

Teagasc Statement of Strategy 2012 – 2015

2012
2015



Supporting Science-Based Innovation in Agriculture and Food



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Foreword



We are pleased to present the fifth Statement of Strategy of Teagasc which sets out our goals, priorities and high level strategic actions for the period 2012-2015. The Statement has been prepared in consultation with staff and a range of external stakeholders and represents our response to the opportunities and challenges facing the organisation and the agri-food sector during the next three years.

During the course of the last strategy period, Teagasc commenced a major organisational change programme involving the disposal of assets, the reduction in the number of research, advisory and educational locations, the cutting of management and administrative posts, reduction in staff numbers and retraining and redeployment of remaining staff. The implementation of the programme has resulted in a slimmed down senior management structure and a new programme structure based around four integrated operational programmes.

These actions have resulted in Teagasc becoming a leaner, more efficient and focused organisation that can better exploit its unique organisational strengths to maximise the integration of its research, advisory and education activities and ultimately deliver science-based innovation support in the agri-food sector and wider bio-economy that will underpin profitability, competitiveness and sustainability.

We recognise that this process of change must continue in line with the Public Sector Reform Plan and the need for Teagasc to meet employment reduction targets set out in its Employment Control Framework (ECF).

These adjustments must continue to be made at a time of growing demand for our services as the Irish agri-food sector is presented with major opportunities for growth and expansion whilst also having to address complex sustainability challenges. Producing food in this new context requires skills and knowledge as well as technology – not only the traditional skills that have always been associated with crop and livestock production, but increasingly the technical and economic expertise required to capitalise on scientific advances and to operate within the modern food system. Moreover, the new emphasis on sustainability is imposing novel challenges: not only how to produce food, but also how to produce it in a way that achieves other goals, such as the conservation of water, the reduction of greenhouse gas emissions and the protection of biodiversity.

Teagasc is committed to playing a key role in ensuring that the ambitious targets identified for the sector in **Food Harvest 2020** are reached. We recognise the challenge which this will present for us, but the organisation is committed to making the adjustments needed to ensure that with reduced resources it will be in a position to deliver high quality support and work in closer association with its parent Department, other State agencies, our third-level partners and private industry to ensure that Irish agriculture benefits to the maximum extent from the current favourable external environment.

Dr Noel Cawley
Chairman

Professor Gerry Boyle
Director

Section 1

Mandate, Mission and Vision

This Statement of Strategy is developed in the context of an analysis of key national, international and organisational driving forces that will impact on the Irish agri-food sector and on Teagasc over the coming strategy period (Section 2). The analysis leads on to the identification of a number of key strategic issues and new strategic directions (Section 3), which, in turn, provides the basis for the development of our Strategic Goals, Objectives and Strategic Actions (Section 4). We consider implementation issues, including organisational structure, resources and alliances, in Section 5.

Mandate

Teagasc was established under the Agriculture (Research, Training and Advice) Act 1988, which states that its principal functions shall be:

- To provide, or procure the provision of educational, training and advisory services in agriculture, including such educational, training or advisory services in agriculture as may be specified by the Minister for the purpose of giving effect to any directive, regulation or other act adopted by an institution of the European Communities.
- To obtain and make available to the agricultural industry the scientific and practical information in relation to agriculture required by it.
- To undertake, promote, encourage, assist, co-ordinate, facilitate and review agricultural research and development (including research and development in relation to food processing and the food processing industry).

This mandate gives Teagasc responsibility for meeting the knowledge and technology needs of the entire food chain and the authority to integrate research, advice and education services to deliver the innovation support necessary to add value to Ireland's agri-food sector.

Mission

To support science-based innovation in the agri-food sector and wider bioeconomy so as to underpin profitability, competitiveness and sustainability.

Vision

Teagasc wishes to be nationally and internationally recognized as the knowledge provider of choice for Ireland's agri-food sector.

Statement of Values

We aim to be professional, responsive, efficient, accountable and independent while endeavouring to attain scientific excellence in all our activities and working in partnership with other organisations to meet the needs of our stakeholders.

Research, Knowledge Transfer and Knowledge Absorption Activities

Teagasc is the leading public sector organisation in the fields of agriculture and food research in Ireland, undertaking innovative activities in research, knowledge dissemination and education covering the following broad thematic areas:

- Animal and Grassland
- Crops, Environment and Land Use
- Food
- Rural Economy and Development.

Research

Our annual research portfolio comprises some 300 research projects carried out by 500 scientific and technical staff in our research centres throughout Ireland. We collaborate extensively with our colleagues in Irish universities. Our post-graduate fellowship programme, which supports more than 100 MSc and PhD students annually, enhances this collaboration. We participate extensively in EU Framework Programmes and we have developed bilateral agreements with research organisations in Europe, the USA and New Zealand.

The challenge for our research is to provide leadership to the agri-food industry and rural communities by generating new knowledge and innovation to underpin competitiveness and sustainability. We ensure that the main focus of our research is on the rapid delivery of results with potential for economic and social impact. While retaining our strong capacity in applied research, we have also strengthened our capacity in key areas of fundamental research, specifically by developing a new focus on, and by making significant investment in the biosciences. This will ensure that agri-food research is fully competitive in the national science, technology and innovation (STI) programme and in the European Research Area. Insights provided by this new bioscience capacity feeds directly into the organisation's traditional strengths in applied agricultural and food research and helps to broaden the scope and impact of ongoing activities.

The main thrust of the Food Programme is directed towards developing the base of expertise and information in generic technologies needed to assist the Irish food industry to achieve consistent quality and guaranteed safety, allied to product and process innovations. The programme covers the full spectrum of the innovatory process, ranging from market studies through to strategic research to technology development services and training programmes. Moorepark Technology Ltd. (MTL) is a key link in the technology transfer chain.

A key element of national strategy for the food industry is to build a dynamic 'foods for health' or functional foods sector. Teagasc is widely recognized as a leading national and international player in this sub-sector, and works closely with the enterprise-development agencies and university partners in serving as an attractor for high technology foreign direct investment.

Knowledge Transfer

Knowledge transfer supports innovation by farmers in the management of their businesses and provides access to the technologies they can apply to improve their competitiveness. The knowledge transfer advisory programme is delivered by advisers in 12 Regional Advisory Areas throughout Ireland. These advisers are in contact with some 80,000 farmers and rural dwellers each year, of whom approximately 45,000 avail of our intensive farm consultancy service. The service can be categorised in terms of its impacts on the following areas:

- Sustainable growth, efficiency, competitiveness and profitability
- Environment
- Rural Development
- Life-long learning
- Public awareness and general information provision.

The service is targeted at intensive dairy, drystock, and tillage farmers and is mainly developmental in nature, but is significantly influenced by public policy schemes and the provision of public goods and services. The best technologies

and the latest research is transferred to farmers using a variety of methods, including discussion groups, individual consultations, farm management newsletters, the education and training programme and through a large number of public events.

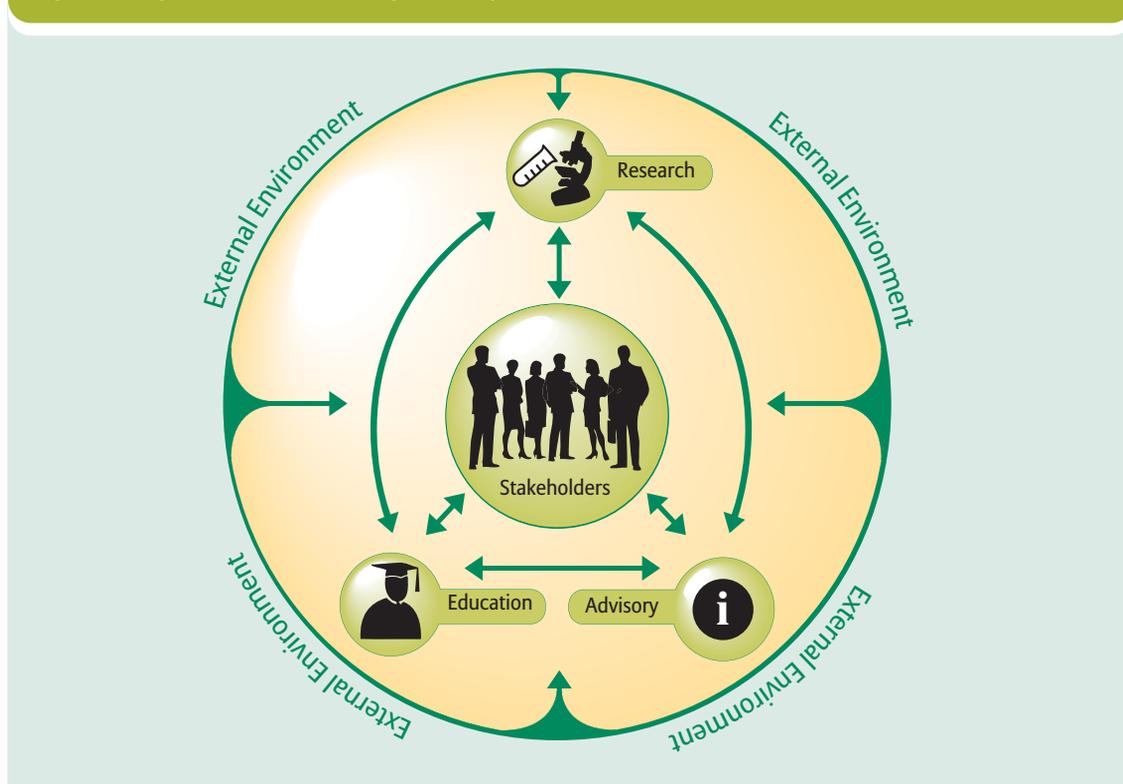
Education

Teagasc is a major provider of education for the overall land-based sector and is a significant training provider to the food sector. We also provide specialised and customised training to the agri-service sector as required. We are a registered FETAC training provider and work in partnership with many other education stakeholders, including the universities, Institutes of Technology and others, to deliver quality-driven, applied education and training programmes. Our education programmes are provided through a network of colleges and regional education centres with full-time, part-time and distance learning courses offered as appropriate. Life-long learning is now an essential requirement in the farming sector, and our advisory and education services are committed to expanding our role in this area in line with increased demand for our courses in recent years.

Model of Delivery

The Teagasc model of innovation support recognises the importance of integrating the critical functions of research, knowledge transfer and knowledge absorption (education) in order to ensure impact for its stakeholders. Indeed, Teagasc is unique in European terms, if not wider afield, in having these three elements embedded within a single organisation. (This model is illustrated in Figure 1). No one element is sufficient of itself to ensure that knowledge capital translates into a form of knowledge that is usable for the benefit of stakeholders. The model also emphasises that stakeholders are key participants in an increasingly open system of innovation. Public innovation support organisations like Teagasc are no longer ‘gatekeepers’ of the knowledge transmission process. Stakeholders now acquire information and knowledge both directly and indirectly through a wide variety of public and private intermediaries.

Figure 1 Teagasc Model of Knowledge Delivery



Section 2

Environmental Analysis

Grand Challenges for Agriculture¹

An increasing number of so-called “Grand Challenges” for food and agriculture have emerged in the first decade of the 21st century. These include population growth, climate change, energy, water supply and re-emerging diseases, all of which affect the potential of agriculture to provide a secure supply of safe food for a rapidly growing population. These challenges are being exacerbated by the current economic and financial crisis, the growing scarcity of natural resources and the undermining of ecosystem services. These “Grand Challenges” are a real threat, not only to future food supplies, but also to global stability and prosperity. They represent a source of growing uncertainty about the future development of agriculture, rendering it difficult to envisage how the growing demand for food and other bio-based materials can be met without further jeopardising the provision of essential ecosystem services. These challenges must be taken seriously and strategies adopted to enable a rapid transition towards more efficient and sustainable food production and consumption in a resource constrained world.

These global Grand Challenges are reflected in challenges for Irish agriculture to:

- Enhance productivity and profitability whilst conserving scarce resources
- Enhance food safety, improve natural resource management and protect biodiversity
- Enhance climate change mitigation and energy security.

National Policy Context

Teagasc’s strategic actions are framed in the context of national policy objectives as set out in the following key documents:

- *Action Plan for Jobs 2012*
- *Government for National Recovery 2011-2016. Programme for Government (2011)*
- *Food Harvest 2020: A Vision for Irish Agri-Food and Fisheries (2010)* and *Milestones for Success (2011)*
- *Food Research Ireland (2011)*
- *Stimulating Sustainable Agricultural Production through Research & Innovation (2011)*
- *Department of Agriculture, Food and the Marine Statement of Strategy 2011-2014*
- *Building Ireland’s Smart Economy: A Framework for Sustainable Economic Renewal (2008)*
- *Innovation Ireland: Report of the Innovation Taskforce (2010)*
- *Government Statement. Public Service Reform Plan (2011).*

The Irish agri-food and drinks sector accounts for:

6.2 per cent of Gross Value Added (GVA) in the economy
 7.5 per cent of national employment (135,000 jobs)
 18 per cent of Ireland’s total industrial output
 60 per cent of manufacturing exports by indigenous firms
 Exports worth €8.9 billion in 2011.

¹ <http://www.agronomy.org/files/science-policy/asa-grand-challenge-2010.pdf%3E>

The Government's policy for addressing the current economic downturn is set out in its *Programme for Government 2011-2016*. The key priorities are to support the protection and creation of jobs, drive change in all aspects of public life and create sustainable economic renewal. The document prioritises the need to restore the country's finances and reform systems of public administration. In response to the ongoing crisis in the public finances, it envisages further severe budgetary adjustments and a continuation of restrictive public sector staffing policies.

The Programme outlines a number of strategies to underpin the development of Ireland's Smart Economy, based on enhancing international competitiveness, investing in research and innovation and implementing a green agenda designed to lessen our reliance on fossil-based energy and to promote 'green' enterprise. It identifies further expansion and innovation in our dairy and meat sectors as a key priority along with supporting the development of new food businesses. The Programme also targets the negotiation of a favourable CAP reform package post-2013 for Ireland and places special emphasis on supporting young farmers.

The *2012 Action Plan for Jobs* aims to create an environment which will enable the number of people at work to increase by 100,000 by 2016 and by 200,000 by 2020. The Plan adopts the employment targets set in *Food Harvest 2020* of underpinning the current employment levels of 135,000 in agri-food and securing a net increase of 7,500 in value-added food production, as well as expanding the indirect employment impact.

Food Harvest 2020 sets out a strategy for the medium-term development of the agri-food sector. It identifies the opportunities and challenges facing the sector and the actions needed to ensure that it maximises its contribution to our export-led economic recovery.

The report develops a vision for the agri-food sector as a dynamic, consumer-focused, future-oriented industry, which avails of new opportunities in expanding international markets for high quality, safe and naturally produced products. To fully realise this vision, the report states that steps will need to be taken to address a number of structural challenges in both production and processing sectors and to focus on ensuring that the highest production and environmental standards pertain at all stages in the food chain.

Food Harvest 2020 Targets:

- Increase the value of primary output in the agriculture, fisheries and forestry sector by €1.5 billion. This represents a 33% increase compared to the 2007-2009 average
- Increase the value added in the agri-food, fisheries and wood products sector by €3 billion. This represents a 40% increase compared to 2008
- Achieve an export target of €12 billion for the sector. This represents a 42% increase compared to the 2007-2009 average.

The underlying strategy centres on **acting smart, thinking green** and **achieving growth**.

ACTING SMART: Supporting knowledge, skills and ideas

THINKING GREEN: Verifying and capitalising on Ireland's natural advantages and resources

ACHIEVING GROWTH: Leveraging innovation and scale for efficient and sustainable increases in output to deliver long-term profitability.

The report identifies Teagasc playing a key role in developing and transferring new knowledge and technologies and in strengthening the industry's skill base. It identifies key research and technology transfer priorities and recommends closer industry involvement in setting priorities and funding activities. It calls for an increased commitment to strategic collaborative partnerships and a focus on stimulating and mentoring innovation and entrepreneurial activity to increase

² *Food Research Ireland (2011); Stimulating Sustainable Agricultural Production through Research & Innovation (2011).*

employment creation. It also stresses that public sector R&D must, in future, be evaluated to a greater degree in terms of its final impact on the industry.

Arising from a recommendation in *Food Harvest 2020*, the Department of Agriculture, Food and the Marine published two new reports² which aim to guide public investment in research in agricultural production and food, respectively. These research agendas are intended to produce the scientific knowledge to underpin the growth targets in the Food Harvest report. They will also inform Teagasc research programmes during this strategy period.

The policy documents referred to highlight the fact that Ireland's long-term economic and social success is dependent upon continued investment in research and innovation in order to drive improvements in competitiveness, enhance environmental sustainability and improve the quality of life of our citizens. The publication by Forfás of the National Research Prioritisation exercise will also impact on our priorities and actions during the current strategy period.



Global Food Security

Food security is increasingly recognised as being one of the key global challenges of the century. By 2050, the FAO estimate that the world will need to produce up to 70% more food each year in order to feed a predicted population of more than 9 billion. Moreover, increasing income in developing countries is leading to changing patterns of food consumption, favouring greater demand for processed food, meat, dairy and fish, while the maturing populations of the developed world will increasingly demand and pay a premium for foods with credible health, wellness and sustainability attributes. The growth in global food markets and the changing nature of food consumption open up major opportunities for Irish food products provided the industry retains its international competitiveness and builds on its sustainability attributes.

UK Global Food and Farming Foresight³

The UK's Global Food and Farming Future Foresight report highlights the urgency of the food security challenge and the decisions that policy makers need to take today, and in future years, to ensure that a global population rising to nine billion or more can be fed sustainably and equitably. It is an authoritative and far-reaching report, with national and global relevance, highlighting the need to increase production, reduce waste, cut emissions and free up trade to address the pressures facing the global food system. A key conclusion is a recognition that the current global food system is failing and that more food needs to be produced from existing land and resources through the 'sustainable intensification' of agriculture. The report makes clear that meeting the challenge will require targeted investment in agricultural research to increase the yield and climate resilience of food production. In this regard, the report stresses that no technological approach should be ruled out and access to innovation should be determined according to scientific and evidence-based criteria.

³ The Government Office for Science (2011). *Foresight. The Future of Food and Farming. Final Project Report*, London.

In the short-to-medium term, the price volatility which has characterised international commodity markets is expected to continue, driven by supply shifts, climate change, energy policies, prices and trade policy developments. Despite this, longer term global markets for agriculture are considered to be positive, and opportunities will arise for Irish dairy products, beef and higher-value consumer food products, which will provide good returns for farmers, food processors and the Irish economy.

EU and International Policy Framework

The EU Common Agricultural Policy (CAP) will continue to provide the policy framework for Irish agriculture. The next major phase of CAP reform is due in 2013. The last phase of reform in 2003 and the Health Check in 2008 led to subsidies being substantially decoupled from production and partly coupled to meeting certain management requirements or conditions in order to deal with problems of overproduction, ensure greater producer responses to market signals and strengthen environmental protection, food safety and animal welfare. There is pressure to strengthen the link between payments to farmers and the competitiveness and sustainability of agricultural production, including the achievement of more public good objectives in the areas of environment, landscape, biodiversity and animal welfare.⁴ The abolition of milk quotas by 2015 offers a particular opportunity to greatly increase Ireland's production of milk and associated value-added products. A feature of the reforms as currently proposed is a stronger commitment to supporting research and development through a new research and development budget and a commitment to supporting innovation partnerships and an expanded Farm Advisory System.

Customer Interests and Needs

Agriculture and food production must respond to increasing food security issues globally while meeting growing expectations of wealthier consumers for better quality and healthier products produced in a more sustainable manner. Farmers are expected to meet these growing demands for food while using fewer external inputs, contending with climate change constraints, addressing energy requirements and providing a growing array of public goods.

Sustainable Intensification⁵

Given the current and burgeoning future challenges to our food supply and to the environment, **sustainable intensification** of agricultural production is emerging as a major priority for policymakers and international development agencies. Sustainable intensification has been defined as producing more from the same area of land while reducing negative environmental impacts and increasing contributions to natural capital and the flow of environmental services.

These forces represent both threats and opportunities for Ireland, its farmers and food processors. To take advantage of the opportunities and minimise the threats, our future national strategy must aim to ensure the continuation of a strong agricultural production base that is competitive, sustainable and profitable; contributes to a secure and sustainable European food supply; is compatible with the urgent requirement to reduce greenhouse gas emissions; contributes to future energy needs; is able to respond to market demands; and helps sustain strong rural communities.

In order to benefit from these emerging consumer trends and address the environmental and other challenges arising, the Irish agri-food sector requires access to ongoing research, as well as an enhanced level of investment in advisory and education.

Internal Environment

Teagasc Change Programme and Public Sector Policies

The Teagasc Change Programme 2009 – 2013 addresses both the ongoing need for change identified in *Teagasc 2030* and the need for significant resource rationalisation to ensure that the organisation remains fit for purpose and delivers value for public money. The implementation of this programme of change is resulting in the disposal of assets, a

⁴ (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0672:FIN:en:PDF>)

⁵ The Royal Society (2009). *Reaping the Benefits. Science and the Sustainable Intensification of Global Agriculture*, London.

significant reduction in the number of research, advisory and educational locations, the cutting of management and administrative posts, reduction in staff numbers across the board, retraining and redeployment amongst remaining staff, culminating in significant productivity gains throughout the organisation. The implementation of the Programme has resulted in a slimmed down senior management structure and a new programme structure based around four integrated operational programmes.

Additional adjustments over and above those set out in the Change Programme will be required to enable Teagasc to reduce its staff numbers in line with its 2014 Employment Control Framework (ECF) target as decided by Government. Staff numbers will have to be further reduced by 195, from 1188 at the beginning of 2012, to 993 at the end of 2014.

Teagasc 2030: A Renewed Focus on Innovation⁶

Teagasc 2030 highlighted the organisation's role in fostering science-based innovation on farms and in firms and it outlined the strategies needed to deliver on this. The report concluded that Teagasc itself needed to become more innovative to keep pace by: ensuring the continued upgrading of our scientific capabilities; integrating our research, advisory and education services so as to transfer knowledge more effectively; promoting more focused stakeholder participation; strengthening priority setting; and developing more flexible resource allocation mechanisms.

The Public Service Reform Plan (2011) will add further momentum to the changes already underway in Teagasc with a view to delivering even more flexible and responsive services to clients and stakeholders and further embedding a strong culture of innovation, change and managed risk within the organisation.

Undoubtedly, over the next three years Teagasc will become a smaller and leaner organisation. In line with the focus of this strategy, it must also become a more innovative, efficient and focused organisation. It must fully exploit its unique organisational strengths by further integrating its research, advisory and education activities, thereby becoming more agile, flexible and proactive and totally focused on creating value for its clients and stakeholders.

Whilst Teagasc will continue to pursue a dynamic change agenda, the organisation also needs to maintain a critical level of skilled staff and other resources to continue to meet its statutory responsibilities.

Developing People

The current challenges confronting both the organisation and its clients and the new capabilities and competencies required to successfully implement the Change Programme and Teagasc 2030 led to the development of a new **People, Leadership and Change (PLC) Strategy**, which has critically analysed the human resource requirements of the organisation and developed actions and implementation plans which will be delivered over this strategy period.

Business Process Review

Teagasc is undertaking a business process improvement exercise for the purpose of optimising the contribution of administrative functions and staff to the frontline delivery of services. The exercise will result in a new service delivery model for administrative services, including improved processes for all major administrative functions. Although this review commenced in advance of the Croke Park Agreement, it is very much in line with the expectations set out in that Agreement of modernising and delivering greater efficiencies within the public sector.

⁶ Teagasc (2008). *Teagasc 2030: Teagasc's Role in Transforming Ireland's Agri-Food Sector and the Wider Bioeconomy*

Section 3

Strategic Issues Arising and New Strategic Directions

The environmental analysis conducted in Section 2 will shape the delivery of Teagasc’s mandate over the period of the Strategy in a number of key respects.

Programme Scope

The long-term prospects for agricultural products are positive. As the global population grows to a forecast 9 billion by 2050, demand for food will also increase. In particular, the demand for meat and dairy will grow in developing countries, while demand for higher quality and healthier foods will grow in Europe and North America. To meet these challenges, Irish food production will need to remain focused on sustainable, cost-competitive production while seeking to extract greater value from its products through improved efficiency, better alignment of production with global market needs and by positioning the country as a global leader in the production of environmentally sustainable, safe and ethically-produced products. To meet these new demands, agriculture will not only need to become more productive, it will also need to greatly shrink its ‘environmental footprint’.

Innovation will be essential in driving the transformation of the sector needed to avail of the new opportunities. Producing food requires skills and knowledge as well as technology – not only the traditional skills that have always been associated with crop and livestock production, but increasingly the technical and economic expertise required to capitalise on scientific advances and to operate within the modern food system.

Over the next three years Teagasc intends to enhance its efforts to foster innovation in the sector by ensuring that farmers and food companies are not only made aware of new knowledge and technology, but are encouraged and facilitated to exploit the opportunities that are presented by these developments, thereby contributing to the Government’s targets for increased output, value and exports and sustainable jobs in the industry.

New strategic directions

In line with foregoing environmental analysis, Teagasc will

- Strengthen programmes focusing on the competitiveness of Irish agriculture and food in support of the growth targets set in *Food Harvest 2020 and Milestones for Success*
- Mainstream sustainability across our programmes in order to develop and disseminate the technologies needed to make Ireland a world leader in science-based sustainable agricultural and food production
- Strengthen our innovation-support role to underpin the growth of the agri-food sector and enable it to contribute to overall economic growth, job creation and national environmental and social outcomes.

Our renewed commitment to fostering innovation on farms and in firms will find expression in

- the launch of a new Knowledge and Technology transfer strategy for food in 2012
- the restructuring of the Advisory Service to prioritise technology transfer
- a renewed focus on strengthening the role of discussion groups in all of the major farm enterprises
- the sustained development of a more responsive and flexible education programme
- the launch of new demonstration farms and expansion of the BETTER Farm Programme
- the development of more collaborative research projects with food companies
- the expansion of the Teagasc/IDB Dairy Innovation Centre to generate a pipeline of branded milk-based consumer products

- the development of a centre for dehydration technology to develop 'smart' ingredients that have built-in functionality for food applications worldwide.

Resource constraints

Teagasc will be required to deliver a demanding programme of activities over the period of this Strategy against a background of severely restricted resources. This will be achieved by pursuing a number of innovative strategic actions across the organisation, including:

- a refocusing of the advisory resources on the development needs of stakeholders, including an absolute commitment to maximise enrolments of students in our agricultural colleges.
- a gradual move to out-servicing in the provision of non-core education and advisory services
- a continued concentration of research resources on competitiveness-oriented research and a maintenance of the current balance between applied and strategic research
- an enhanced role for research knowledge procurement
- a drive to leverage permanent research staff resources by pursuing ambitious but attainable external income objectives
- continued development of broad technology platforms in areas such as grass and animal breeding technologies that are applicable across a range of farm enterprises
- a commitment to the establishment of strategic national and international partnerships with complementary organisations. This means building on the national alliances with our university partners and taking advantage of the growing investment in agricultural research that is occurring internationally
- a continuation of the process that has been in train for a number of years of securing greater efficiencies in administration through office rationalisation, including the reform of business processes
- a commitment to invest in key strategic infrastructure
- a continued investment in the development of human resources through the implementation of the *People, Leadership and Change Strategy*.

AgResearch: New Zealand refocuses its strategy on competitiveness and sustainability⁷:

Following a major review of the Crown Research Institutes (CRI's) in New Zealand, AgResearch - the institute with responsibility for agriculture and food research - launched a major new strategy in 2011. The new strategy outlines how AgResearch will deliver on its core purpose, i.e. "...to enhance the value, productivity and profitability of New Zealand's pastoral, agri-food and agri-technology sector value chains to contribute to economic growth and beneficial environmental and social outcomes for New Zealand". As a result of the new strategy, AgResearch is being transformed to operate strategically in partnership with key sectoral stakeholders in order to enhance innovation and create value for New Zealand. This is being achieved by increasing the organisation's core funding, thereby enabling it to undertake long-term research in partnership and ensure that it becomes a key element in the country's innovation system.

⁷ AgResearch (2011). *Sustainable Economic Growth for New Zealand. AgResearch Statement of Corporate Intent 2011-2016*.

Section 4

Goals, Objectives and Strategic Actions

Goals

Teagasc has four goals that are designed to:

GOAL 1

Improve the competitiveness of agriculture, food and the wider bioeconomy

Enhanced levels of productivity, reductions in costs and a single-minded focus on market orientation are critical components in driving growth in Irish agriculture and food. This will require the development of new technologies and systems and their dissemination and adoption.

GOAL 2

Support sustainable farming and the environment

Future food production systems must be sustainable in terms of delivering a supply of safe, healthy food with low environmental impacts. This will require a hugely enhanced level of innovation, involve major improvements in efficiency and waste reduction and access to new types of technology.

GOAL 3

Encourage diversification of the rural economy and enhance the quality of life in rural areas

High quality social science research and policy advice are needed to contribute to improving the competitiveness, profitability and sustainability of Irish agriculture and enhancing the quality of life in rural Ireland, including safety and health.

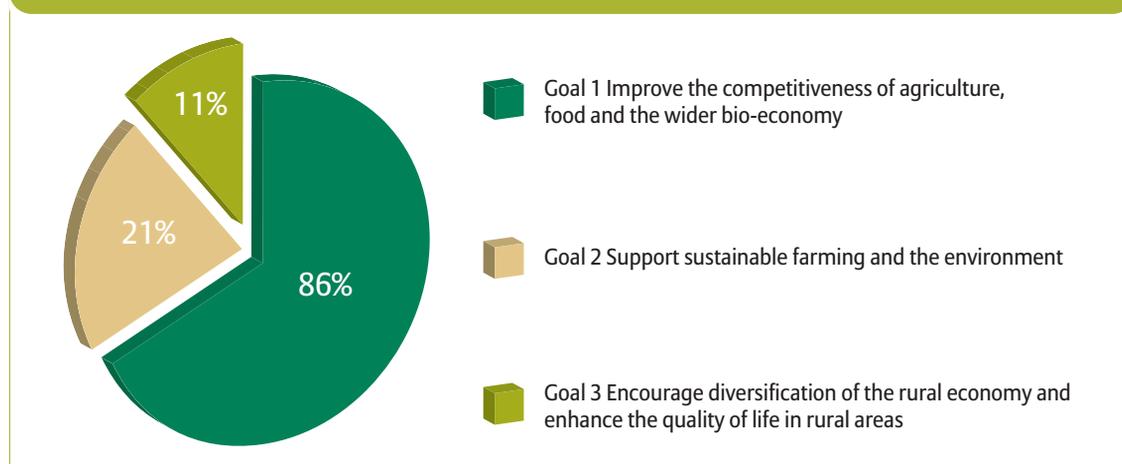
GOAL 4

Enhance organisational capability and deliver value for money

Develop our people, processes and technology to ensure that we are a capable, responsive and results-oriented organisation.

These goals are consistent with the overall vision for the agri-food sector set out in *Teagasc 2030* and in *Food Harvest 2020* and they reflect the EU thematic axes on rural development policy. Figure 2 shows the current allocation of resources between the three programme goals.

Figure 2 Resource Allocation by Goals



Goals

Goal 1. Improve the competitiveness of agriculture, food and the wider bio-economy

Strategic Actions

- Generate and procure knowledge and technologies appropriate to the competitiveness needs of Ireland's farming and food industries
- Disseminate knowledge and technology to Irish farmers and food companies to ensure a quantifiable impact on profitability, competitiveness, exports and employment
- Deliver appropriate education and training programmes to enable Ireland's farmers and food companies to fully exploit the opportunities presented by new knowledge and technologies.

High Level Indicators of Success

- Implementation of relevant commitments in FH2020 and Milestones for Success as quantified and reported to the High Level Implementation Committee
- Implementation of actions as set out in Teagasc annual business plans.

New Initiatives Planned:

- Establish new Greenfield dairy farm in the West of Ireland
- Establish next generation dairy herd
- Establish new Greenfield suckler demonstration farm in the West of Ireland
- Commence joint research and advisory programme with the pig industry
- Expand Teagasc/Irish Farmers Journal BETTER Beef Farm Programme
- Implement new food technology and knowledge transfer strategy
- Implement joint programme with UCD as envisioned in the Teagasc/UCD Partnership
- Deliver new Professional Farm Managers' Programme (Dairy)
- Collaborate with Irish Dairy Board to develop branded dairy-based consumer products
- Devise and commence application of genomics in grass breeding
- Develop new research on extracting value from waste streams in the meat industry.

Goal 2 . Support sustainable farming and the environment

Strategic Actions	High Level Indicators of Success
<ul style="list-style-type: none"> ● Generate and procure knowledge and technologies appropriate to the sustainability needs of Ireland’s farming industry ● Disseminate knowledge and technology to Irish farmers to ensure a quantifiable impact on the sustainability of their production activities ● Deliver appropriate education and training programmes to enable Ireland’s farmers to fully exploit the opportunities for sustainable intensification. 	<ul style="list-style-type: none"> ● Implementation of relevant commitments in FH2020 and Milestones for Success as quantified and reported to the High Level Implementation Committee ● Implementation of actions as set out in Teagasc annual business plans.

New Initiatives Planned:

- Calculate carbon footprint of Irish dairying and develop a “carbon navigator” to guide dairy farmers towards a reduced carbon footprint
- Develop plan to mainstream sustainability across research programmes
- Develop and implement advisory programme based on research on the Catchments Programme
- Support implementation of next phase of the Nitrates Action Plan
- Support the implementation of the Sustainable Use of Pesticides Directive Programme.

Goal 3: Encourage diversification of the rural economy and enhance the quality of life in rural areas

Strategic Actions	High Level Indicators of Success
<ul style="list-style-type: none"> ● Generate and procure knowledge and policy decision tools appropriate to the development needs of rural areas ● Disseminate knowledge to enhance the development of rural areas ● Deliver appropriate education and training programmes to enable rural dwellers to exploit the opportunities for the development of rural communities ● Promoting collaborative farming initiatives. 	<ul style="list-style-type: none"> ● Implementation of relevant commitments in FH2020 and Milestones for Success as quantified and reported to the High Level Implementation Committee ● Implementation of actions as set out in Teagasc annual business plans.

New Initiatives Planned:

- Analysis of CAP reform post 2013
- Economic analysis of Food Harvest 2020
- Joint research with Bord Bia on food marketing
- Promoting collaborative farming initiatives
- Building better understanding of factors influencing farmers’ adoption of technology.

Goal 4 Enhance organisational capability and deliver value for money

Strategic Actions

- Create a strong performance culture that has the capacity for continuous improvement through the engagement and professional development of staff and the adoption of sound management practices
- Create a culture of change within Teagasc
- Develop and maintain IT and communication systems to support and enhance service delivery
- Ensure that all Teagasc activity is conducted in such a manner as to achieve value for money in line with Government guidelines
- Ensure that Teagasc maintains the assets that are entrusted to its care and develops its infrastructural needs in accordance with the best principles of project management and Government guidelines
- Ensure Teagasc operates in strict alignment with Government policy and relevant corporate governance codes and standards.

High Level Indicators of Success

- New and improved models of operations service delivery put in place
- New resource allocation model in place
- Rationalisation as defined in the Teagasc Change Programme delivered
- Compliance with corporate governance requirements and government policies.

New Initiatives Planned:

- Implement Management Development Programme
- Implement Leadership Development Programme
- Implement Time and Attendance System
- Evaluate a Resource (Budget) Allocation Model
- Implement Strategic Investment Plan.



Section 5

Strategy Implementation

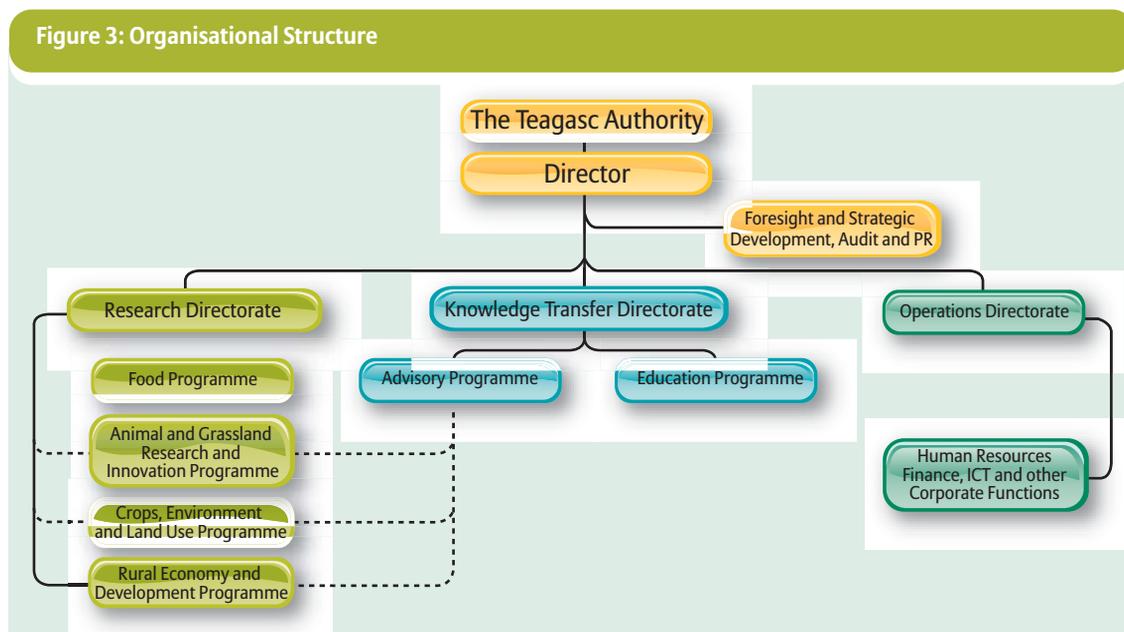
The implementation of this Strategy requires the full commitment of the Authority and staff and the continued strengthening of our internal business planning process. It also requires further commitment to ongoing change, including the implementation of the new Public Sector Reform Plan. The overall planning process will ensure that all of our activities are directed towards meeting our mandate and mission. The Strategy will be implemented through the annual business planning process. We will also seek to negotiate a new performance agreement with our parent Department. The Authority will play a more central role in approving and reviewing the ongoing implementation of the Strategy.

Organisational Structure

The organisational structure is represented in Figure 3. Following two stages of a “Change Programme” in 2009 and 2010, Teagasc has radically rationalised and re-organized its structure. It is now organised into three integrated directorates: Research, Knowledge Transfer and Operations.

The Research Directorate is organised around four operational programmes:

- Food
- Animal Production and Grassland
- Crops, Environment and Land Use
- Rural Economy and Development.



Each of these programmes includes distinct research and knowledge transfer departments.

The Knowledge Transfer Directorate operates two major programmes:

- Regional Advisory Programme delivered in 12 Regional Areas (Figure 6).
- Educational Programme delivered in four Teagasc colleges, 12 Regional Education Centres and three private colleges. A strong ‘dotted line’ relationship operates between the Knowledge Transfer departments located within the Research Directorate and the Advisory Programme.

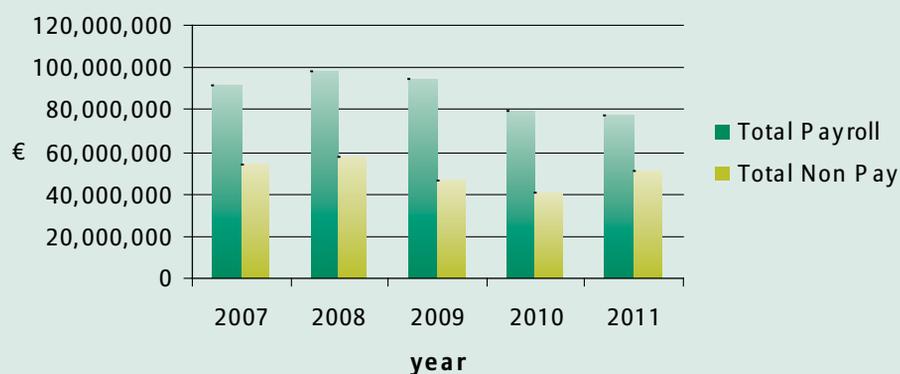
The Operations Directorate comprises a number of Head Office departments (Finance, HR and ICT), but also has overall responsibility for the effective delivery of administrative systems across the organisation.

Over the period of this Strategy, management plans to review this new organisational structure and to make amendments as appropriate.

Financial resources

Teagasc recognises the pressure that will continue to be exerted on the public finances over the course of this strategy period and that this will be reflected in the available budgetary resources. Grant-in-Aid funding has fallen from €139,964,000 in 2008 to €128,460,000 in 2012, while other income sources have fallen by 10.3% to €41,720,000 over the same period. Over the course of this strategy period, Teagasc will aim to maximise its own earned income from all sources while seeking to maintain a core State Grant needed to deliver on its statutory functions. The organisation will also seek to maintain the positive trend in the ratio of non-pay to pay expenditure.

Figure 4: Payroll and Non-Pay 2007-2011

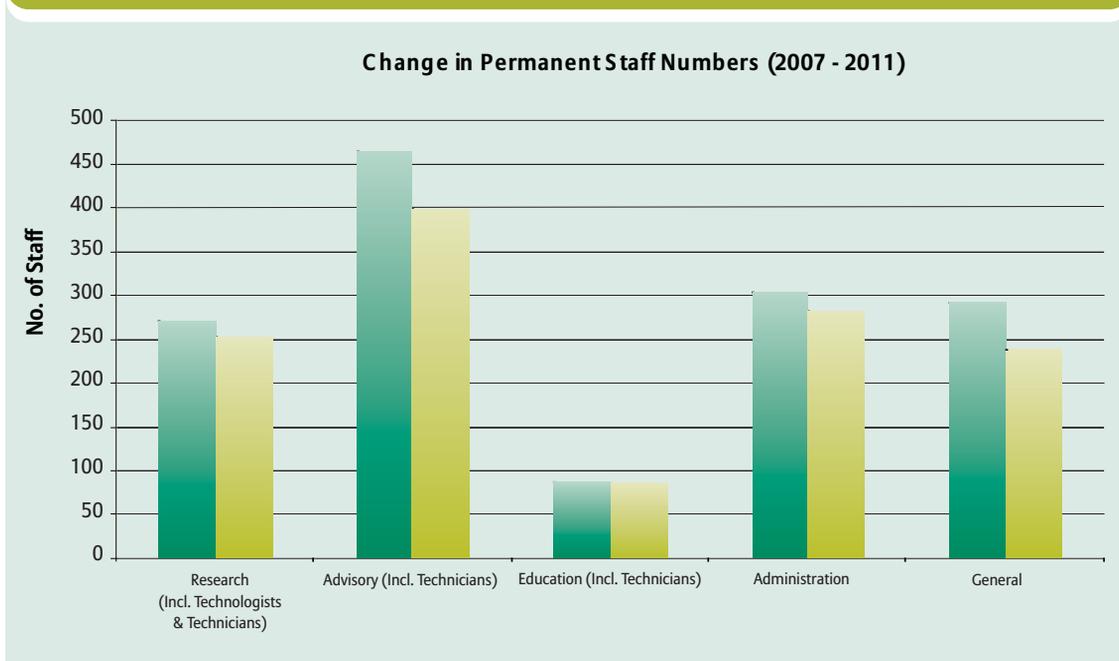


Human resources

Figure 5 shows the trend in permanent staff numbers in recent years. Overall numbers fell from 1,424 in July 2007 to 1,189 serving at the end of 2011, a reduction of 235, or 16% in a four year period. When the full ECF reduction has been implemented by the end of 2014, the overall staff number will be 993, which will constitute a 30% reduction on the staffing level between 2007 and 2014.

Contract staff and students are a valuable human resource, especially in the Research Directorate. Contract staff numbers, as is to be expected, have fallen at a greater rate than permanent staff, dropping from 227 in 2008 to 77 in 2011.

Figure 5 Staff Numbers by staff type for the period 2007 to 2011



In adapting to the new staffing reality over the upcoming strategy period, Teagasc will prioritise its activities in order to ensure that critical services needed to deliver on *Food Harvest 2020* targets are retained. It will continue to push the limits of staff productivity and increase efficiency and staff flexibility in all areas of its operations. In research, we will leverage additional knowledge through collaborations, joint programmes and procurement. We will seek to maximise external funding in order to build critical resources through contract research. In this regard, we will also continue to prioritise the Walsh Fellowship and Post Doc schemes. The existing sub-contracting of discrete areas of the advisory and training programmes will continue and may have to be further extended. While all of these measures will certainly enable us to maintain a larger service than would otherwise be possible, this still does not detract from the stark conclusion that in the absence of limited new recruitment over the next three years, Teagasc’s long-term ability to meet its core statutory obligations will be seriously eroded.

Physical resources

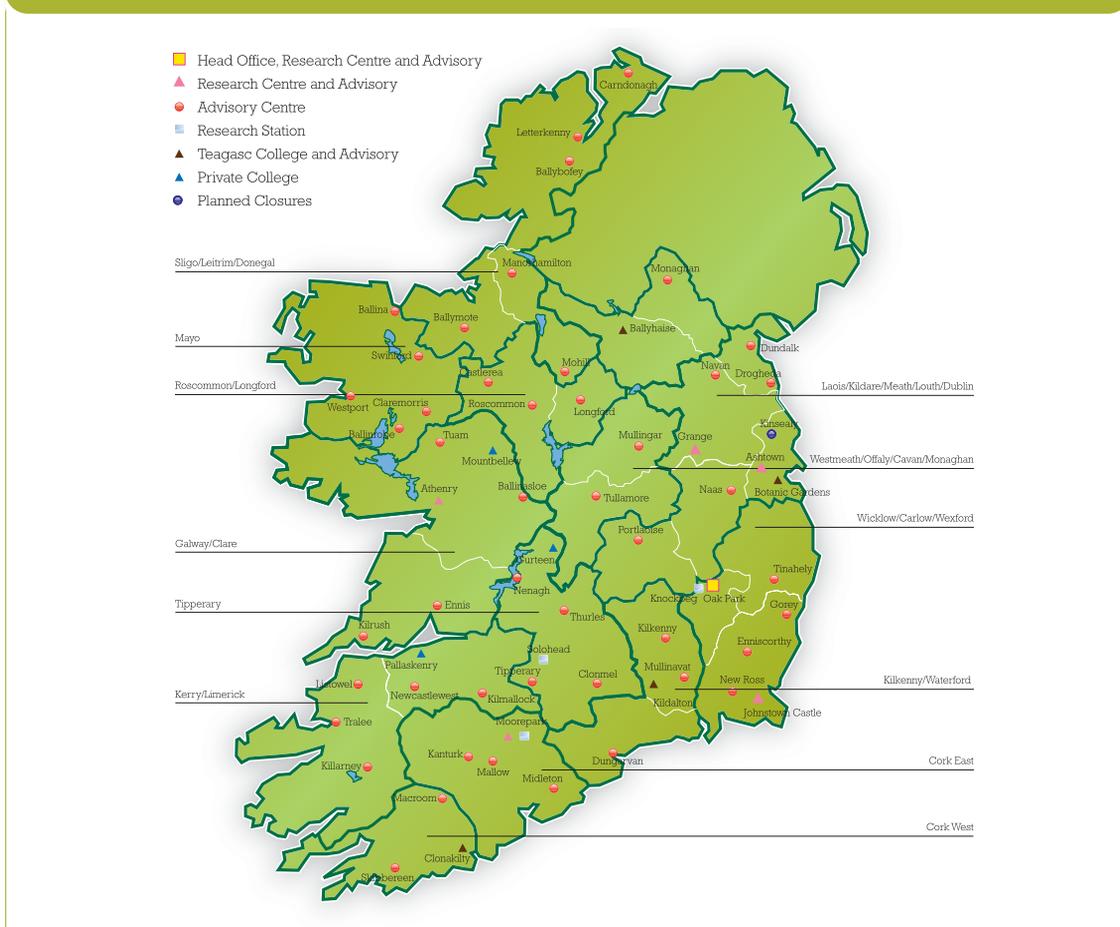
Figure 6 displays the current and planned Teagasc configuration of facilities. Since 2008, the organisation has substantially reduced the number of offices, from 96 to an anticipated 55 by the middle of 2013. It has also rationalised its research sites, in particular through the planned closure of the centre at Kinsealy and the consolidation of research, advisory and education activities in the Dublin area at sites in Ashtown and the Botanic Gardens.

Teagasc intends to augment its research and advisory infrastructure through the development of a number of key strategic projects. The organisation had previously identified a portfolio of investment needs amounting to about €40 million in total. It has now selected three high priority capital projects that are essential to fulfilling its mission and supporting its objectives over the course of this strategy period:

- A. Pigs Research Unit /Animal Biotest Facility €2,500,000
 To replace the outdated existing pig research facilities in Moorepark and include Biotest facility in support of the Foods for Health Programme.

- B. Dairy Research-Based Education and Innovation Centre €3,700,000
To facilitate the increasing role of Moorepark in supporting 3rd and 4th level educational programmes.
- C. Move from Kinsealy Campus to Ashtown Campus €4,750,000
To accommodate the relocation of staff and programmes from Kinsealy to Ashtown.

Figure 6: Teagasc Facilities



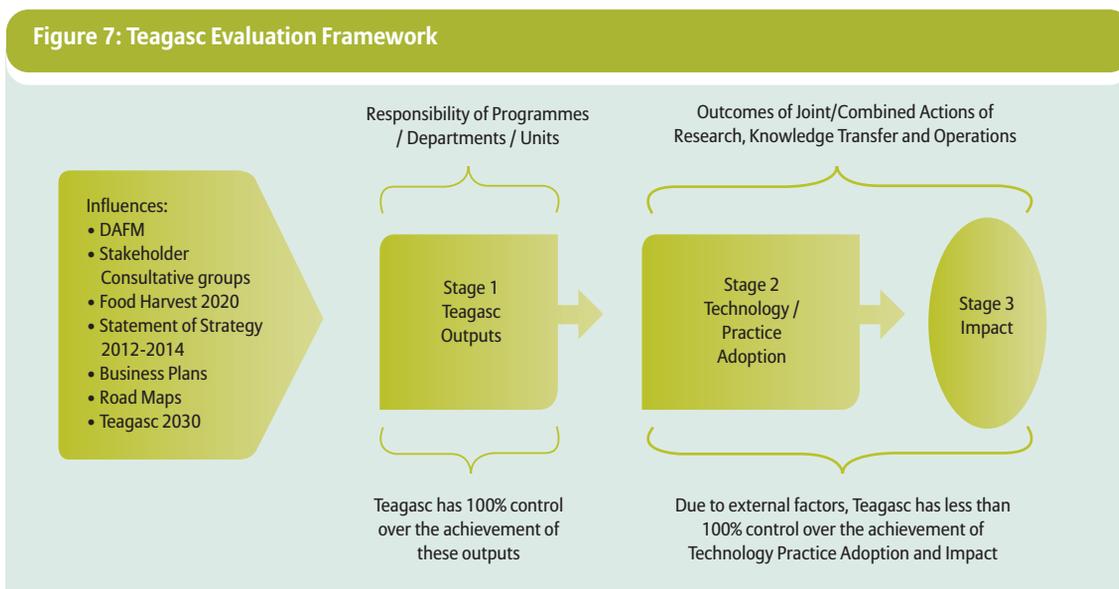
Business Planning and Programme Evaluation

This Strategy, which is supported by detailed strategic reviews for each of the three directorates, provides a multi-annual context for the organisation’s annual business planning process. The organisation conducts business planning at three levels: Level 3 operates at the department or unit level; Level 2 applies to the programme or directorate level plan; and Level 1 operates at the overall organisational level. The latter is approved and reviewed by the Authority on a regular basis, while levels 2 and 3 are subject to reviews at unit, directorate and senior management level.

Performance Evaluation

Performance evaluation is a key function of the business planning process. Teagasc employs a three-stage cycle of Outputs, Technology Practice Adoption and Stakeholder Impact when evaluating performance. Each organisational unit engages in activities that produce specific outputs (Stage 1); these outputs collectively should result in the adoption of new technological practices by industry (Stage 2); and these practices will impact on industry in a variety of ways (Stage 3). Figure 7 outlines this process.

Figure 7: Teagasc Evaluation Framework



Performance Evaluation Metrics

For an organisation with activities as diverse as Teagasc, it is not possible (or even productive) to measure every single activity or output. The metrics employed provide information on key performance indicators. While they do not always give a complete description of activities, they do give a valuable insight on performance. The metrics used are in line with internationally accepted performance indicators. This section gives a brief selection of some metrics for each performance evaluation stage.

- Stage 1 Outputs include:
- peer reviewed publications per permanent researcher
 - PhDs completed
 - competitive national and EU funding secured
 - royalties, patents, contract and collaborative research
 - client numbers, client consultations, discussion groups, client visits, services including eProfit Monitors, Single Farm Payment applications and environmental regulation compliance
 - the number and diversity of courses, course participation rates, staff - student ratios, and cost per student.
- Stage 2 Practice adoption metrics focus on issues such as:
- improving grass utilisation and breeding metrics
 - anti-resistance and reduced herbicide strategies
 - adoption of integrated pest management strategies
 - adoption of soil analysis and fertilizer plans
 - processes and practices to improve quality, functionality, safety and process efficiency in food processing.
- Stage 3 Impacts include:
- dairy, beef and sheep “profit from productivity” metrics
 - dairy milk solids per hectare
 - beef and sheep kg of live-weight per hectare
 - percentage of tillage clients with higher yields and lower costs than national average
 - carbon footprint of milk and meat products.

Consultation Process

Effective consultation provides a wider perspective on issues, assists a shared understanding of objectives and results in a focused strategy statement which has more relevance for stakeholders. From an early stage the Senior Management Group provided the leadership in setting the strategic goals and objectives to be achieved over the coming three years. They also engaged in an extensive consultative process with a range of internal and external stakeholders. The internal consultative process provided critical input into the final document, including the high level overall environmental analysis undertaken at a strategy workshop, the material provided by the National Partnership Committee and the various suggestions and views received from staff. The organisation engages in ongoing consultation with industry on its strategies and programmes through a network of stakeholder consultation groups and through the input from industry representatives on the Authority. The final document reflects these views, in so far as this is possible, in a high-level strategic document.

Key Linkages

Teagasc is committed to working in partnership with all sectors of the agriculture and food industry at home and abroad in the delivery of its research, advisory and education programmes. This partnership approach ensures that the organisation's resources are used to best effect. Partnerships continue to be fostered and enhanced with the following organisations and agencies:

Government Departments

Teagasc works closely with its parent Department (DAFM) to ensure that its programme of activities meets the needs of the sector and is consistent with government policy. It also works closely with a number of other departments including:

Public Expenditure and Reform	Jobs, Enterprise and Innovation
Environment, Community and Local Government	Education and Skills
Communications, Energy and Natural Resources	

Government Agencies

Teagasc maintains close links with the following agencies:

Science Foundation Ireland	Bord Bia
Enterprise Ireland	FÁS
Forfás	FETAC and HETAC
Environmental Protection Agency	The National Qualifications Authority of Ireland
The Marine Institute	Food Safety Authority of Ireland
BIM	Health and Safety Authority.
Food Safety Promotion Board	

EU and other International Linkages

Active participation in international scientific communities is a necessary condition for the development of know-how. As a small organisation, Teagasc has always realised the value of building and maintaining a portfolio of strong international contacts and networks. The organisation co-signed a number of bilateral agreements with institutes around the world and has sought to be an active participant in the wider world of scientific and developmental endeavour. These contacts have been important in ensuring early access for Ireland to relevant developments in science and technology abroad. The organisation will strengthen its existing bilateral research agreements and seek to develop new linkages which will benefit our work and the industry it serves.

International Agreements

AgResearch, New Zealand
Dairy NZ, New Zealand
INRA, France

Agricultural Research Service, USA
MTT, Finland
Scottish Agricultural College, UK.

Higher Education Institutions in Ireland

Teagasc has developed an extensive network of formal and informal collaboration with its university and Institute of Technology counterparts, particularly through the Walsh Fellowship Scheme and HETAC-approved agricultural training courses. It agreed a formal Strategic Alliance in Food Research and Innovation with UCC in 2010 and a Partnership in Agricultural Research, Education and Innovation with UCD in 2011. These alliances will help strengthen collaborative activities, enhance Ireland's international research reputation and improve effectiveness and efficiency in delivering a national research and technology transfer programme for the sector.

Joint Programmes with Industry

Teagasc works with all major Irish agri-businesses on joint programmes that focus on improving production efficiency and product quality consistent with market requirements.

Joint Programmes with Industry

Kerry
Dairygold
Carbery

Glanbia
Teagasc/IFJ Better Beef Farm Programme
Dawn Bull Beef Programme.

North-South Linkages

Teagasc will continue to advance co-operation with the agri-food development agencies in Northern Ireland on matters of mutual interest. Ongoing contact will be maintained with agri-food, research and development and education / training bodies and any opportunities for cooperation that would yield mutual benefit will be explored.





Teagasc Statement of Strategy 2012 – 2015



Supporting Science-Based Innovation in Agriculture and Food



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