



**PRODUCER ORGANISATIONS
IN THE FRUIT AND VEGETABLES SECTOR**

**NATIONAL STRATEGY
FOR SUSTAINABLE OPERATIONAL PROGRAMMES
2009 - 2013**

Council Regulation (EC) No 1234/2007
and
Commission Regulation (EC) No 1580/2007

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1. A FIVE-YEAR STRATEGY

This strategy, which has been drawn up in accordance with Article 103*f* of Council Regulation (EC) No. 1234/2007 and Article 57 of Commission Regulation (EC) No. 1580/2007, will apply to approved operational programmes implemented by recognised producer organisations and commencing on 1 January 2009 or on 1 January of the following four years. The strategy will also apply to programmes that commenced on or before 1 January 2008 if they are amended after that date.

The strategy may be amended in particular in the light of monitoring and evaluation. Amendments will be made before the submission of draft operational programmes in any given year.

2. IRISH FRUIT AND VEGETABLE PRODUCTION

2.1. OVERVIEW OF THE SECTOR

Production of fruit and vegetables is a significant entity within the overall agricultural industry, making an important economic contribution in terms of supplying the domestic market, employment and foreign trade.

Sector	2004 €m	2007 €m	Change 2004 v 2007
Mushrooms	114.5	97.4	- 15%
Field vegetables	56.7	63.3	+13%
Protected Crops	36.8	45	+ 22%
Fruit Crops	8.9	8	- 10%
TOTAL	216.9	213.7	- 1.5%

Field vegetables and protected crops together had a farm output value in 2007 of €108m, a 16% increase on the 2004 output value. Mushrooms on the other hand have gone through a very difficult period, with farm output value at €97m down by 15% on 2004 levels. The fruit and vegetable sector is experiencing considerable consolidation in all areas as scale becomes a significant prerequisite for success.

The market in Ireland is dominated by the multiples who have enormous bargaining power. They prefer to be supplied from one or two sources and they exert unrelenting pressure on producers to drive down prices. This pressure, coupled with ever-increasing input costs, particularly the costs of energy and labour, has resulted in many producers leaving the sector. There has been a significant reduction in the number of producers since 2004.

Crops / producers	2004	2007
Mushrooms	228	85
Field vegetables	294	238
Protected crops	245	160
Fruit crops	104	100

Source: DAFF estimates

2.1.1 THE SUB-SECTORS

2.1.1(a) MUSHROOMS

This is the single most important crop in Irish horticulture; its farm gate value of €97m in 2007 represented 46% of the value of fruit and vegetable production. Ireland is almost totally self-sufficient in mushrooms, with only small quantities of exotic types imported.

- The bulk of the crop is grown for export, with 80% of all production exported to the UK. Irish owned production operations in Ireland and the UK supply close to half of the fresh market there.
- The margin on mushrooms is very tight and the extreme price competition in recent years has resulted in serious consolidation in the sector.
- There has been a significant decline in the number of producers from 228 in 2004 to 85 at present. However, the level of output has remained relatively stable, as there has been an increase in the scale of operation of growers remaining in the business in an effort to reduce unit cost.
- The expansion of Phase III compost facilities is a prerequisite for the sustainability of this sector. Increased availability of Phase III compost would help reduce production costs through higher productivity per tonne of compost and shorter growing cycles in the production units.
- There is strong cross-border co-operation with Northern Ireland in the mushroom sector.

The value of mushrooms marketed by Irish POs in 2007 was €168m.

2.1.1(b) FIELD VEGETABLES

In 2007 the farm gate value of fresh field vegetables produced in Ireland was €63m. Carrots and cabbage are the two most important field crops in terms of both production area and farm gate value. Production is sold mainly as fresh produce. The volume of field vegetable farm gate production is approximately twice the volume of the same categories imported. Imports are largely when seasonal conditions do not allow for local supply and there does not appear to be significant opportunity for either import substitution or export growth. The viability of the sector is a major issue because of the constant downward pressure on prices paid to producers by the multiples. Costs have been rising by as much as 11% per annum and there have been no price increases in several years.

The value of field vegetables marketed by Irish POs in 2007 was €3.7m.

The number of growers producing field vegetables in 2007 was 238. Nine of these growers were in POs.

In 2007 4,600 hectares of field vegetables were produced, which was virtually unchanged from 2004. PO members grew 373 hectares.

Field crops	National production 2007	
	Area (hectares)	Value ex farm-gate (€m)
Carrots	722	16.3
Cabbage	841	9.2
Broccoli	552	4.9
Swedes	506	5.6
Cauliflowers	423	6.0
Parsnips	363	4.5
Outdoor lettuce	177	4.4
Brussels sprouts	182	2.1
Other	834	10.2
Totals	4600 hectares	€63m

2.1.1 (c)

PROTECTED CROPS

In 2007, the farm gate value of Irish protected crops amounted to €45m. 160 growers account for 315 hectares, with much of the output sold on the domestic market. The overall trend is towards fewer growers but increasing production value.

This sector has shown very good growth, primarily as a result of the change in strawberry production from outdoors to protected structures. Strawberries account for over 50% of output value and further growth is likely as growers aim to extend the season further. There may also be limited opportunities for exports. However, while the success of the strawberry segment is due to the use of new technology under glass and more efficient growing tunnels, energy costs exert increasing pressure on margins.

Tomato production accounts for 21% of the protected crops output value. The trend in this segment is towards diversification into profitable niches such as vine tomatoes and vine plum tomatoes.

The value of protected crops (tomatoes, strawberries, cucumbers, peppers and lettuce) marketed by Irish POs in 2007 was €45m. This was produced by 20 growers on 34 hectares.

Protected crops	National production 2007	
	Area (hectares)	Value ex farm-gate (€m)
Strawberries	115	24.3
Tomatoes	20	9.6
Lettuces	106	3.8
Cucumbers	11	2.3
Peppers	6	1.4
Others	57	3.7
Total	315 hectares	€45.1m

2.1.1(d). SOFT FRUITS / TOP FRUITS

The sector is a small one and is coming under increasing pressure primarily because of a lack of scale. There were approximately 99 growers in the outdoor soft fruit sector in 2007. Five of these were PO members.

The output value of outdoor soft fruits/top fruits was €8 million in 2007. The volume of outdoor fruit produced is about one-third of the volume of fresh fruit imported. Strawberries are still the dominant crop in the soft fruit sector, but there has been a major shift towards producing them under protection (see section 2.1.1(c)). Due to variations in our climate, apple output has a tendency to fluctuate from year to year. There is further potential for juice and cider production.

Soft fruits/ Top fruits	National production 2007	
	Area (hectares)	Value ex farm-gate (€m)
Apples culinary/cider	620	3.8
Outdoor Strawberries	70	0.9
Raspberries	35	1.7
Others	121	1.5
Total	846 hectares	€7.9m

2.1.2. ENVIRONMENTAL EFFECTS OF FRUIT AND VEGETABLE PRODUCTION

The areas under production have remained relatively static over the last few years and the different crops continue to be produced in what have been traditional areas. Growers are paying increasing attention to the environmental impact of their activities and are making investments to ameliorate the negative impact particularly in relation to water usage and disposal of waste.

Disposal of spent mushroom compost (SMC) is a serious issue for the industry and one that can only increase in importance. Efforts are underway to explore different options of dealing with SMC in a way that minimises its impact in the environment.

Field vegetables continue to be produced in the traditional areas of production. There has been little or no expansion in this area. Growers are investing in processes to minimise the effects on the environment, particularly in regard to treatment of water used for washing.

The switch from field grown strawberries to strawberries grown under protection, many of which are grown in self contained units rather than in soil, has allowed the introduction of water capture and reuse systems.

There has been little or no expansion outside the traditional areas of production for soft fruits and top fruits. It is not anticipated that there will be any great expansion in the near future.

The environmental situation is assessed further in Section 1 of Annex A.

2.1.3. DEVELOPMENT OF POs IN IRELAND SINCE 1999

PO members have benefited from their greater knowledge and understanding of the market and each others' production, and from coming together and organising on this scale with or without the help of marketing companies. Improvements in the quality and presentation of Irish produce over the past decade have been very substantial as producers have improved grading and packaging to meet the demanding standards of the supermarkets. This development has been facilitated by the POs through investment in improved facilities and support for marketing and quality assurance.

When the Producer Organisation Scheme was introduced by Council Regulation 2200/96, the Irish retail trade was already dominated by the supermarket chains and multiples who were supplied in turn by a small number of large importer facilitators, who had acquired prepacking enterprises and had strong traditional links to individual growers. This structure made it more difficult for the new POs to break into the marketing chain.

By 2002, 17 new POs were established, with 13 of these in the mushroom category. Although there have been no formal mergers of mushroom POs, the ad hoc consolidation of their membership and the national decline in mushroom producers has reduced the number of POs in this category to just 2 in 2008. Membership of POs peaked at 404 members in 2000 but had declined to 78 at the end of 2007. These membership figures included mushroom producers in the UK. The Irish membership can be compared as follows with overall numbers of growers taken from censuses of fruit and vegetable growers carried out by the Department and from Teagasc records of mushroom growers:

Year	Mushroom growers	Mushroom growers in Irish POs (figures in brackets include transnational members of the POs)	Percentage of Irish growers in POs
2000	504	357 (379)	71%
2002	365	333 (341)	91%
2004	228	216 (255)	95%
2007	85	79 (90)	93%

Year	Fruit/Vegetable growers	Fruit/Vegetable growers in Irish POs	Percentage of Irish growers in POs
2000	n.a	25	n.a.
2002	577	45	8%
2004	549	77	14%
2007	483	30	6%

With one more Fruit and Vegetable PO ceasing operations in 2008, only 21 fruit and vegetable growers are now PO members.

2.1.4. POTENTIAL FOR DEVELOPMENT

The Irish population is expanding rapidly. The total population in April 2006 was 4,234,925 – an increase of 8.1% compared with the previous census in 2002. The record growth in this period includes annual net inward migration of 46,000. The horticulture industry has therefore a growing market and one that demands diversity. Immigrants constitute approximately 10% of the total population; this offers the potential to produce for niche requirements.

Consumption of fruit and vegetables in Ireland has been very low. The annual consumption per capita was 245g in 2006; the level recommended by WHO and FAO is 400g. If this consumption rate can be improved, there will be a significant expansion in demand. The sector can benefit in practical terms from educating consumers on the health benefits of eating fruit and vegetables. With increasing awareness of the dangers of childhood obesity and with more sophisticated lifestyles, people are ready to take this message on board.

Consumer awareness of the benefits of locally grown fresh produce is growing. The bulk of Irish fruit and vegetable production is sold fresh and the range, quality and presentation of Irish produce has improved significantly and it is capable of satisfying the most discerning consumers. Consumers are becoming increasingly aware of the global concerns about climate change. This combination promises an increase in market share for locally grown produce.

Openings for new products. The increase in strawberry production through the adoption of new technology has shown the potential for increases in other crops such as raspberries and blueberries. Increasing travel abroad may well result in products that have previously been regarded as exotic becoming more mainstream. Increasing oil prices will alter the economics of shipping fresh food over long distances and may promote an increase in Irish production of crops such as peppers, herbs and salad crops.

Organic production: The organic sector in Ireland is still very small in relation to agriculture as a whole. In 2007 there were just over 1,270 organic operators in all sectors in Ireland with just under 40,000 hectares of land under organic production methods, less than 1% of our agricultural land area. The Programme for Government set a target of increasing the amount of utilisable agricultural land area under organic production to 5% by 2012. An Organic Farming Action Plan was launched recently to assist in achieving this target.

There is an opportunity for growth in this area. Currently there is a large proportion of imported organic fruit and vegetables sold in Ireland and while some of the produce such as citrus will always be imported there is still a significant opportunity for expansion in organic production. Unlike many sectors of horticulture where the

trend is towards consolidation, organic production is well-suited to small-scale production.

More dynamic marketing measures. There is potential for increasing market share through promotion, marketing, innovation and new product development. Concentration of these functions in POs will allow producers concentrate on their core business.

Positive effects of consolidation. The trend towards increasing consolidation and specialisation should increase the competitiveness of the sector through economies of scale. Larger production units should allow for an increase in labour productivity through investment in mechanisation in what has traditionally been a labour intensive industry.

2.2.1 PRIORITY NEEDS OF THE SECTOR / STRATEGIES TO ADDRESS THOSE NEEDS

PRIORITY NEEDS

To improve returns for producers

To maintain or increase market share

To optimise production costs

STRATEGIES

To improve returns

Greater participation in POs will be encouraged. POs are an important mechanism for growers to achieve greater bargaining power in the marketplace by becoming part of a larger supply base.

POs will be supported in their endeavours to negotiate with the multiples for better terms and returns. Producers of fruit and vegetables often see themselves as price takers. The potential strength of the PO is to give growers control of their own production.

The development of PO brands will be encouraged. Recognisable brands would allow the POs to differentiate and promote the unique qualities of their products, thus creating consumer demand for their specific product rather than for fruit and vegetables as a commodity.

To increase market share

POs will be encouraged to work with retailers to develop the market for fruit and vegetables, thus raising the level of consumption of the products and the margins available to the producers.

POs will be encouraged to engage in the promotion of fruit and vegetables as part of a healthy lifestyle - to increase consumer awareness and help increase consumption.

POs will be encouraged to generate demand for local seasonal produce. Consumers generally have a preference for locally grown fresh produce and it is important that the high quality attributes of Irish produce are adequately promoted and clearly presented so that consumers can exert choice at the supermarket shelves.

POs will be encouraged to move up the value chain by developing branded products with some added value and to adapt production lines to changing lifestyles.

POs will be encouraged to avail of opportunities to expand organic production. The provision of technical advice will be assisted to expand and promote organic and integrated production.

To optimise production costs

POs will be encouraged to invest in the best technical advice to optimise production inputs and improve competitiveness, to boost the commercial value of production and to extend the growing season.

Producers are experiencing consolidation, with a smaller number of growers accounting for a greater proportion of output. Producers are also facing opportunities in relation to new products and facing challenges in relation to the storage and handling of product. Ongoing technical and advisory support is needed to improve competitiveness and maximise returns. Investment in increased mechanisation, modernisation and specialisation will be encouraged.

POs will be encouraged to increase labour productivity in what has traditionally been an industry with high labour input, and to promote sustainability through improved working conditions.

POs will be encouraged to undertake environmental measures that will reduce the carbon footprint – particularly more efficient and alternative energy use. This in turn could be used as a promotional tool for consumers concerned about climate change.

All of these issues can be addressed in operational programmes.

2.2.2. BASELINE INDICATORS FOR NATIONAL STRATEGY

The baseline data are from 2007 rather than a three-year average, as there has been a significant decline in the number of POs and of their membership over the most recent three years. The VMP of mushroom POs has been significantly affected by the value of sterling relative to the euro, as a high proportion of their production is exported to the UK.

Our target is to stop the decline in the number of POs and their membership. Reversing the downward trend would be a bonus.

Indicator	Baseline 2007	Target 2013
Number of fruit and vegetable producers who were active members of POs	30	30
Area of protected crops of POs	34.5 ha	34.5 ha
Area of field crops of POs	400 ha	400 ha
VMP of fruit and vegetable POs	€19.8m	€21.5m
Number of mushroom producers who were active members of POs	89	89
Tonnage of mushrooms marketed by POs	69,878 tonnes	69,878 tonnes
VMP of mushroom POs	€66m	€80m

3. OBJECTIVES OF OPERATIONAL PROGRAMMES

To address the priority needs of the sector, all operational programmes must have two or more of the following objectives.

- **Planning of production**
 - Planning of production
 - to ensure reliability of supply and underpin supply contracts, thus strengthening the relationship between supplier and buyer;
 - to avail of opportunities arising to increase market share, minimise waste and optimise production costs.
 - Matching supply to demand to maximise gains from seasonal variations in price.

- **Improvement of product quality**
 - Improving quality through stringent controls at PO level to enhance the image and reputation of the PO produce with both market outlets and consumers.
 - Concentrating controls to enable the producers to meet the high demands of the quality assurance schemes of the major multiples and to minimise the costs of meeting those demands. Also to allow for improved working conditions and hygiene standards above the minimum requirements.
 - Giving feedback to members from the quality controls to reduce percentages of rejected produce and to increase their market returns.
 - Implementing programmes of residue and contaminant testing over and above statutory requirements to achieve the best possible food safety standards.

- **Boosting the commercial value of products**
 - Enhancing commercial value to cover rising input costs and to improve viability. Market research and analysis of consumer demands leading to the development of new product lines to expand the market.

- **Promotion of the products, whether in a fresh or processed form**
 - Raising awareness of the benefits of increased fruit and vegetable consumption to stimulate consumption and increase demand for the PO's produce.
 - Establishing a PO brand identity to increase consumer demand for PO produce in the supermarkets.

- **Environmental measures and methods of production respecting the environment, including organic farming**
 - Building public trust in quality, safe production that does not damage the environment.
 - Reducing input costs, such as energy and plant protection products.
 - Minimising waste production and waste disposal costs.

- **Crisis prevention and management**
 - POs may attempt to protect their members' incomes through crisis prevention and management measures.

The types of measures and actions eligible for support for the achievement of these objectives and the performance indicators that will allow progress to be assessed are set out in Section 3.2.

3.1 CONDITIONS APPLYING TO PROGRAMMES

Balance between programme measures: Crisis prevention and management measures shall not comprise more than one-third of the expenditure under the operational programme. No other measure shall comprise more than 60% of the expenditure under the programme.

Duplicate funding: Actions must not be included in operational programmes if they are supported by other EU aid or by State aid, including schemes under the Rural Development Programme 2007-2013. Items of capital investment must not be included in the operational programme if an application for grant aid has been made or grant aid has been received in respect of the same items under the NDP Capital Investment Schemes or under similar schemes either in Ireland or in other Member States by either the PO or by a member of the PO. Payments to PO members for agri-environment commitments must not be included in the operational programme if the members of the PO have applied for similar aid under the Rural Environment Protection Scheme (REPS).

POs will be required to certify that neither they nor their members have applied for or received any other aid. In addition, claims for actions involving capital investment, agri-environment commitments or organic production will be checked against records of other Schemes and discovery of an application for duplicate funding by any one member of the PO will result in disallowance of the entire action.

Demarcation between measures under the Rural Development Programme and the Scheme for Producer Organisations: Article 60(2), first and second subparagraphs, of Commission Regulation (EC) No 1580/2007 states:

"Where support under Regulation (EC) No 1698/2005 has exceptionally been granted in accordance with Article 5(6) of that Regulation, to measures which would be potentially eligible under this Regulation, Member States shall ensure that a beneficiary may receive support for a given action only under one scheme.

To that end, when Member States include measures containing such exceptions in their rural development programmes, they shall ensure that the national strategy as referred to in Article 57 of this Regulation lays down the criteria and administrative rules which they will apply in the rural development programmes."

Ireland's Rural Development Programme provides for

- decoupled compensatory allowances to encourage sustainable use of agricultural land in less favoured areas;
- the Rural Environment Protection Scheme for farmers who make agri-environmental commitments;

- the Natura 2000 Scheme to compensate farmers in designated Natura 2000 sites for the mandatory restrictions related to the designation and
- LEADER.

None of these measures are available under the Producer Organisation Scheme.

Environmental Impact Assessment: In accordance with Article 9(5) of Regulation (EC) No 1182/2007, all proposed investments must be presented with an environmental impact assessment. Investments with the potential to increase pressures on the environment will not be approved unless the Department is satisfied that the investments respect the objectives set out in Article 174 of the Treaty establishing the European Communities and Decision 1600/2002/EC of the European Parliament and of the Council laying down the Sixth Community Environment Action Programme.

Detailed rules: The Scheme of Aid for Producer Organisations in the Fruit and Vegetables Sector sets out the detailed rules for recognition of POs and for operational programmes.

3.2. MEASURES AND ACTIONS THAT MAY BE INCLUDED IN OPERATIONAL PROGRAMMES

This list of actions is non-exhaustive. Proposals from POs for other actions to further their programme objectives will be considered favourably.

3.2.1. Planning of production in relation to demand in terms of quality and quantity

Planning, both long term and ongoing, to ensure that all production of all members is marketed and that the market outlets can be serviced with the quantities and qualities required. Eligible actions are

- investments in computers and computer software, centrally and/or on individual holdings;
- programming costs and software licence fees;
- investments aimed at optimising production costs, centrally and/or on individual holdings;
- personnel to co-ordinate production and demand.

<p>Indicators:</p> <p>Number of actions undertaken</p> <p>Number of holdings participating in each action</p> <p>Total value of investments</p> <p>Change in the volume of marketed production (tons)</p> <p>Change in the value of total marketed production (€/kg)</p>

3.2.2 Improving or maintaining product quality

Quality assurance checks to meet the demands of the market and reduce the level of rejected product.

Eligible actions are

- investments in climate and environmental controls, centrally and /or on individual holdings;
- investments in pack-houses, handling facilities and market preparation facilities, centrally and/or on individual holdings;
- investments in cold storage, centrally and/or on individual holdings;
- sampling and analysis of produce for residues of plant protection products, heavy metals and other contaminants;
- sampling of water quality;
- sampling of other inputs for quality control, such as growing media;

- cost of audits and certification for Quality Assurance Schemes;
- personnel to carry out quality assurance checks and give feedback to members that will help them to address quality defects.

<p>Indicators:</p> <p>Number of actions undertaken</p> <p>Number of holdings participating in each action</p> <p>Total value of investments</p> <p>Change in volume of marketed production that meets the requirements of a specific quality scheme (tons)</p> <p>Change in value of total marketed production (€/kg)</p> <p>Estimate impact on production costs (€/kg)</p>
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3.2.3 **Improving marketing**

Marketing of the PO product to increase market share, promote new product lines, negotiate best prices, maximise producer returns, promote PO brands. Eligible marketing activities are

- promotion and communication;
- market research, including production patterns, market dynamics and consumption trends;
- concentration on innovative and value added products to meet consumer demands;
- development and maintenance of PO websites;
- sales development, management of customer relations, category management activities strictly in relation to PO produce, negotiation of price increases and promotion of new product ranges.
- development of PO brands
 - membership of Bord Bia Branding Forum;
 - cost of branding consultants;
 - cost of registering trademarks;
 - media campaigns;
 - promotional literature;
 - in-store tastings.

<p>Indicators:</p> <p>Number of actions undertaken</p> <p>Number of holdings participating in each action</p> <p>Total value of investments</p> <p>Change in volume of marketed production (tons)</p> <p>Change in value of total marketed production (€/kg)</p>

3.2.4 **Research and experimental production**

Clearly defined research or experimental projects with timebound objectives, such as diversification into new product lines, or the introduction of new crops or new varieties of crop. Eligible actions are

- cost of the new varieties of plants;
- additional advisory costs;
- income foregone from the same area of standard production;
- market research for the new product;
- cost of assessment study of the results.

Indicators:

Number of actions undertaken
Number of holdings participating in each action
Total value of investments
Number of new techniques, processes and/or products adopted since the beginning of the operational programme

3.2.5. **Training and provision of advisory services**

Eligible actions are:

- Provision of training courses related to the operational programme
 - equipping of a dedicated training facility for members (furnishings, audio-visual presentation equipment, demonstration units) or hiring of suitable premises as required for specific courses;
 - training courses for members and their production staff on quality assurance, management of plant protection products, harvesting methods including the FETAC Picker Training Programme, IT skills needed for the implementation of operational programme actions or for administration of the operational programme;
 - daily allowances, transport costs and accommodation may be allowed.
Training for staff of marketing companies is not eligible for inclusion in the programme.
- Provision of advisory services and technical advice to members on
 - optimising inputs;
 - plant health issues;
 - food safety and hygiene issues;
 - preparing for certification under quality assurance schemes;
 - harvesting;

- environmental issues, such as irrigation, heating, use of fertilisers and plant protection products;
- varieties suitable for organic production in Irish conditions and organic production methods;
- integrated production methods.

Indicators:

Number of training actions

Number of days of training received by participants

Number of people who completed the full training activity/programme

Number of holdings that use advisory services

3.2.6. Crisis prevention and management measures

Provision will be made for the inclusion of crisis prevention and management measures in operational programmes, but not until detailed rules have been drawn up. The measures will include market withdrawals, green harvesting or non-harvesting, promotion and communication, training measures, harvest insurance and support for the administrative costs of setting up mutual funds.

The detailed rules will include the maximum amounts of aid for withdrawals, green harvesting and non-harvesting. Maximum amounts of support for withdrawals for a number of products are set out in Annex X of Regulation 1580/2007; the EU aid payable will be 75% of the EU compensation that was payable for withdrawals under Regulation 2200/96. The maximum amount of aid for green harvesting or non-harvesting will be not more than 90% of the aid set for withdrawals.

3.2.7. Environmental actions

Operational programmes must include at least two environmental actions. Certain exceptions are allowed. The Framework for Environmental Actions is in Annex A. The eligible environmental actions are set out in Section 5 of the Framework.

3.2.8. Investment in shares

Operational programmes may include investments in shares of companies if the investment contributes directly to the goals of the operational programme.

3.2.9. Administration of the operational programme

50% of the actual administration costs of the operational programme will be allowed, subject to a limit of €90,000 on the aid payable in any year.

POs may opt instead for payment of a lump sum for administration on the basis of 2% of the expenditure accepted for payment. The limit of €90,000 aid will apply.

4. DESIGNATION OF COMPETENT AUTHORITY

The Department of Agriculture, Fisheries and Food is responsible for the management, monitoring and evaluation of this strategy.

5. MONITORING AND EVALUATING THE PROGRAMMES

Programmes will be approved on condition that the PO undertakes to provide the common indicators for each action implemented as listed in Section 3.2.

Each PO must report annually on the implementation of its operational programme. The report on each action must include a measurement of the progress achieved through the prescribed indicators for each action. The circumstances responsible for failure to achieve the target set or for exceeding the target should also be provided.

The effectiveness of the national strategy will be monitored through the information provided in the Annual Reports, having regard to

- the changes in value of production marketed
- the unit value changes
- percentages of programmes that achieve their stated objectives
- the changes in recognition and membership patterns
- the changes in PO market share
- the effects on the environment.

6. MONITORING AND EVALUATING THE NATIONAL STRATEGY

A report on the effectiveness of the strategy will be compiled for submission to the EU Commission not later than 15 November 2012.

ANNEX A

FRAMEWORK FOR ENVIRONMENTAL ACTIONS

1. ASSESSMENT OF THE ENVIRONMENTAL SITUATION

1.1. Climate Change

Ireland's *National Climate Change Strategy 2007-2012*¹ states that the agriculture sector contributed almost 28% of Ireland's emissions in 2005. Total emissions have been declining since 1999 and this is projected to continue through the Kyoto Protocol commitment period and beyond to 2020. Emissions are predominantly non-CO₂ gases and arise primarily from enteric fermentation in animals, management of animal manures and agricultural spoils. Of these, only N₂O emissions from soils are concerned in the production of fruit and vegetables. Growing practices that result in better nitrogen utilisation can reduce emissions. The other area of concern is energy use in fruit and vegetable production. Ireland imports 87% of its energy requirement. The *National Climate Change Strategy* aims to reduce our reliance on fossil fuels, expand the use of renewable energies, including biofuel, and use energy more efficiently.

1.2. Nature and Biodiversity

Biodiversity is an enormously important aspect of our natural heritage and has important social, economic, scientific, educational, cultural, recreational and aesthetic values. Biodiversity includes the diversity of individuals within a species (genetic diversity), diversity of species within an ecosystem or habitat (species diversity) and the diversity of ecosystems or habitats (habitat diversity). Ecosystems provide a variety of functions including the regulation of climatic processes, breakdown of wastes and recycling of nutrients, filtering of water, buffer against flooding, maintenance of soil fertility and the provision of natural resources. Since there has not been any expansion in fruit and vegetable growing areas which could lead to loss of habitats, the impact of fruit and vegetable production on nature and biodiversity primarily arises from the use of pesticides in production.

1.3. Natural resources and waste

(a) Water

Ireland's water quality compares well with that of most other EU countries although there is evidence of slight or moderate pollution in certain rivers and lakes. The report of the EPA (Environmental Protection Agency) on *Water Quality in Ireland 2006*², which was released on 12 October 2007, showed that a high percentage of Ireland's waters (71% of river channel length and 92% of lake surface area examined) was of a satisfactory standard in 2006. Approximately 25% of the groundwater locations examined exceeded the national guideline value for nitrate concentration for drinking water and 2% breached the mandatory limit.

The quality of this resource is vital, as we depend on surface and ground waters for our drinking water. Water is also crucial as a habitat for freshwater and marine plants and animals and as an amenity for all to enjoy. The trends in the data indicated a

¹ <http://www.environ.ie/en/PublicationsDocuments/FileDownload,1861,en.pdf>

² <http://www.epa.ie/downloads/pubs/water/indicators/>

further increase in the extent of satisfactory water quality in rivers and lakes compared with the previous assessment. Nevertheless, there remains an unacceptable and sizeable level of water pollution in the country. Eutrophication of rivers, lakes and tidal waters continues to be the main threat to surface waters, with agriculture being one of the key contributors.

(b) Waste

National policy is to regard waste as a resource. This is reflected in our commitment to developing a recycling society and in the priority given to the diversion of waste from landfill. The implementation of these policies has a positive side-effect in reducing greenhouse gas. The *National Waste Report 2006*³, published in 2008, identifies the national priorities as waste prevention and diversion from landfill.

Growers in the fruit and vegetable sector are encouraged to reuse, recycle or biodegrade wherever possible. Disposal of spent mushroom compost (SMC) is a serious issue for the industry and one that can only increase in importance. Efforts are underway to explore different options of dealing with SMC in a way that minimises its impact in the environment.

1.4 Environment and health and quality of life

The EPA report '*Air Quality in Ireland 2007*'⁴ which was released on 16 September 2008 shows that air quality in Ireland was good throughout the country and complied with all the air quality standards in force across Europe for all pollutants. The results for 2007 showed that there is a strong link between air quality and local emissions. Traffic and smoky fuel are the two main causes of poor air quality in Ireland.

³ http://www.epa.ie/downloads/pubs/waste/stats/epa_national_waste_report_20063.pdf

⁴ http://www.epa.ie/downloads/pubs/air/quality/epa_air_quality_report_2007.pdf

2. NATIONAL PRIORITIES

2.1. The environmental actions under the Scheme of aid for Producer Organisations will seek primarily to deliver benefits in three of the key areas targeted in the Sixth Community Environment Action Programme⁵, viz.

- climate change,
- nature and biodiversity, and
- natural resources and waste.

The objectives under each of these priorities are set out in section 6, with a non-exhaustive list of eligible actions identified for each priority. The horticultural sector in Ireland is small and its impact on the objectives identified under the priority Environment and Health and Quality of Life in the Sixth Community Environment Action Programme would not be significant.

2.2. The priorities identified for the horticultural sector as a result of the assessment of the environmental situation complement and are consistent with the priorities defined in Axis II of Ireland's Rural Development Programme, which are to deliver benefits in the areas of climate change, water quality and biodiversity. The Rural Development Programme describes Irish agriculture as predominantly grass-based and extensive. Tillage, including fruit and vegetables, occupies some 10% of utilisable agricultural area (UAA). There were approximately 5816 hectares of fruit and vegetables grown in 2007. Since 1994 Ireland has operated an agri-environment measure called the Rural Environment Protection Scheme (REPS). Aimed originally at addressing the problem of overgrazing by sheep, it has since been modified to include a selection of biodiversity measures. The measures are primarily directed at the farming situation of grass based livestock farmers.

⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:242:0001:0015:EN:PDF>

3. GENERAL CONDITIONS FOR COMPULSORY ENVIRONMENTAL ACTIONS

3.1. As required by Article 103c(3) of Regulation (EC) No 1234/2007, operational programmes must include two or more environmental actions. Two exceptions are allowed:

- a programme with just one environmental action will be approved if that single action entails at least 10% of the expenditure on the overall programme;
- if at least 80% of the producer members of the PO are subject to one or more identical agri-environment commitments under REPS (Rural Environment Protection Scheme), then each one of those commitments shall count as an environmental action under the operational programme. There will be no additional aid under the programme for agri-environment commitments aided under REPS. In practice very few, if any, PO members are in REPS.

3.2. The compulsory actions may be undertaken at PO level or on individual holdings.

3.3. Although the expenditure on the compulsory environmental actions may be concentrated in one or more of the years covered by the operational programme, the related environment commitment(s) must continue for the remaining duration of the programme and implementation and impact must be documented.

3.4. In the case of an action other than investments, the duration of an action must be sufficiently long to ensure that the environmental benefits can be realised. When the action is an investment, it must be used by the PO for the normal accountancy depreciation period.

3.5. The compulsory actions must be implemented at the latest in the second year of the programme. Payment for the first year of the operational programme will not be made until the PO has provided satisfactory evidence that the compulsory environmental actions are being implemented.

3.6.1. In the case where the National Framework provides for an environmental action (other than investments) that is similar to an agri-environmental measure included under the Rural Development Programme (e.g. organic production, integrated production and other actions where the duration is an essential condition for its effectiveness, i.e. for attaining the expected environmental benefits), the same duration should apply as the similar agri-environmental measure concerned, unless a different duration can be justified in the National Framework.

3.6.2. In the case where the duration of the operational programme is shorter (i.e. 3 or 4 years) than the duration referred to in section 3.6.1, the PO is obliged to continue the environmental action concerned in its subsequent operational programme, if this is necessary for attaining the duration applying for similar agri-environmental measures under the Rural Development, except for duly justified reasons, and in particular based on the results of the mid-term evaluation of the operational programme provided for in Article 127(3) of Commission Regulation (EC) No 1580/2007.

In the future, where relevant, this requirement will also apply to other environmental actions newly included in the National Framework.

4. **GENERAL CONDITIONS FOR ALL ENVIRONMENTAL ACTIONS**

4.1 In accordance with Articles 103c(3), second subparagraph and Article 103f(1), first subparagraph of Council Regulation (EC) No 1234/2007, environmental actions selected under an operational programme must:

- respect the requirements for agri-environmental payments set out in the first subparagraph of Article 39(3) of Council Regulation (EC) No 1698/2005, and in particular go beyond:
 - a) the relevant mandatory standards established pursuant to Articles 4 and 5 of and Annexes III and IV to Regulation (EC) No 1782/2003;
 - b) minimum requirements for fertiliser and plant protection product use established by national legislation and
 - c) other relevant mandatory requirements established by national legislation;
- conform to the National Framework;
- be compatible with and complement the other environmental actions implemented under the operational programme and, where appropriate, with the agri-environmental commitments, supported under the Rural Development programme, implemented by the members of the PO.

4.2. Where an operational programme entails the possibility of combining different environmental actions and/or where the environmental actions selected under the operational programme may be combined with agri-environmental measures supported under the Rural Development programme, the level of support must take account of the specific income foregone and additional costs resulting from the combination to avoid the risk of over-compensation.

4.3. Aid will only be paid on the basis of additional costs incurred or income foregone. The eligible expenditure on environmental actions is the specific additional cost, calculated as the difference between conventional costs and the costs actually incurred. Income foregone as a result of the environmental actions is also eligible, provided it is fully documented. Where appropriate, account must also be taken of any cost savings and additional income resulting from the action.

4.4. The support for the environmental actions selected under an operational programme, which is intended to cover additional costs and income foregone resulting from the actions, could be modified in case of amendments of the relevant reference level (i.e. the set of standards beyond which an environmental commitment must go).

4.5. The provision of technical assistance, advice and training, and of environmental and energy audits are actions that, if implemented alone, do not produce environmental benefits, but they may be eligible for support if implemented in combination with actions that can be expected to have a direct positive impact on

the environment and are specifically targeted to reinforce the effects of those actions. The activities must be entrusted to additional (internal or external) qualified personnel. The operational programme must clearly indicate the specific tasks that the additional qualified personnel are required to perform. The technical assistance, advice and training must be distinct from actions taken under Section 3.2.5 of the National Strategy.

4.6. Personnel costs (including charges linked to wages and salaries if these are borne by the PO) for improving or maintaining a high level of environmental protection are eligible; the costs involved shall essentially involve the use of qualified personnel but the PO may also request authorisation to use its own employees or member producers. The time worked must be documented in all cases.

4.7. A written undertaking must be given by the PO and its members that they have not received, directly or indirectly, duplicate EU or national funding in respect of environmental actions qualifying for aid in the operational programme.

4.8. Based on provisions of Article 60(2), third and fourth subparagraphs, of Commission Regulation (EC) No 1580/2007, the amounts of support for the actions under the operational programmes cannot exceed the levels of support for similar measures carried out under the Rural Development Programme and, in any case, the support for environmental actions, other than the acquisition of fixed assets, cannot be higher than the maximum amounts laid down in the Annex to Council Regulation 1698/2005 for agri-environment payments.

4.9. The demarcation criteria between measures under the Rural Development Programme and the Scheme for Producer Organisations are set out in section 3.1 (Conditions applying to Programmes) of the National Strategy.

5. ENVIRONMENTAL ACTIONS THAT MAY BE INCLUDED IN OPERATIONAL PROGRAMMES

The following is a non-exhaustive list of actions addressing the national priorities identified in Section 2.

5.1. Climate change

The objective is to reduce the environmental load of greenhouse gas emissions and thus mitigate the effects of climate change resulting from human activities. Measures to achieve this include reducing emissions from heating installations, reducing consumption of fuels and/or using renewable energy. Since Ireland imports 87% of its energy needs, this is an important priority for all sectors.

It is recommended that an energy audit should form part of any project under this priority, unless previously undertaken.

5.1.1. Reducing emissions

- A. The specific commitment entailed is the **replacement of an existing burner/boiler** with
- a) a more efficient system or
 - b) one using cleaner fuel (e.g. moving from oil to gas); the CO₂ produced may be vented into the glasshouse and thus captured in the crop tissue.

This action is justified in relation to Ireland's environmental needs and priorities as

- less energy will be used which results in a reduction in CO₂ emissions.

The expected reduction in energy used will be assessed ex-ante on the basis of technical specifications; the expected reduction in energy use must be of 25% at least. It may be less, but not lower than 10%, when together with the reduction in energy use (and in CO₂ emissions) there is at least another environmental benefit combined (e.g. reduction in the emission of air pollutants).

Eligible expenditure: Invoiced costs of purchase and installation of burner/boiler and associated equipment. Cost of energy audit conducted by suitably qualified personnel.

5.1.2. Reducing energy requirement

- A. The specific commitment entailed is to **increase insulation** in production units, e.g. thermal screens in glasshouses, in mushroom houses or in packing sheds and / or offices.

This action is justified in relation to Ireland's environmental needs and priorities as the heating/cooling requirement will be reduced, thus reducing the amount of energy used and the emissions produced.

The expected reduction in energy used will be assessed ex-ante on the basis of technical specifications; the expected reduction in energy use must be of 25% at least. It may be less, but not lower than 10%, when together with the reduction in energy use (and in CO₂ emissions) there is at least another environmental benefit combined (e.g. reduction in the emission of air pollutants).

Eligible expenditure: Invoiced costs of purchase and installation of extra insulation, mobile and fixed thermal screens and associated equipment. Cost of energy audit conducted by suitably qualified personnel.

- B.** The specific commitment entailed is the **installation of Combined Heat and Power (CHP) units**. These are designed to produce both power in the form of electricity and heat, giving greater efficiencies in energy use. They may also use biofuel as an energy source. This justifies the action on the basis of its expected impact in relation to Ireland's environmental needs and priorities.

The expected reduction in energy used will be assessed ex-ante on the basis of technical specifications; the expected reduction in energy use must be 25% at least. It may be less, but not lower than 10%, when together with the reduction in energy use (and in CO₂ emissions) there is at least another environmental benefit combined (e.g. reduction in the emission of air pollutants). If the unit uses additional bio-fuel, it must not be relocated from use elsewhere.

Eligible expenditure: Invoiced costs of purchase and installation of CHP units. Cost of energy audit conducted by suitably qualified personnel. Cost of technical assistance and advice specifically related to installation and commissioning of the CHP unit.

5.1.3. Using renewable energy

- A.** The **specific commitment** entailed is the **replacement of the existing burner/boiler with one using renewable energy**, e.g. wood pellets/chips.

This action is justified in relation to Ireland's environmental needs and priorities as it should result in an overall reduction in the emission of greenhouse gases through using a non-fossil fuel. If the unit uses additional bio-fuel, it must not be relocated from use elsewhere.

Eligible expenditure: Invoiced costs of purchase and installation of boiler and associated equipment. Cost of energy audit conducted by suitably qualified personnel. Cost of technical assistance and advice specifically related to installation and commissioning of the burner/boiler.

- B.** The specific commitment entailed is the **installation of solar panels**.

This action is justified in relation to Ireland's environmental needs and priorities. By raising the temperature of the water to be heated by the heating system, the energy requirement for heating will be reduced and the emissions from combusted fuel will be reduced. The expected reduction in energy use and emissions will be assessed ex-ante on the basis of technical specifications.

Eligible expenditure: Invoiced costs of purchase and installation of panels and associated equipment. Cost of energy audit conducted by suitably qualified personnel.

- C.** The specific commitment entailed is the **installation of wind turbines**

This action is justified in relation to Ireland's environmental needs and priorities. The electricity generated for use by the PO will reduce the requirement for electricity from the National Grid. At present a maximum of 8% of Ireland's energy supplied through the National Grid is generated from renewable sources.

Eligible expenditure: Invoiced costs of purchase and installation of wind turbines and associated equipment. Cost of energy audit conducted by suitably qualified personnel.

- D.** The specific commitment entailed is the **installation of Geothermal systems** designed to reduce the overall requirement for other fuels for heating and /or cooling.

This action is justified in relation to Ireland's environmental needs and priorities as the heating/cooling requirement will be reduced, thus reducing the amount of energy used and the emissions produced. The expected reduction in energy use and emissions will be assessed ex-ante on the basis of technical specifications.

Eligible expenditure: Invoiced costs of purchase and installation of geothermal heating / cooling systems. Cost of energy audit conducted by suitably qualified personnel.

5.2. Nature and Biodiversity

The use of pesticides in production of fruit and vegetables may impact on nature and biodiversity. The objective is to minimise the impact and possible negative effects of production on nature and biodiversity within our current state of knowledge. Actions under this priority must be aimed at producing fruit and vegetables in a way that minimises the effect on nature and biodiversity.

5.2.1. Use of natural pest control agents

The specific commitment entailed is the **use of pheromones, predators, parasites and other biological agents to control pests.**

This action is justified in relation to Ireland's environmental needs and priorities as it has the objective of keeping the use of chemical pesticides in the production of fruit and vegetables to a minimum.

Eligible expenditure: The specific additional costs involved in using these pest control methods. Personnel costs and technical advice by suitably qualified personnel are also eligible.

5.2.2 Use of inherent disease resistance

The specific commitment entailed is the **use of grafted plants to confer disease resistance and/or the use of disease resistant varieties**

This action is justified in relation to Ireland's environmental needs and priorities as it has the objective of keeping the use of chemical pesticides in the production of fruit and vegetables to a minimum.

Eligible expenditure: The specific additional costs incurred in the use of grafted over non-grafted plants, resistant varieties over non-resistant varieties. Cost of technical assistance and advice in selecting varieties most suitable for Irish conditions/ growers' situations.

5.2.3. Use of physical methods of pest/weed control

A. The specific commitment entailed is the **use of steam sterilisation of soil, compost and growing houses.**

This action is justified in relation to Ireland's environmental needs and priorities as it has the objective of reducing the use of chemical pesticides/ biocides for disinfection.

Eligible expenditure: Invoiced costs for purchase of steam boilers; the specific additional costs incurred in steam sterilisation over and above the costs for conventional chemical sterilisation.

- B. The specific commitment entailed is the **use of barrier methods of pest control.**

This action is justified in relation to Ireland's environmental needs and priorities as it has the objective of reducing the use of chemical pesticides compared to programmed spraying.

Eligible expenditure: Invoiced costs of purchase of equipment; the specific additional costs over and above the conventional costs of pest control. Cost of technical assistance and advice specifically in relation to the use of this type of pest control.

- C. The specific commitment entailed is the **use of physical methods of weed control.**

This action is justified in relation to Ireland's environmental needs and priorities as its objective is to reduce the use of chemical weedkillers compared to programmed spraying.

Eligible expenditure: Invoiced costs of investment in equipment; the specific additional costs associated with the use of these kinds of weed control. Cost of technical assistance and advice for growers who have not previously used this type of weed control.

5.2.4. Targeted application of pesticides

The specific commitment entailed is the **use of specialist ULV crop sprayers.**

This action is justified in relation to Ireland's environmental needs and priorities as the targeted application of pesticides will result in lower use of pesticides and a more accurate application, reducing risks of pollution.

The expected reduction in pesticide use and the increased accuracy will be assessed ex-ante on the basis of technical specifications.

Eligible expenditure: Invoiced costs of purchase of specialist sprayers.

5.2.5. Organic Production

The specific commitment entailed is the **production of crops according to a recognised organic protocol that is subject to independent certification.**

The recognised organic protocol must entail the application of production methods compliant with the provisions of Council Regulation (EC) No 2092/91 (of Council Regulation (EC) No 834/2007 from the 1st January 2009).

This action is justified in relation to Ireland's environmental needs and priorities as its objective is to reduce the use of pesticides and fertilisers.

Eligible expenditure: Invoiced costs for investments in equipment and facilities necessary for the production, preparation, grading, packing and storing of organic products. Other costs related to the application of organic production methods are not eligible.

5.3. Natural Resources and Waste

The main areas of concern here are the production of waste and the use of natural resources such as water and peat. The waste produced is of various kinds – organic waste of production, including spent mushroom compost (SMC), plant trimmings and crop residues, and packaging waste. The objectives are to reduce the amount of waste produced, to re-use it wherever possible and to biodegrade it where re-use is not feasible. With natural resources the objective is to use them sustainably, by using them more efficiently and re-using them wherever possible.

5.3.1 Re use of organic waste of production

- A. The specific commitment entailed is the **incorporation of Spent Mushroom Compost (SMC) into commercial plant growing media.**

This action is justified in relation to Ireland's environmental needs and priorities as its objective is to re-use SMC and substitute SMC for peat in plant growing media.

Eligible expenditure: Specific costs associated with the collection of SMC from members' farms and delivery to compost manufacturer, including specific additional personnel costs. Only commitments going beyond the compulsory legal requirements can be supported.

- B. The specific commitment entailed is the **use of dried SMC as a fuel on-farm** using a Fluidised Bed Combustion system.

This system is already in use on poultry farms, where poultry litter is used as a fuel. The ash is suitable for incorporation in compound fertiliser.

This action is justified in relation to Ireland's environmental needs and priorities as its objective is to re-use SMC, produce bio-energy for use on the farm and recycle nutrients.

Eligible expenditure: Invoiced costs of purchase and installation of a suitable boiler and ancillary equipment. Cost of technical assistance and advice in relation to monitoring of emissions and running of remote computerised control system.

- C. The specific commitment entailed is **the composting and re-use of plant material.**

This action is justified in relation to Ireland's environmental needs and priorities as its objective is to re-use waste and produce organic compost that can be reused as a soil conditioner.

Eligible expenditure: Costs associated with setting up compost facility and using the compost for soil conditioning. Cost of technical assistance and advice to select the most efficient system for growers who are new to the technology.

- D. The specific commitment entailed is the **production and use or selling of “logs” from dried SMC for use as fuel.**

This action is justified in relation to Ireland’s environmental needs and priorities as its objective is to re-use waste and use a renewable source of energy.

Eligible expenditure: Invoiced costs of purchase of machinery to produce the logs.

- E. The specific commitment entailed is **pyrolysis (burning without oxygen) of SMC** and use or selling of the produced oil and ash.

This process will yield an oil-like fuel and ash that can be incorporated into fertiliser.

This action is justified in relation to Ireland’s environmental needs and priorities as its objective is to re-use waste, use a renewable source of energy and recycle nutrients.

Eligible expenditure: Invoiced costs of the purchase and installation of the equipment necessary.

- F. The specific commitment entailed is the **re use of mushroom casing, either for mushroom growing or for other plant cultivation.**

Mushroom casing is currently made from peat. It is normally used only once. This action provides for its re-use. It is justified in relation to Ireland’s environmental needs and priorities as its objective is the more sustainable use of peat, which is a limited natural resource.

Eligible expenditure: Invoiced costs of the purchase of suitable equipment for the collection, sterilisation and re-use of mushroom casing. Personnel costs involved are also eligible.

5.3.2. **Environmental management of packaging**

- A. The specific commitment entailed is the **use of reusable crates for delivery of produce.**

This action is justified in relation to Ireland’s environmental needs and priorities as its objective is to reduce waste compared with using non-returnable packaging and improve waste management.

Eligible expenditure: Specific additional costs involved in the collecting, sorting, washing, sterilising and distribution of reusable crates, including specific additional personnel costs. The costs have to be justified either by invoices if the action is outsourced or by a register of extra tasks fulfilled and extra hours worked if the PO uses its own personnel. Documentary evidence of crate use must be supplied.

- B.** The specific commitment entailed is **the use of biodegradable/compostable punnets or packaging for produce.**

This action is justified in relation to Ireland's environmental needs and priorities as its objective is to reduce non-biodegradable waste.

Eligible expenditure: The specific additional costs of using such packaging compared to non-degradable packaging. The specific costs will be determined on the basis of invoices for the biodegradable material.

5.3.3. Capture and re-use of water in growing systems

The specific commitment entailed is the **capture, treatment and reuse of excess irrigation water draining from glasshouse growing systems.**

This action is justified in relation to Ireland's environmental needs and priorities as its objective is a reduction in the use of water and a reduction in the application of fertilisers through more efficient use.

The expected reduction in water use will be assessed ex-ante on the basis of technical specifications; the expected reduction in water use must be 25% at least. It may be less, but not lower than 10%, when two or more environmental benefits are combined. Where it is not possible to check ex-ante on the basis of technical specification, the reduction in water use must be checked on an ex-post basis.

Eligible expenditure: Invoiced costs for the purchase and installation of the equipment necessary. Costs of technical assistance and advice in relation to monitoring and correcting nutrient levels in re-used irrigation water, including monitoring nutrient levels in the fruit and vegetables.

6. INDICATORS

The environmental impact of the programme must be measured with appropriate indicators. The indicators must include the position at the start of the programme (the baseline), the position at the end of the programme and the difference, if any. The information required includes the following non-exhaustive list:

For all actions

- the number of holdings participating in the action if it involves the acquisition of fixed assets on individual holdings;
- the total value of investments;
- the number of hectares concerned.

As appropriate

- the estimated change in annual mineral fertiliser consumption/hectare, by type of fertiliser (tons);
- the estimated change in annual water use/hectare (cubic metres/ha);
- the estimated change in annual use of energy by type of energy source or type of fuel (tons/litres/cubic metres/Kwh per ton of marketed production);
- the estimated change in annual volume of waste generated (tons per ton of marketed production);
- the estimated change in annual use of packaging (tons per ton of marketed production);
- the number of farms operating as organic farm;
- the number of farms undergoing transition to organic;
- tonnes / volume of organic produce grown.