and technology. R&D and statutory work is carried out on seeds and cultivars, and specialist advice is provided to government and industry. Other activities undertaken include protection of UK plant breeders' rights, UK National List trials, DARD recommended list testing, plus a number of research projects.

**R&D facilities: Ireland**

Almost all universities and Institutes of Technology (ITs) in Ireland have some history of R&D in horticulture, and many have ongoing research projects in progress. Teagasc also has a strong R&D remit and undertakes horticulture R&D at Kinsealy Research Centre outside Dublin and at the Soft Fruit Research Station, Clonroche, Co. Wexford. Currently, however, R&D funding is in decline and the Kinsealy Research Centre is under threat of closure. Teagasc is also considering the closure of its organic research and training programme due to the funding decline.

**Institutional cross-border links**

Universities and research institutions have long cooperated on projects of mutual interest - sharing resources, research findings and specialist topics. Such cooperation and sharing is

formalised through the work of a number of professional associations and research bodies.

**SAFEFOOD - FOOD SAFETY PROMOTION BOARD**

Safefood - the Food Safety Promotion Board is one of the all-island bodies set up under the Good Friday Agreement. Its aims include:

- Promotion of food safety;
- Research into food safety;
- Communication of food alerts;
- Surveillance of foodborne diseases;
- Promotion of scientific cooperation and linkages between laboratories; and
- Development of cost-effective facilities for specialist laboratory testing.

Safefood has a commissioned research programme, conducted on an all-island basis using a partnership approach between the key research and academic agencies, North and South.

**INSTITUTE OF HORTICULTURE**

The Institute of Horticulture is an organisation representing people who are professionally engaged in horticulture in the United Kingdom and in Ireland. Its members include growers, researchers, and educators and personnel from state agencies in both Northern Ireland and Ireland.

The Institute works to further the advancement of horticulture, and its membership includes people and organisations from both the Food and the Amenity sectors.

**SOCIETY OF IRISH PLANT PATHOLOGISTS**

Based at UCD, the Society of Irish Plant Pathologists operates as an all-island group of research scientists and plant health specialists. The Society works to promote the science of plant pathology and to disseminate knowledge about plant diseases and plant health management.

**CENTRE FOR INNOVATION IN BIOTECHNOLOGY**

The Centre for Innovation in Biotechnology in Coleraine is a partnership between the University of Ulster (UU), Queen's University Belfast (QUB) and BioResearch Ireland. The Centre has recently joined forces with the Mushroom Research Group to seek ways to enhance the competitiveness of the mushroom export industry throughout Northern Ireland and Ireland.

**RECOMMENDATIONS**

In Chapter 3 we reviewed the critical challenges facing the horticulture industry in Ireland and Northern Ireland. In this chapter, we address how these challenges might be addressed by policy makers, implementation bodies and by the industry itself.

**Policy cohesion**

**IMPLEMENTATION STRUCTURES**

Growers in Ireland have access to significantly better agency resources compared to Northern Ireland growers. Bord Glas provides a focus and a co-ordinating role for horticulture that is not present in Northern Ireland, where such functions are fulfilled by sections of DARD.

The establishment of a functioning organisation responsible for the development of the horticulture industry in Northern Ireland is essential. Resources attributed in Northern Ireland should be broadly similar to those available to the horticulture industry in Ireland. In particular, such a body could help to distinguish horticulture from the general agriculture industry.

**FOOD SERVICE**

The Food Service sector is becoming a very important target market for prepared horticulture produce, and the industry needs to find ways to meet this demand. There are substantial opportunities to replace imports of prepared and value-added produce.

**WIDER BENEFITS**

Policy makers, implementation bodies and the industry itself all have a role to play in promoting the wider social, health and economic benefits of horticulture.

RECOMMENDATIONS	
<b>POLICY MAKERS / IMPLEMENTATION BODIES</b>	<ul style="list-style-type: none"> <li>• Remodel implementation structures in Northern Ireland to achieve parity with those in place in Ireland.</li> <li>• Support horticulture clusters with export market development potential through their programmes and overseas networks.</li> <li>• Develop specific programmes aimed at increasing sales of prepared fresh fruit and vegetable produce via the Food Service sector. (Bord Bia and Invest Northern Ireland)</li> </ul>
<b>INDUSTRY</b>	<ul style="list-style-type: none"> <li>• Increase awareness amongst policy makers of the wider role of horticulture in the creation of wealth and enhancement of the environment.</li> </ul>

## Meeting consumer demand

### MARKET INTELLIGENCE

Growers in Ireland are able to avail of excellent market intelligence provided by Bord Glas and the DAF. There is limited market intelligence provided by DARD on the Northern Ireland horticulture industry. New markets such as 'Snacking on the Go' and sales via 'Fresh Produce Markets' are showing increases.

Future policy-making and strategic development of the industry has its foundation in the availability of reliable and accurate market intelligence rather than anecdotal evidence.

### BRANDING OPPORTUNITIES

There are limited opportunities for branding on basic commodities. There is, however, the potential to expand the generic Garden Ireland concept, both domestically and in export markets.

Growers and sector associations need to explore further opportunities for common marketing and branding initiatives. In the Amenity sector, for example, point-of-sale opportunities could be enhanced by developing consistent branded quality.

### MARKET DIFFERENTIATION

Higher processing costs, labour shortages and competition from cheaper imports means that horticulture needs to differentiate itself to the market place on factors other than price. There are opportunities to present to the island market fresh, local produce to accredited quality standards.

There is considerable market opportunities in the domestic market for certified organic produce, and the Organic sector needs to scale up to meet that demand.

### NICHE DEVELOPMENT

Niche markets present the horticulture industry in Ireland and Northern Ireland with opportunities to compete internationally at the highest levels - such niches include bulbs, nursery plants, fruit and Christmas trees. Participation in such markets needs to be founded on excellent market intelligence, continuous product and process R&D, and also requires specialisation and expertise.

RECOMMENDATIONS	
<b>POLICY MAKERS / IMPLEMENTATION BODIES</b>	<ul style="list-style-type: none"> <li>Conduct a biannual in-depth census of grower output, using common data collection and analysis methods North and South.</li> <li>Conduct market research to focus on identifiable opportunities.</li> <li>Expand the Garden Ireland generic marketing concept</li> </ul>
<b>INDUSTRY</b>	<ul style="list-style-type: none"> <li>Develop new, value-added products to meet identified consumer demand</li> <li>Scale up Organic sector</li> </ul>

## Traceability and quality

### OBLIGATORY TRACEABILITY

From 1 January 2005, the EU will require obligatory traceability of all food produce in the EU; the horticulture industry in Northern Ireland and Ireland needs to be adequately prepared for this deadline.

Industry must continue to employ and enforce rigorous systems to meet the EU requirements on traceability. To achieve this, producers need to invest in improved procedural management systems.

Policy makers need to implement supports to address weaknesses in the ability of some growers and processors to conform to the EU traceability process, and policy should address the availability of key support mechanisms.

### QUALITY STANDARDS

Quality is now a given with consumers and retailers: in particular, supermarket multiples now insist on quality standards. Quality standards help to ensure consistency and measurability, to reduce wastage and to increase competitive advantage.

The quality scheme developed by Bord Glas together with Northern Ireland's Assured Produce programme have considerably enhanced the quality image of horticultural produce. More needs to be done, however, and there is an opportunity to standardise an all-island quality scheme for the industry. Trade between Northern Ireland and Ireland could benefit significantly from the greater transparency and improve consumer confidence that such a scheme would provide.

RECOMMENDATIONS	
<b>POLICY MAKERS / IMPLEMENTATION BODIES</b>	<ul style="list-style-type: none"> <li>Make support mechanisms available to enable producers to meet the EU traceability requirements.</li> <li>Standardise an all-island quality scheme.</li> </ul>
<b>INDUSTRY</b>	<ul style="list-style-type: none"> <li>Improve procedural management systems to ensure traceability.</li> </ul>

## R&D and investment

### DECLINING R&D

Specific R&D into the horticulture industry is in decline in both Northern Ireland and Ireland. At the same time, competition from other agriculture sectors is serving to even further diminish the R&D resource allocation for horticulture. The continued decline of horticulture R&D will impact on the ability of producers to move with market trends and react to positive market opportunities.

Policy on horticulture R&D should be specific and separated from the remit of agriculture. Key sectors, including Mushrooms, Amenity, Organic and Fruit should be given special attention - within these sectors, there are opportunities for all-island, market-led R&D.

### THE NEED TO INVEST

Under-capitalisation is the single biggest problem in Irish horticulture market, and the industry needs to reinvest in order to develop scale, improve product quality and take advantage of the many market opportunities that are available. However, tightening margins and rising insurance costs are inhibiting producers from making the necessary investment.

### R&D AND WEATHER

The variability of weather on the island does not make for the best conditions for the horticulture industry. Further research is needed into ways in which the negative impact of weather variation can be reduced.

There is also an opportunity for cross-border R&D into the effects of climate change on the horticulture industry.

RECOMMENDATIONS	
<b>POLICY MAKERS / IMPLEMENTATION BODIES</b>	<ul style="list-style-type: none"> <li>• Separate horticulture R&amp;D from general agriculture R&amp;D</li> <li>• Develop an all-island market-led R&amp;D strategy</li> <li>• Target specific R&amp;D initiatives</li> </ul>
<b>INDUSTRY</b>	<ul style="list-style-type: none"> <li>• Focus R&amp;D on storage, extension of the growing season, more suitable varieties</li> </ul>

## Human resources and training

### LABOUR AND SKILLS SHORTAGES

Indigenous labour is increasingly difficult to recruit into the horticulture industry. With fewer Irish workers entering the industry and the increasing dependence on temporary foreign workers, there is a declining pool of sustainable knowledge, in the horticulture.

Scarcity of labour and succession issues will remain for the foreseeable future, and policy needs to reflect the need to use more foreign labour, especially from Eastern Europe.

Indigenous growers should also be able to avail of training and skills development options, for employees to ensure market development.

### LACK OF BUSINESS SKILLS

Running a successful horticulture enterprise requires all of the standard business skills in areas such as human resources, finance, strategic planning and marketing. In both Ireland and Northern Ireland, growers should receive training in these essential business skills to assist them to develop and scale up their operations.

Globalisation and the increased competitive environment make it imperative that people in the industry become more professional in all areas of business development and understand how the supply chain operates.

As clusters of specialisation and expertise emerge in both Ireland and Northern Ireland, there are opportunities for common approaches and the pooling of resources - these may include networking, training workshops and mentoring programmes.

Skills and training deficits are common on both sides of the border. This could necessitate a common approach and pooled resources.

RECOMMENDATIONS	
<b>POLICY MAKERS / IMPLEMENTATION BODIES</b>	<ul style="list-style-type: none"> <li>• Promote and extend the Seasonal Agricultural Workers Scheme (SAWS) in Northern Ireland and the Seasonal Horticultural Workers Scheme (SHWS) in Ireland schemes to attract more student / seasonal labour.</li> <li>• Facilitate skills transfer programmes - particularly on supply chain issues and on new technologies.</li> </ul>
<b>INDUSTRY</b>	<ul style="list-style-type: none"> <li>• Pool resources to establish skills transfer programmes</li> <li>• Take up opportunities for business skills training.</li> </ul>

## APPENDIX A: SUMMARY OF STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

### Strengths

- Strong consumer support
- Positive impact on regional economies
- Positive image at home and abroad
- Good training and R&D facilities
- Improved traceability and accreditation
- Dynamism among growers
- Processors increasingly market-focused

### Weaknesses

- Lack of critical mass
- Commodity-based approach
- Added value NPD
- Lack of competitiveness
- Lack of investment
- Lack of cohesion / cooperation
- Lack of business skills / planning
- Lack of market intelligence
- Absence of an R&D strategy
- Lack of adequate funding

### Opportunities

- Changes in eating habits
- Health consciousness
- Organic sector
- Branding / marketing
- All-island market
- Food service growth
- Garden centres
- Amenity export markets
- Food export markets

### Threats

- Imports
- Limited differentiation of produce
- Consumer confidence
- CDCs and routes to market
- Operating costs
- Labour shortages

## APPENDIX B: SOURCES

Bord Bia publications available at [www.bordbia.ie](http://www.bordbia.ie)

Bord Glas publications available at [www.bordglas.ie](http://www.bordglas.ie)

Central Statistics Office, *Area, Yield and Production of Crops 2000-2002*  
[www.cso.ie/publications/agriculture/aycrop.pdf](http://www.cso.ie/publications/agriculture/aycrop.pdf)

Commission of the European Communities, *White Paper on Food Safety, 2000*  
[europa.eu.int/comm/dgs/health\\_consumer/library/pub/pub06\\_en.pdf](http://europa.eu.int/comm/dgs/health_consumer/library/pub/pub06_en.pdf)

Department of Agriculture and Rural Development (Northern Ireland) publications available at [www.dardni.gov](http://www.dardni.gov)

Department of Agriculture and Food (Ireland) publications available at [www.agriculture.gov.ie](http://www.agriculture.gov.ie)

Department for Environment, Food and Rural Affairs (United Kingdom) *Standards for Fresh Fruits, Vegetables, Salad Crops and Nuts, A Retailer's Guide, 2003*  
[www.defra.gov.uk/hort/hmi/guides/retail.pdf](http://www.defra.gov.uk/hort/hmi/guides/retail.pdf)

Department of Finance (Ireland), *National Development Plan 2000-2006 (2000)*

Enterprise Ireland publications available at [www.enterprise-ireland.com](http://www.enterprise-ireland.com)

Food Standards Agency, Northern Ireland publications available at [www.foodstandards.gov.uk/northernireland/](http://www.foodstandards.gov.uk/northernireland/)

Food Safety Authority of Ireland publications available at [www.fsai.ie](http://www.fsai.ie)

IFOAM/EU Regional Group, *A sustainable agricultural policy for Europe - Position paper on CAP review and reform (2002)*  
[www.ifoam.org](http://www.ifoam.org)

Invest Northern Ireland publications available at [www.investni.com](http://www.investni.com)

Teagasc publications available at [www.teagasc.ie](http://www.teagasc.ie)

## APPENDIX C: PEOPLE AND ORGANISATIONS CONSULTED

### POLICY MAKERS AND IMPLEMENTATION BODIES

#### BORD BIA

Michael Hussey  
*Dublin, Ireland*

#### DARD

Aaron Wright  
Michael McKinney  
*Belfast, Northern Ireland*

#### ENTERPRISE IRELAND

Joe Fox  
*Dublin, Ireland*

#### GREENMOUNT AGRICULTURAL COLLEGE

Stephen Millar  
Bill Simpson  
*Antrim, Northern Ireland*

#### INVEST NI

William Magee  
Stephen Wightman  
*Belfast, Northern Ireland*

#### IRISH BULB PRODUCERS ASSOCIATION

John Coleman  
*Ireland*

#### IRISH CHRISTMAS TREE GROWERS ASSOCIATION

Mick Kelly  
*Ireland*

#### IRISH ORGANIC FARMERS & GROWERS ASSOCIATION

John Hoey  
*Belfast, Northern Ireland*

#### IRISH SOFT FRUIT GROWERS ASSOCIATION

Susan Kearns  
*Ireland*

#### MUSHROOM INDUSTRY ASSOCIATION OF NORTHERN IRELAND

Gordon Orr  
*Dromara, Northern Ireland*

#### TEAGASC

Cathal Cowan  
Liam Staunton  
*Dublin, Ireland*

#### UCD

Dr Owen Doyle  
*Dublin, Ireland*

#### BORD GLAS

Alice McGlin  
Lorcan Bourke  
Mike Neary  
Declan Fennel  
*Dublin, Ireland*

#### IRISH FARMERS ASSOCIATION - NATIONAL POTATO CO-ORDINATOR

Malachy Mitchell  
*Dublin, Ireland*

#### IRISH FARMERS ASSOCIATION - IRISH MUSHROOM GROWERS ASSOCIATION

Kieran Leady

#### DAFRD

Gerry Heskins  
Michael Hickey  
*Cork, Ireland*

#### CONSUMER ASSOCIATION OF IRELAND

Colin Bird  
*Ireland*

## INDUSTRY CONTACTS

### BALLYLIKEN PLANT CENTRE

Rosemary Campbell  
Bushmills, Northern Ireland

### CAPPOQUIN FRUIT FARM

Keane Family  
Cappoquin, Ireland

### CARRIGDALE NURSERY

Owner  
Newcastle, Northern Ireland

### CHAPMAN FOODS

Harold Chapman  
Portadown, Northern Ireland

### CHIVERS IRELAND

Maurice Horgan  
Dublin, Ireland

### CISTI GUGAN BARRA TEO

Joan & Michael  
Ireland

### CLONLEEK FARM LTD

Alma  
Glaslough, Ireland

### COOLMORE GARDENS

Rowland Newenham  
Carrigaline, Ireland

### EVERGREEN PEAT PRODUCTS

J. McCusky  
Coalisland, Northern Ireland

### FERNHILL NURSERIES

Stephen and Anita Gordon  
Banbridge, Northern Ireland

### FRESH FOOD KITCHEN

Bob Tyrell  
Londonderry, Northern Ireland

### HALLS NURSERIES & GARDEN CENTRE

J. Hall  
Portadown, Northern Ireland

### IRISH CHRISTMAS TREE GROWERS

Mick Kelly  
Ireland

### IRISH GARDEN PLANTS

Doug Thomson  
Seaforde, Northern Ireland

### K HUGHES & CO LTD

Jim O'Donnell  
Dungannon, Northern Ireland

### KILDARE GROWERS (L&K DUNNE NURSERIES)

Kieran and Laurance Dunne  
Naas, Ireland

### KILMURRAY JAMS LTD

Bella and David Kinghan  
Kilmacanogue, Ireland

### KYRLE ALLEN

Kyrle Allen  
Ovens, Ireland

### MCGEARY FRESH MUSHROOMS LTD

Geoffrey McGeary  
Dungannon, Northern Ireland

### MICHAEL MCGIOLLA CODA

Michael McGiolla Coda

Burncourt, Ireland

### MILNE FOODS

Justin  
Birr, Ireland

### MOURNE MUSHROOMS MARKETING LTD

Joe Murphy  
Newry, Northern Ireland

### NORTH DOWN GROUP

Perry Donaldson  
Belfast, Northern Ireland

### NORTHWINDS NURSERY

Ronnie Verner  
Bushmills, Northern Ireland

### O'DONOVAN VEGETABLES

John O'Donovan  
Ireland

### RATHCOONEY FOOD FARMS

Owner  
Glanmire, Ireland

### ROSS HAZEL FARMS

J. Orton  
Clonard, Ireland

### SPARKY PAC

Mark McKee  
Comber, Northern Ireland

### SUNNYSIDE FRUIT FARM

John Howard  
Rathcormac, Ireland

### THE APPLE FARM

Con Traas  
Cahir, Ireland

### WALSH FAMILY FOODS LTD

Paddy Walsh  
Finglas, Ireland

### WALSH MUSHROOMS PRODUCTIONS LTD

Alan Walsh  
Gorey, Ireland

### WEXFORD FARMERS CO-OP

P.J. Darcy  
Wexford, Ireland



