



Department of
**Agriculture,
Food and the Marine**

An Roinn
**Talmhaíochta,
Bia agus Mara**

Department of Agriculture,
Food and the Marine

2016

Annual Report



Department of Agriculture, Food and the Marine (DAFM)

Mission Statement

“To lead the sustainable development of the agri-food, forestry and marine sector and to optimise its contribution to national economic development and the natural environment”

This Annual Report is produced in line with the objectives set out in the Statement of Strategy 2015 - 2017



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The agriculture and food sector continued to play a vital role in Ireland's economic recovery in 2016. According to Bord Bia food and drink exports rose by about 2% to reach €11.15 billion, marking growth of over 41% since 2010. CSO statistics for agri-sector exports, which include non-edible products such as forestry increased to €12.2 billion in 2016. The profile of trade continues the change that has been evident in recent years, with exports of food and drink to international markets (outside of our traditional UK and EU markets) steadily increasing to a value of around €3.5 billion in 2016.

Developments in 2016 were dominated by the decision of the United Kingdom in June to leave the European Union. Substantial work was undertaken by the Department in the first half of 2016 to identify the key risks that could arise in the event of a Brexit and to engage in preliminary contingency planning. Internal analysis of the likely implications for key sectors was conducted, informal consultations were held with stakeholders and the Department fed into a whole-of-Government contingency framework prepared by the Department of the Taoiseach. Following the decision that the UK would leave the EU, this analysis was further deepened, consultation with stakeholders in the sector was intensified, and engagement with colleagues in other Member States and in the UK (including Northern Ireland) commenced.

The Minister for Agriculture, Food and the Marine, Michael Creed TD, announced a “three pillar strategy” in response to income volatility as part of Budget 2017. Along with tax measures and farm payments, the “Agriculture Cashflow Support Loan Scheme” was announced to assist in addressing the impact of the change in the sterling exchange rate and lower commodity prices in some agriculture sectors. The Scheme, developed by the Department in co-operation with the Strategic Banking Corporation of Ireland (SBCI), makes €150 million available to farmers at interest rates of 2.95%.

Budget 2017 included an adjustment to the farmers' ‘Income Averaging’ taxation system, allowing an opt-out for an exceptional year. It also included support measures for SMEs, the introduction of a fishers' tax credit of €1,270 and environmental agri-taxation measures.

During 2016, the Minister launched a “Cash Flow & Financial Management Initiative” to improve on-farm financial planning on farms, particularly cash-flow planning.

The market difficulties across the EU continued in 2016 for the dairy and livestock sectors. Two further packages of support measures were agreed by Member States, in March and July, the latter of which included an EU-wide €500 million support fund. This package comprised two elements - a €150 million EU-wide measure to compensate farmers for reducing their milk output; and a €350 million fund allocated to Member States (of which Ireland's allocation amounted to €11.1 million). Ireland's allocation was augmented with a further €14 million in national funding to provide leverage for a new €150 million low-cost loan scheme for Irish farmers.

**food and drink exports rose
by about 2% to reach €11.15
billion, marking growth of
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2016 Main Achievements

Simplification of the CAP continued in 2016. A number of simplified market measures were adopted in May, including regulations on public intervention and private storage, and on import and export licences.

2016 saw a significant step forward for global climate action with the Paris Agreement entering into force. Ireland ratified the Agreement in quarter four of 2016.

At EU level in July 2016, the European Commission presented a legislative proposal, the "Effort Sharing Regulation", setting out binding annual greenhouse gas emission targets for Member States for the period 2021–2030.

43 research projects were awarded over €28 million in December 2016 under the Department's three public good competitive research programmes:

- Food Institutional Research Measure (FIRM), Research Stimulus Fund (RSF) and the Programme of Competitive Forest Research for Development (CoFoRD).
- The 43 awards involve collaborations between 19 different institutions and organisations including Teagasc, a number of universities and institutes of technology.
- The research investment will provide direct employment for 186 people including 65 contract researchers and 83 post graduate research opportunities in the form of PhDs (66) and Masters degrees (17).

A US-Ireland Research and Development Partnership Call in Agriculture was opened for the first time in March 2016. The initial Call was a pilot in three priority areas in plant and animal science. The Call enabled scientists from the US, Ireland, and Northern Ireland to develop collaborative tri-jurisdictional research applications for submission under the USDA's National Institute of Food and Agriculture 2016 Agriculture and Food Research Initiative Call for Proposals – a major competitive grant programme addressing critical societal issues.

Under Horizon 2020, the EU Framework Programme for Research and Innovation, Ireland drew down a total of €5.44m in the Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy element of the programme.

Ireland's €240 million European Maritime and Fisheries Fund (EMFF) Operational Programme for the seafood sector was implemented in 2016 through the roll-out of 16 Schemes for the fishing, aquaculture and seafood processing sectors.

Seven new Fisheries Local Action Groups (FLAG) were established in 2016 with a total budget of €12 million to invest in coastal communities over the period 2017-20. The FLAG Scheme focuses on adding value to seafood products and assisting coastal communities to diversify their economies towards new economic activities, particularly those offered by blue growth and the broader maritime sectors".

The Independent Review of the aquaculture licensing process recommended in Food Wise 2025 and in the National Strategic Plan for Sustainable Aquaculture Development, was commenced in December 2016 with the appointment of an Independent Review Group and publication of its Terms of Reference.

Milk production in Ireland in 2016 was 6.8m tonnes, an increase of 4% on the 2015 annual total.

Minister Creed and Minister of State Andrew Doyle T.D. led some 30 Irish agri-food companies on a week-long trade mission to Asia in September. One of the key focus areas for the trade mission was progressing market access for Irish meats in China, Vietnam and Korea. Minister Creed held a positive meeting with the Chinese AQSIQ Minister who committed to expedite consideration of Ireland's application for beef access. In Vietnam and Korea Minister Doyle submitted detailed questionnaires regarding beef access in both countries.

2016 Main Achievements

The extension of our beef market access to the USA to include Beef Intended for Grinding (BIFG) was approved by the US Food Safety Inspection Services (FSIS) in July 2016. In addition market access for beef was secured to Canada, New Zealand, and Israel.

In 2016 Irish Whiskey exports exceeded €500m for the first time. This was an increase of 13.8% on Irish Whiskey exports in 2015 and brought cumulative growth of 82.5% over the four years since 2012. The most important market was the United States.

In addition to outward trade missions, the Department hosted visiting delegations from a wide range of countries, including China, US, Vietnam, Morocco, Nigeria, Georgia, Iran, New Zealand, Kenya, Eritrea, Macedonia and Kyrgyzstan.

Two North/South Ministerial Council Agriculture Sectoral meetings were held in January and October 2016.

During 2016 the Department continued its support for the vital work of the United Nations World Food Programme (WFP) with a total core multilateral contribution of €40 million, which is comprised of Ireland's 2016 and 2017 contribution of €20m per year. The 2017 pre payment gives WFP the flexibility to plan and target its funding in the most strategic, efficient and effective manner.

The Africa Agri-Food Development Fund continued its work with three Irish companies, the first project brings new efficiency-improving crop technologies to farmers in Ethiopia and Kenya, the second is using Irish expertise and knowledge to develop sustainable pig production in Uganda and the third project is exploring the possibility of locally producing and marketing an ethical brand of Ready-to-Use Complementary Food in Malawi to help prevent Chronic Malnutrition.

At its 2016 meeting the FAO Committee on Food Security (CFS) endorsed the document Sustainable Agriculture Development for Food Security and Nutrition, What roles for Livestock? Ireland acted as the EU negotiator for the process to agree the policy recommendations and played an influential role in the related side events on this topic.

In addition to paying Ireland's 2016 subscription of €1.85 million to FAO, further extra budgetary funding of €986,000 was provided by the Department to the FAO in areas where FAO has a particular competence and which DAFM considers to be of strategic importance.

The Department and its agencies contributed to the Government's 2016 Action Plan for Jobs by undertaking 20 headline actions, all of which were achieved.

A public consultation was launched on a draft adaptation plan for the agriculture and forest sector, under the 2012 National Climate Change Adaptation Framework.

An Irish case study on Policies, Practices and Strategies for Climate Smart Agriculture was completed and presented as part of the Global Alliance Climate Smart Agriculture (GACSA) webinar series and at the GACSA Annual Forum in June.

The Department hosted two open policy debates under the Civil Service Renewal Programme relating to climate change issues: one on the challenges for the Irish beef and dairy sectors and one on adaptation in the agriculture and forest sector.

The number of Basic Payment Scheme (BPS) applications filed online, through BPS iNet, in 2016 increased by 7,717 to over 101,000. This represents approximately 77% of all applications submitted.

In 2016, €16m in voted monies was spent on the Fishery Harbour and Coastal Infrastructure Capital Programme.

SeaFest, Ireland's national maritime festival, was held in Galway in July. As part of SeaFest, the third 'Harnessing Our Ocean Wealth' Conference, reviewed ongoing progress on the implementation of the Government's Integrated Marine Plan and was attended by over 500 delegates. More than 60,000 visitors to SeaFest enjoyed an action-packed programme of family-friendly events at Galway Docks.

2016 Main Achievements

The rollout of schemes under the Forestry Programme 2014-2020 continued in 2016, including:

- the opening of the NeighbourWood Scheme in February 2016,
- the development of a template for private forest owners to establish certification groups, the contract for which was signed in November 2016,
- the development of a training course for forest machine operators at the Teagasc Agricultural College, in Ballyhaise, Co. Cavan was also announced in November 2016 at the unveiling of a new harvester/forwarder simulator, which will form an important element in the training,
- the Forest Roads Scheme to encourage and facilitate the mobilisation of the existing timber resource,
- provision of support for the adoption of central tyre inflation technology by timber hauliers.

A Windblow Reconstitution Scheme, the purpose of which was to provide financial aid to land owners whose plantations were damaged in late 2013/early 2014 by storm force winds, was opened from September 2016 (until February 2017) for applications. Some 8,000 hectares of forest lands were affected by the storms.

COFORD published a new *All Ireland Roundwood Production Forecast 2016-2035* in 2016. It outlines the potential to expand roundwood harvest from the current 3.2 million cubic metres per annum to over 6 million cubic metres by 2030. Most of the additional harvest is forecast to come from the private sector, on foot of afforestation over the past three decades. Additional measures taken by the Department in 2016 to facilitate and enable the mobilisation of this resource included were the provision of support for the training of harvester and forwarder operators, and for voluntary forest certification initiatives. The launch of the Forecast was accompanied by an online spatial analysis tool, which will generate bespoke roundwood production forecasts, for both Coillte and the private sector for any area of the country, for a range of wood size assortments, including forest-based biomass.

In September 2016, the European Union and Indonesia agreed that Indonesia could issue FLEGT licences for verified legal timber and timber product exports to the EU as and from 15th November 2016. This was a major development following a long period of negotiation, governance enhancement/development and capacity building which culminated in the finalisation of a

Voluntary Partnership Agreement (VPA), between Indonesia and the EU. This VPA is aimed at guaranteeing legality of timber through FLEGT licensing of Indonesian timber and timber products destined for the EU market.

As part of ongoing developments in the EU Clean Air Package; amendments to the National emissions ceiling directive (NECD) to curb air pollutants such as ammonia, from manure and fertiliser, and machinery emissions were agreed in December 2016. These include binding national targets for 2030 to limit air pollutants linked to major human health problems.

The inclusion of a flexibility from the land use sector in the EU Effort Sharing regulation proposal is a significant achievement for Ireland as we have been engaging with the Commission for some time to ensure there is a clear understanding of the agriculture and forest sectors in Ireland, and to seek consistency between EU agri-food and climate policies.

Minister Creed launched the consultation process on a National Farmed Animal Health Strategy in September. 14 submissions from stakeholders were received.

Agreement was reached with Egypt to allow the importation of Irish cattle in February, and with Turkey in June, resulting in the export of over 19,000 cattle to Turkey in 2016.

The landing obligation for certain demersal species came into effect from the 1st January 2016 as part of the phased in approach which is already in place for pelagic fisheries and will apply to all TAC species by 2019.

Ireland secured 233,500 tonnes of quotas worth €280 million for Irish fishermen at the December 2016 EU Fisheries negotiations. This represents an increase of 17,390 tonnes for 2017 and includes a 9% increase in the €74 million prawn fishery.

Organisation of the Department

At 31 December 2016 the Department employed a total of 2,902 full-time equivalent staff.

The senior management team is the Management Board. This comprises seven Assistant Secretaries General/Directors, the Chief Veterinary Officer, the Deputy Chief Veterinary Officer, the Chief Inspector, the Director of Laboratory Services and is headed by Aidan O’Driscoll, Secretary General.

MAC/Director	Deputy	Function	Head of Division	Location
Brendan Gleeson <i>Livestock Products, Food</i>		Meat & Milk Policy, Food Safety Liaison	Colm Hayes	Dublin, Portlaoise
		Milk & Meat Hygiene, Fees, Animal By-Products, TSE, National Milk Agency	Tom Loftus	Portlaoise, Johnstown Castle
		Dairy Controls and Certification	Nicholas Finnerty	Dublin, Portlaoise
		Food Industry Development, Bord Bia	Marian Byrne	Dublin
		Horse & Greyhound Racing Teagasc	Rebecca Chapman	Portlaoise
Brid Cannon <i>EU, Trade, Economics, Rural Development, Sustainability</i>		CAP Rural Development	Patricia Kelly	Dublin
		EU Policy and International Trade	Paul Savage	Dublin
		Embassies	Breffini Carpenter	Brussels
		Brussels, London, Paris, Rome, Geneva, Warsaw, Washington		
		Economics & Planning	Sinead McPhillips	Dublin, Portlaoise
		Climate Change and Bio Energy Policy	Edwina Love	Portlaoise
Ann Derwin <i>Governance Finance, Audit, Accounts, Legal Services, Management Services, Human Resources, Corporate Affairs including co-ordination for State Bodies</i>		Management Services Accommodation, Health & Safety	Grainne Mulligan	Dublin, Portlaoise
		Human Resources	Sharon M. Murphy	Dublin, Portlaoise
		Corporate Affairs	Kay Ryan	Dublin, Portlaoise
		Finance Central Procurement Unit	Heber McMahon	Dublin, Portlaoise
		Accounts	Colm McKiernan	Cavan
		Internal Audit	Gordon Conroy	Dublin, Portlaoise
		Legal Services	Derek Elliott	Dublin, Cavan
		Agricultural Appeals	Angela Robinson	Portlaoise

Organisation of the Department

MAC/Director	Deputy	Function	Head of Division	Location
Sean Keevey <i>Information Management & Technology</i>		IMT- Direct Farm Payments Systems (IACS)	Alan King	Dublin, Portlaoise
		IMT- Infrastructure and Operations	Darren Murray	Dublin
		IMT- Customer, Financial, Fisheries & Animal Health Systems	Joe Hanly	Dublin, Portlaoise, Backweston
		IMT Programme Office	Louise Jevens	Dublin
Paul Dillon <i>Agriculture Structures Market Supports Forestry</i>		Forest Service Inspectorate	Seamus Dunne	Dublin, Regions
		Forest Service	Brideena Nolan	Johnstown Castle
		Forest Services- International	Stephen Fitzpatrick	Dublin
		Agriculture Structures & Market Supports	Ronan O'Flaherty	Johnstown Castle
		Agriculture Environment and Structures	Liam Fahey	Castlebar, Regions
		Forest Sector Development/COFORD	Eugene Hendrick	Dublin
		Agricultural Environment and On-Farm Investment	Mirrian Cadwell	Johnstown Castle
Kevin Smyth <i>Direct Payments Suckler Cow</i>		BPS (Inspection and Policy)	Paul McKiernan	Portlaoise
		Basic Payment Schemes	Fintan O'Brien	Portlaoise
		Single Payment Entitlement & Financial Control	Bernadette Brennan	Castlebar, Portlaoise
		Direct Payment Integrated Controls	Thomas Keating	Dublin, Regions
Cecil Beamish <i>Marine</i>		Sea-fisheries Policy and Management	Josephine Kelly	Clonakilty
		Sea Fisheries Administration	Kevin Moriarty	Clonakilty
		Aquaculture & Foreshore Management	John Quinlan	Clonakilty
		Engineering	Noel Clancy	Clonakilty
		Marine Agencies and Programmes	Paschal Hayes	Clonakilty
Bill Callanan <i>Chief Inspector</i>	Vacancy <i>Deputy Chief Inspector</i>	Livestock Breeding, Production & Trade	Gerry Grealley	Backweston, Cavan, Portlaoise
		Pesticide Registration & Controls	Aidan Moody Tom Medlycott	Backweston
		Feedstuffs, Fertilisers, Grain and Poultry	Vacant	Backweston
		Crop Evaluation and Certification	Donal Coleman	Backweston
		Plant Health & Horticulture	Barry Delany	Backweston
		Research & Codex	Richard Howell	Dublin
		Nitrates, Biodiversity and Engineering	Jack Nolan	Portlaoise
		Crop Policy, Production & Safety	Kevin Cassidy	Backweston

Organisation of the Department

MAC/Director	Deputy	Function	Head of Division	Location
Martin Blake <i>Chief Veterinary Officer</i>	Richard Healy <i>Director of Animal Health and Welfare</i>	ERAD, Veterinary Medicines, Regional Offices Administration and Veterinary Council of Ireland	Míchéal O'Raghallaigh	Backweston
		Animal Health and Welfare	Dermot Murphy	Dublin
		Animal Identification and Movement	Martin Farrell	Backweston
	Paula Barry Walsh <i>Deputy Chief Veterinary Officer</i>	Veterinary Northern Area Management Team	Thomas McTague	Regions
		Veterinary Southern Area Management Team	Pat Meskell	Regions
		Veterinary Service Internal Audit Unit, SIU	Pat Flanagan	Dublin
		Animal Health & Welfare- non ruminants, Animal Remedies	Michael Sheahan	Dublin
		Animal Health- ruminants ERAD, Animal Identification	Margaret Good	Dublin
		Veterinary Public Health Inspection Service (VPHIS) (East, SE, SW)	Peter Maher	Dublin
		Veterinary Public Health & Food Safety Policy, International Trade and Contingency planning.	Dave Nolan	Dublin
National Disease Control Centre and Border Inspection Posts	Sally Gaynor	Dublin		
TSE and Animal By-Products Division	John Griffin	Dublin		
Audit, Enforcement, Ethics Organisational Governance, Animal Remedies	Hazel Sheridan	Backweston		
Donal Sammin <i>Director of Laboratories</i>	James Choiseul <i>Head of Agriculture Laboratories</i>	Bacteriology	John Egan	Backweston
		Dairy Sciences Laboratories	Eoin O'Brien	Backweston
		Veterinary Public Health Regulatory Laboratory	Montserrat Gutierrez	Backweston
	Vacancy <i>Head of Veterinary Laboratories</i>	Regional Veterinary Laboratories & Blood testing Lab	Micheal Casey	Regions, Longtown
		Pathology	John Moriarty	Backweston
		Pesticide, Seed Testing & Plant Health	Anne Marie Dillon	Backweston
		Virology	Ronan O'Neill	Backweston
		Biosecurity	Padraig Ross	Backweston
		Lab Service Admin Unit	Vacant	Backweston
		Longtown farm	Robert Fisk	Backweston

OBJECTIVE 1 - AGRI-FOOD, FORESTRY AND MARINE POLICY AND TRADE DEVELOPMENT



Objective One

Performance Budgeting for Objective One

High Level Objective: “Progress the economic development of the agri-food, forestry and marine sectors, including facilitating the achievement of FoodWise 2025 targets.”

INPUTS – FINANCIAL & HUMAN RESOURCES

		2016 Estimate			2016 Outturn		
		Current	Capital	Total	Current	Capital	Total
		€000	€000	€000	€000	€000	€000
A.1	ADMINISTRATION - PAY	15,684	-	15,684	15,660	-	15,660
A.2	ADMINISTRATION - NON-PAY	4,219	93	4,312	4,008	46	4,054
A.3	- RESEARCH AND TRAINING	29,943	300	30,243	29,903	300	30,203
A.4	- DEVELOPMENT OF AGRICULTURE AND FOOD	4,120	4,600	8,720	4,395	1,249	5,644
A.5	TEAGASC - GRANT-IN-AID FOR GENERAL EXPENSES	113,880	2,400	116,280	113,880	2,400	116,280
A.6	- AN BORD BIA – GRANT-IN-AID FOR GENERAL EXPENSES	32,492	-	32,492	32,569	-	32,569
A.7	- MARINE INSTITUTE (GRANT-IN-AID)	19,309	10,000	29,309	19,094	10,000	29,094
A.8	- BORD IASCAIGH MHARA (GRANT-IN-AID)	19,430	11,750	31,180	17,505	5,599	23,104
A.9	- FOOD AID DONATIONS – WORLD FOOD PROGRAMME	40,000	-	40,000	40,000	-	40,000
A.10	- OTHER SERVICES	21,639	2,500	24,139	18,045	530	18,575
A.11	- HORSE AND GREYHOUND RACING FUND	64,556	9,444	74,000	64,556	9,444	74,000
A.12	- BEEF GENOMICS SCHEME	52,000	-	52,000	61,896	-	61,896
A.13	- CEDRA – RURAL INNOVATION AND DEVELOPMENT FUND	1,500	-	1,500	1,480	-	1,480
Programme Total:		418,772	41,087	459,859	422,991	29,568	452,559

* 2016 Estimate as amended by supplementary estimate.

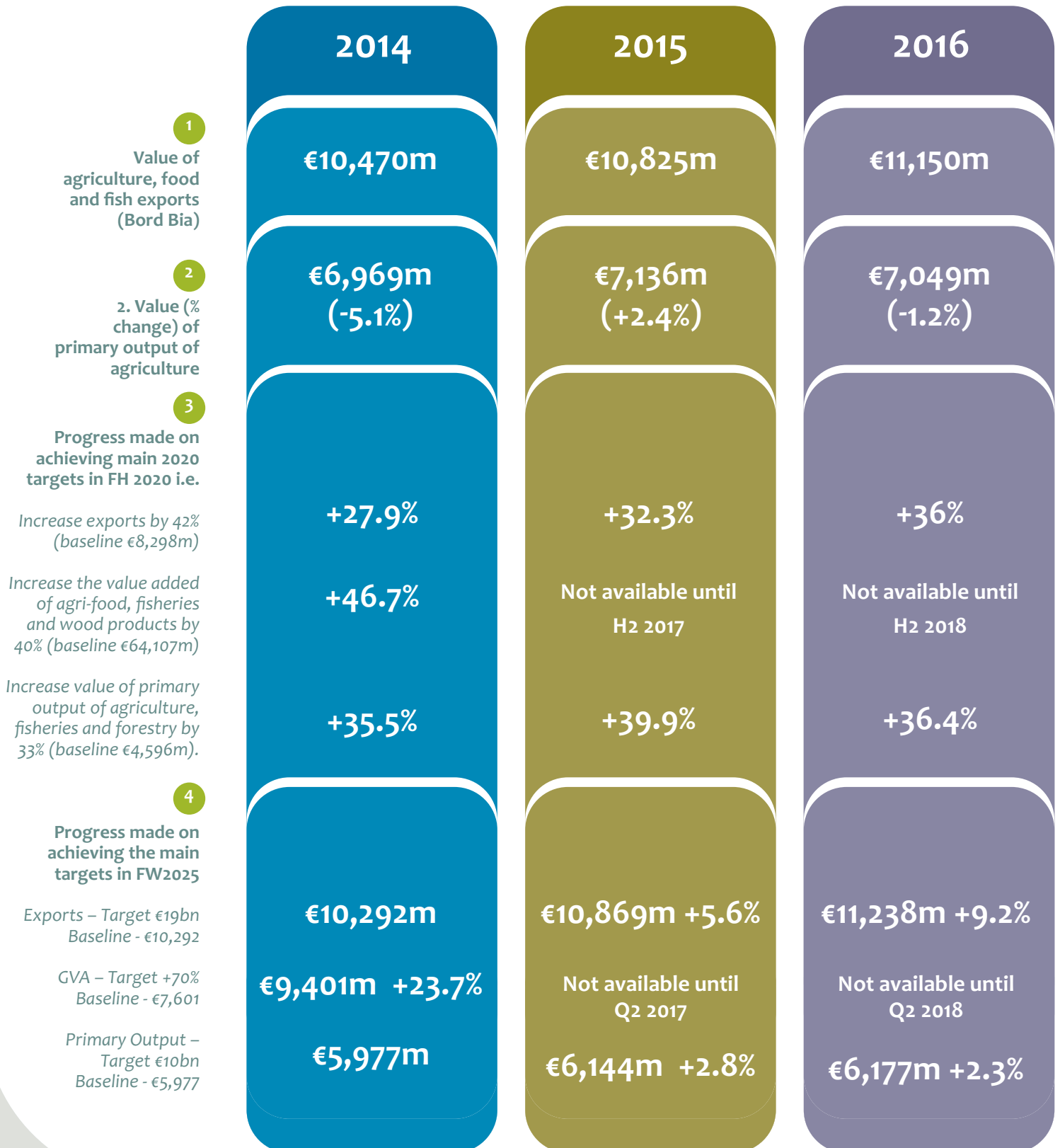
Staff Numbers	2016 Estimate	2016 Actual
DAFM	263	210
Teagasc	1,000	1,024
Bord Bia	111	111
Marine Institute	140	140
BIM	122	128

Objective One

Performance Budgeting for Objective One

Programme A: Context Indicators

Context and Impact Indicators



Objective One EU Interactions



EU Interactions

The Netherlands and Slovakia shared the role of the President of the Council of the European Union in 2016 - Netherlands from January to June and Slovakia from July to December. The main items discussed during 2016 by Member States, including Ireland were the continued market difficulties being experienced by farmers across the dairy and livestock sectors, and CAP simplification (with a particular emphasis on greening measures and other measures under the so-called Omnibus Proposal). Several informal discussions were also held at Ministerial level on CAP post-2020. Strengthening farmers' position across the food supply chain was also a common theme. Discussions also continued on a number of legislative proposals, including organics, official controls and plant health.

UK Decision to leave the EU

The year was dominated by the UK's decision in June to leave the European Union. This decision could have a potentially very significant impact on Ireland's agri-food and fisheries sectors, - some €4.8bn of Irish agri food products (39%) was exported to the UK in 2016, while the value of imports was €3.7bn (46% of total agri-food imports).

From a sectoral viewpoint, 50% of Irish beef exports and more than one-third of dairy exports go to the UK market. The mushroom and forestry sectors are also highly dependent on the UK market, and the mushroom sector was one of those worst affected in 2016 by the fall in the value of sterling against the euro.

Brexit also presents particular challenges for the fisheries sector in the form of potentially restricted access to fishing grounds and resources - on average, 36% of Irish landings are taken from UK waters. For mackerel and prawns, which account for nearly 50% of the total value of Irish fish quotas, 64% and 39%, respectively, are caught in the UK zone.

Substantial work was undertaken by the Department in the first half of 2016 to identify the key risks that could arise in the event of a Brexit and to engage in preliminary contingency planning. Internal analysis combined with stakeholder consultation informed this process, which fed into a wider programme of work undertaken on a whole-of-Government basis, co-ordinated by the Department of the Taoiseach.

After the UK vote, this analysis was further deepened, consultation with stakeholders in the sector was intensified, and engagement with colleagues in other Member States and in the UK (including Northern Ireland) commenced. The Department established a dedicated Brexit Unit to co-ordinate its response, together with an internal Brexit Response Committee comprised of representatives from a wide range of areas, including meat and milk policy, economics and planning, animal health and welfare, and food industry development. Brexit was also added as a standing item on the agenda of the Food Wise 2025 High Level Implementation Committee. A Stakeholder Consultative Committee was formally established, and the Minister and Department commenced a very active participation in the All-Island Civic Dialogue Process. North-South and East-West co-operation was also intensified at both official and ministerial levels, and a process of raising awareness of the Irish agri-food sector's concerns on Brexit with other Member States and with EU institutions was commenced.

CAP Post-2020

Preliminary discussions on the CAP post-2020, commenced at the Informal Council meeting of Agriculture Ministers in May 2016. This was followed by an Informal meeting of Ministers hosted by the French Minister for Agriculture in Chambord, France in September which examined the future of the CAP against the backdrop of the UK's decision to leave the EU and the ongoing difficulties being experienced on agricultural markets.

Objective One EU Interactions

The future of the CAP was also discussed at the European Conference on Rural Development in Cork, also in September, and again at the Informal Council meeting of Ministers under the Slovak Presidency in mid-September.

The future orientation of the CAP was also discussed at the Agricultural Outlook Conference in Brussels in December 2016. Three key principles that the future CAP must address were identified: greater market resilience, more sustainable agricultural production and progress on generational renewal.

CAP Simplification

Simplification of the CAP continued in 2016. A number of simplified market measures were adopted in May, including regulations on public intervention and private storage, and on import and export licences. Following its commitment to carry out a review of the greening provisions after their first year of implementation, the Commission undertook a public consultation process in the first quarter of 2016. The responses from this consultation formed the basis of the Greening simplification measures announced at the Agri-Fish Council in July. Many of the simplification proposals focused on changes to various rules relating to Ecological Focus Areas.

Also part of the simplification process, the Omnibus Proposal forms part of the European Commission's mid-term review of the Multiannual Financial Framework 2014-2020. In addition to revising the general financial rules concerning multiannual programmes, the Omnibus Proposal includes simplification-related changes to some primary CAP legislation, including the Direct Payments and Rural Development regulations.

Common Fisheries Policy Reform

One of the key achievements in 2016 was reaching final agreement with the European Parliament on the Baltic Sea Multiannual Plan in June. This is the first new Common Fisheries Policy regional plan that takes account of interactions between species and aims to ensure the sustainability of fisheries. This plan forms the basis for future plans, e.g. the North West Waters plan, which is extremely important from an Irish perspective.

Discussions on the development of the Technical Measures Regulation as part of the reformed Common Fisheries Policy commenced in 2016, while work progressed on the Data Collection Framework

Regulation. A General Approach was secured at June Council on the proposal for a new system to grant and manage fishing authorisations that will allow authorities to better monitor EU vessels fishing outside Union waters and international vessels fishing in EU waters.

The bi-annual proposal for a Council Regulation fixing the fishing opportunities for deep sea stocks for 2017 and 2018 was negotiated and agreed in 2016, while first round discussions were completed on the proposal on the North Sea Multiannual plan for demersal stocks.

The Annual Total Allowable Catches (TACs) and Quotas for 2017 were agreed at the December Agriculture and Fisheries Council. The Minister secured 233,500 tonnes of quotas worth €280 million for Irish fishermen for 2017. This represents an increase of 17,390 tonnes over 2016, while the €280 million value of quotas represents a 6% increase on 2016.

Market situation

Market developments across the EU, particularly in the dairy, livestock and fruit & vegetable sectors, continued to be monitored closely in 2016. Following on from the package of measures announced in September 2015, the Commission announced a further package of support measures in March 2016 in response to the ongoing crisis. The main elements of this package included the extension and broadening of the more traditional support measures such as intervention and aids to private storage. In addition, advance payments of 70% for the basic payment scheme and 85% for the rural development schemes were provided for to improve cash flow for farmers. Member States were also given the option to introduce voluntary supply control measures in the dairy sector, funded at Member State level. Other measures included the establishment of a Meat Market Observatory for the beef and pigmeat sectors, consultations between the recently-established Agricultural Markets Task Force and High Level representatives from Member States to examine the structural issues within the dairy sector, and an increase in the 2016 budget for promotional projects in the dairy and pigmeat sectors in particular.

Despite these additional measures, the market difficulties continued into the middle of 2016. In response, the Commission presented a further package of measures in July 2016. The main component was a fund of €500 million, which comprised two separate elements:-

Objective One EU Interactions

- €150 million EU-wide measure to compensate farmers for reducing milk output in the final quarter of 2016 compared to the same period in 2015.
- €350 million fund allocated to Member States in the form of a national envelope, which Member States could use in accordance with their national circumstances.

The Department subsequently implemented a voluntary milk supply reduction scheme to which approximately 5,000 farmers applied, and Minister Creed announced a new €150 million low-cost loan fund for the livestock and other sectors, leveraged through the use of Ireland's €11.1 million allocation, in conjunction with national funds of €14 million.

Food Sector

New EU promotion campaign 'Enjoy, it's from Europe': Bord Bia successfully applied for funding to promote beef and lamb in China, Japan and Hong Kong. The €3.75 million campaign includes EU funding of €3 million and €0.75 million in Bord Bia funding.

Forestry Sector

A review of all aspects of the EU Forest Law Enforcement Governance Timber (FLEGT) Action Plan was completed at EU level in 2016 and Ireland has inputted into this review. The Commission and Member States within the Council Working Group and EUTR /FLEGT Committee continued to monitor efforts to combat illegal logging through the effective implementation of the EUTR (EU Timber Regulation).

In September, the European Union and Indonesia agreed that Indonesia could issue FLEGT Licences for verified legal timber and timber product exports to the EU from November 2016. This is a major development that follows a long period of negotiation, governance enhancement / development and capacity building which culminated in the finalisation of a Voluntary Partnership Agreement (VPA) between Indonesia and the EU.

Substantial progress was also made in the negotiations on concluding a Voluntary Partnership Agreement (VPA) with Vietnam. Vietnam has agreed in principle to sign a VPA and will now develop a Timber Legality Assurance System to further this process.

Rural Development Programme (RDP)

The first amendment to Ireland's Rural Development Programme 2014 – 2020 was formally approved by the European Commission in June. It introduced:-

- Changes to GLAS 2 (an agri-environmental scheme), on foot of a review of GLAS 1
- The Burren Programme (a locally led agri-environmental scheme)
- An amendment to TAMS II (on-farm investment scheme) to introduce a tillage scheme, rainwater harvesting and sheep fencing
- Changes to the Organic Farming Scheme to allow for the extension of 'old' contracts and the inclusion of additional land
- Permission to be a member of two Knowledge Transfer Groups
- LEADER clarifications in relation to use of second-hand equipment, use of payment costs instead of simplified cost options and inclusion of reference to advance payments

The Commission proposed some simplification measures to the Rural Development Regulation, as part of its Omnibus Proposal. The measures are aimed at avoiding the need for re-programming existing rural development programmes and include:-

- Easing the rules to be respected with Financial Instruments, including channelling support to young farmers, removal of certain eligibility rules, and enabling working capital to be eligible outside agriculture and forestry
- Streamlining rules to support young farmers, introduction of a sector-specific income stabilisation tool and simplifying selection criteria rules
- Quicker availability of EU funding

Ireland submitted the second amendment of its RDP to the Commission in September 2016 for approval.



Objective One EU Interactions

Russian Ban on EU Agriculture Products

The Russian ban on the importation of certain EU agricultural products remained in place throughout 2016, having been extended by Russian Authorities.

The separate ban on the importation of pigs and pigmeat products imposed following the discovery of African Swine Fever (ASF) in wild boar in Lithuania in early 2014, also remained in place. These restrictions have had a significant impact on the EU pigmeat sector in particular, with Irish pigmeat prices falling to their lowest level in five years in early 2016.

All Member States, including Ireland, have consistently urged the European Commission to intensify its contacts with the Russian authorities with a view to lifting the ban, in particular with a view to restoring the trade in live pigs, pork fat, lard and offal. The EU Commission continued to work hard to make progress on this issue. A WTO adjudication panel ruled against the ban in August 2016. This was subsequently appealed by Russia, but was upheld by the WTO's Appellate Body earlier this year.

Organic Farming Proposal

Negotiations on the Organics Proposal continued in 2016. Issues such as the scope, objectives and principles, general production rules, unauthorised products and substances, trade with third countries, and certification and controls progressed significantly. However, other issues including the use of greenhouses, derogations for the use of non-organic seeds, non-organic livestock and non-organic juveniles, and precautionary measures are causing difficulties in the agreement of a final compromise text.

Three part package covering Animal Health, Plant Health and Official Controls

Good progress was made on the official controls proposal resulting in the finalised text being agreed at the Environment Council in December. The Council Regulation on Plant Health was published in November 2016. Working Groups have been established to address secondary legislation on areas such as establishing lists of priority pests, protected zones and plants requiring checks at import.

Climate Energy

The proposal for an Effort Sharing Regulation (ESR) published in July 2016 provides a binding annual greenhouse gas emissions target for Ireland of 30% below the 2005 level by 2030. While this is equivalent to the proposed EU average target, it will be a challenge for Ireland. The proposal is detailed in terms of national targets for each Member State and contains a number of proposed flexibilities. Under the proposal Ireland has potential to use up to a cap equivalent to 5.6% of 2005 emissions (2.7 Mt CO₂eq per annum) from LULUCF in order to meet its emission reduction requirements, based on a combined contribution of net afforestation, cropland and grassland management activities.

OECD Ministerial Meeting of Agriculture Ministers

The OECD Ministerial meeting took place in April 2016 in Paris. The meeting co-chaired by USA and France, was a very positive exchange of views, focused on "better policies to achieve a productive, sustainable and resilient global food system".

The Ministerial reflected on the progress made in recent international agreements on the Sustainable Development Goals, the Nairobi WTO agreement, and the Paris COP21 agreement on climate change.

There was agreement on the following shared goals:

- To provide all consumers with reliable access to safe, healthy and nutritious food
- To enable producers everywhere, big and small, male and female, to operate in an open and transparent global trading system and to seize available market opportunities to improve their standards of living
- To contribute to sustainable productivity and resource use, solutions to climate change, resilience in the face of risk, and the provision of public goods and ecosystem services.
- To contribute to inclusive growth, and development, within and across countries.

Objective One International Interactions

World Trade Organisation

Developments in 2016 focused on the implementation of the outcome of the 10th WTO Ministerial Conference, held in December 2015 in Nairobi, which included the phased elimination of export subsidies and other measures agreed in relation to rules of origin and services.

EU-US (TTIP)

Four rounds of negotiations took place during 2016, with the latest taking place in New York from 3-7 October 2016. Most progress in these rounds was made on regulatory issues. The negotiations entered a natural pause following the US presidential elections and pending further clarity on the future direction of US trade policy. At the end of 2016 attention shifted to the means by which the progress achieved since mid-2013 could be formally consolidated.

Canada CETA

The Comprehensive Economic and Trade Agreement with Canada, which will remove over 99% of tariffs, was concluded in September 2014. The text of the agreement underwent a process of legal review during 2016 and the agreement was signed at the EU-Canada Summit in Brussels on 30 October.

EU MERCOSUR

The Mercosur trade negotiations had been in suspension for a number of years, but political developments in late 2015, particularly in Argentina, generated a new momentum from the Mercosur side to make progress, with a new round of negotiations taking place from 10-14 October 2016 in Brussels.

Prior to this new round, a draft offer circulated by the Commission to Member States in April 2016 contained a tariff rate quota (TRQ) for beef. Ireland worked very closely with other Member States to have this TRQ

removed and to have a comprehensive assessment of the cumulative impact of other FTAs on the agriculture sector carried out by the Commission before any substantial offer is made. Following this intense lobbying, the Commission decided not to include a TRQ for beef when it exchanged offers with Mercosur. The Commission also presented its study of the cumulative impact of trade agreements in November.

EU-Singapore

These negotiations were completed in October 2014, following which a process of legal review commenced. This was subsequently put on hold pending the outcome of proceedings in the European Court of Justice in relation to whether the Commission has exclusive competence to negotiate the agreement, or share such competence with the Council/Member States. Ireland submitted comments supporting the Council position in late 2015. The Advocate General of the European Court of Justice issued an opinion in December 2016 to the effect that the agreement could only be concluded by the European Union and Singapore acting jointly. The formal findings of the Court are still awaited.

EU-Vietnam

In July 2015 the Commission announced a provisional trade agreement with Vietnam, involving full dismantling of 99%-plus of tariffs over a period of 7 years for the EU and 10 years for Vietnam. The legal review of the text was ongoing at the end of 2016.

EU – Japan

The 17th round of negotiations took place in September 2016 in Brussels. Good progress was achieved with several chapters nearing completion. However key outstanding issues still remained in relation to agricultural products. Working groups continued to meet during December 2016, and the EU will continue to adopt an offensive approach in relation to the agriculture elements of these negotiations.



Objective One International Interactions

EU - China

The aim of the proposed EU-China Investment agreement is to remove market access barriers to investment and provide a high level of protection to investors and investments in EU and Chinese markets. It will replace the 26 existing Bilateral Investment Treaties between China and individual EU Member States with one single comprehensive investment agreement. Twelve rounds of negotiations have taken place up to September 2016. No date has yet been scheduled for the 13th round of these negotiations.

EU-Philippines

The first round of the EU-Philippines FTA discussions took place in Brussels in May 2016.

EU-Mexico

The EU and Mexico met in Brussels in June 2016 to start the negotiation process for the modernisation of the EU-Mexico Global Agreement. A second negotiating round took place in Mexico City in November.

TRADE MISSIONS

In 2016, Ministers Creed and Doyle led trade missions to China, Singapore, South Korea, Vietnam and Morocco, with input from Bord Bia, Enterprise Ireland (EI), Sustainable Food Systems Ireland (SFSI), other Departments and the relevant Embassies.

South-East Asia (China, Singapore, South Korea & Vietnam)

In September 2016, Minister Creed and Minister Doyle led a combined four country Asian trade mission. Minister Creed visited China and Singapore. During the same period Minister of State Andrew Doyle visited Vietnam and South Korea to promote Irish food and beverages and to explore further avenues and opportunities for the Irish food and beverage industry.

Notable elements of the missions saw high level political meetings as well as giving valuable opportunities for Irish business to network in the region that has a potential market for 1.5 billion people. The missions also further advanced the beef access application in South Korea and saw the launch of the Bord Bia regional office in Singapore.

Algeria and Morocco

In November, Minister Michael Creed led 10 Irish agri-food companies on a five-day trade mission to North Africa. The Minister led the mission in Morocco for three days and the trade delegation, led by senior officials of the Department, continued to Algeria.

The trade mission saw a series of trade promotion events and political meetings with Algerian and Moroccan counterparts. Minister Creed met with his Moroccan counterpart, the Minister for Agriculture, Mr. Aziz Akhannouch. Talks focused on the scope for deepening the collaboration in agriculture and food between both countries. At the conclusion of the political meetings the focus turned to commercial events, starting with a visit to one of Morocco's largest importers of dairy products, Copralim. This company is an existing importer of Irish dairy products from various Irish suppliers.

Events in Algeria included bi-lateral meetings with the Ministry of Agriculture and with the Algerian State Agency ONIL, which manages public procurement of dairy products, making them one of the largest buyers of dairy produce in the world. There was also a series of commercial and promotional events, including a major seminar organised by Bord Bia, promoting Irish Dairy, called "Food Ireland - Safe, Secure and Sustainable".

Inward trade visits

In addition to outward trade missions, the Department hosted visiting delegations from a wide range of countries in 2016, including China, US, Vietnam, Morocco, Nigeria, Georgia, Iran, New Zealand, Kenya, Eritrea, Macedonia and Kyrgyzstan.

Objective One International Interactions

North / South co-operation

There were two North South Ministerial Council (NSMC) Plenary meetings and two NSMC Agriculture Sectoral meetings held in 2016. At the Agriculture Sectoral meeting, Ministers noted the current position with regard to the ongoing difficulties being experienced on agricultural markets and the associated measures introduced to address these difficulties. They welcomed the continuing close contact between officials from DAERA and DAFM on a range of issues including, CAP Reform implementation issues and referred to the impact the UK decision to leave the EU will have on the agri-food and fisheries sectors in both jurisdictions. Ministers also noted the potential implications on future CAP funding and looked forward to the continuation of practical and effective co-operation on animal health and welfare, and disease control in both jurisdictions to ensure that the health and welfare of livestock is maintained at the highest level.

Further to the results of surveys in summer 2016 and within the framework of the All-Ireland Chalara Control Strategy, a comprehensive review of policy objectives and options in relation to the disease was initiated by officials from DAFM and DAERA in Northern Ireland. The focus of the review is the development of new strategic approaches to the disease and options available to the two administrations for reducing the potential impact of the disease on the island as a whole, in particular the updating and the targeted application of support schemes such as the Reconstitution Scheme and the Woodland Improvement Scheme (Element 1: Thinning and Tending).

In May 2016 DAFM Research Division, as part of a competitive process, awarded funding to the value of a €350,000 to Teagasc for a research project to screen 1,000 ash genotypes for Ash Dieback disease tolerance in Lithuania. As part of the project, systems for propagating resistant material will be also developed using biotechnological approaches to facilitate mass plant production. The ultimate aim again is to develop a population of Irish planting stock, tolerant to the disease. DAFM is also working with the Forestry Commission (UK) on similar tree breeding work.

European Forest Institute (EFI)

DAFM is a member of the EFI, which conducts research and provides policy support on issues related to forests. Ireland is an active member and supporter of a number of EFI initiatives including:

Science supporting policy making - this work is funded by EFI's Multi-Donor Trust Fund for policy support, which is supported by the Governments of Austria, Finland, France, Germany, Ireland, Italy, Norway, Spain and Sweden. In 2016, the facility issued:

- From Science to Policy 4: Forest bioeconomy - a new scope for sustainability indicators
 - From Science to Policy 3: Forest biomass, carbon neutrality and climate change mitigation
- These publications can be downloaded from www.efi.int

Climate Change

Ireland will contribute to the global climate action plan, The Paris Agreement, through the intended nationally determined contribution (INDC) tabled by the EU on behalf of its Member States, which commits to a reduction of 40% in EU-wide GHG emissions by 2030, compared with 1990.

FAO Analysis of the pledges suggests a very high portion include agriculture and land use as having a contribution to make, including those from developing countries. Economic dependence on the agriculture sectors and natural resources is also at the core of many countries' vulnerability concerns. Two-thirds of countries point to these sectors when discussing climate-related risks – more than any other sector. When focusing exclusively on economic vulnerabilities, almost 90% of countries refer to agriculture sectors.

During 2016, DAFM continued to participate in the EU Agriculture, Forests and Other Land Uses (AFOLU) team to promote and seek EU agreement on the Agriculture, Forestry and Other Land Use approach to the treatment of the land sector in UN climate change negotiations.

Objective One Food Security



UN - World Food Programme (WFP)

During 2016 the Department continued its support for the vital work of the United Nations WFP with a total core multilateral contribution of €40 million, which is comprised of Ireland's 2016 and 2017 contribution of €20m per year. The 2017 advance contribution gives WFP the flexibility to plan and target its funding in the most strategic, efficient and effective manner. This support is particularly necessary in the context of the current crisis in the Syria region where large parts of their funding will be targeted.

Africa Agri-Food Development Fund (AADF)

The AADF is a joint initiative by this Department and Department of Foreign Affairs and Trade. Its objective is to develop partnerships between the Irish Agri-Food Sector and African countries to support sustainable growth of the local food industry, build markets for local produce and support mutual trade between Ireland and Africa. During 2016, the fund continued its work with three Irish companies, the first project bringing new efficiency-improving crop technologies to farmers in Ethiopia and Kenya, the second is using Irish expertise and knowledge to develop sustainable pig production in Uganda and the third is exploring locally producing and marketing an ethical brand of Ready-to-Use Complementary Food in Malawi to help prevent chronic malnutrition.

UN- Food and Agriculture Organisation (FAO)

The Department ensured that Ireland's position on agricultural and development matters was well represented at various FAO meetings throughout the year. In October 2016, the seventh meeting of the reformed FAO Committee on Food Security (CFS) was held. The CFS is the main global forum for discussion and policy coherence on food security issues. It includes representation from all stakeholders including civil society representatives. At its 2016 meeting CFS endorsed the document 'Sustainable Agriculture Development for Food Security and Nutrition', "What roles for Livestock"? Ireland acted as the EU negotiator for the process to agree the policy recommendations and played an influential role in the related side events on this topic. The discussions concluded on the important attributes of grass systems and the key nutritional characteristics of animal source foods were acknowledged. Ireland was also represented in a panel of farmers where the impacts of sustainable practices on Irish farms were discussed with reference to co-operation with Teagasc and links with the FAO's Livestock Environment Assessment and Performance Partnership (LEAP) initiative which is strongly supported by Ireland.

In addition to paying Ireland's 2016 subscription of €1.85 million to FAO, further extra budgetary funding of €986,000 was provided by the Department to the FAO in areas where FAO has a particular competence and which DAFM considers to be of strategic importance.

Objective One National Policy Framework



Food Wise 2025

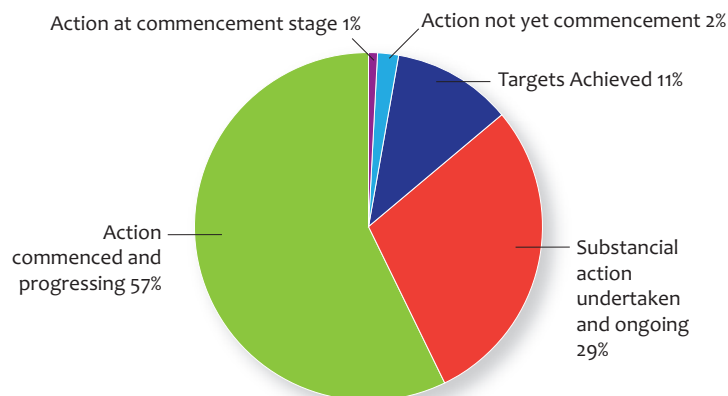
Food Wise 2025 sets out a ten year plan for the agri-food sector and is part of a series of rolling ten year strategies for the sector, following on from Food Harvest 2020. It underlines the sector's unique and special position within the Irish economy, and it illustrates the potential which exists for this sector to grow even further.

Implementation process

- The Implementation Process for Food Wise is driven by the High Level Implementation Committee (HLIC), chaired by the Minister and with participation from Management Board members, other Government Departments and relevant State agencies.
- The High Level Implementation Committee met six times in 2016 (January, April, twice in June, September and December).
- The five themes of Food Wise 2025: sustainability, human capital, competitiveness, market development and innovation plus the 12 individual sectors were covered at these meetings.
- The Environmental Sustainability Committee established to monitor and drive the implementation of the sustainability actions met on four occasions during 2016. The Committee's focus in their first year centred on information gathering, and in this regard invited a number of experts to address them. An adaptation workshop was held in November as part of the Committee's commitment to hold an annual stake holder work shop. This event took the form of an open policy debate under the Civil Service Renewal Programme.
- A Meat Implementation Group was established in 2016.

Food Wise 2025 Q4 2016 Updates

Total No of Actions: 330



Steps to Success 2016

- The first progress report of Food Wise 2025 entitled 'Steps to Success 2016' was launched in July 2016.
- It outlines what the Department and its agencies have achieved in year one and what they plan to achieve over the next 12 months. Among the highlights of year one are:
 - Market openings secured for beef in the US and Canada
 - Additional market openings for sheepmeat and pigmeat in Asia
 - Launch of the Bord Bia centre for consumer insights, The Thinking House;

Objective One National Policy Framework

- Launch of the Meat Technology Centre
- 2017 was designated the Year of Sustainable Grassland to celebrate and optimise Ireland's comparative advantage in terms of sustainable, grass-fed production system. The strong reputation of Irish grass fed beef, sheep and dairy production can be further leveraged in the period to 2025 to ensure greater penetration of high value markets in the EU and in third countries.

Of the 330 actions that were due to commence in 2015 or 2016, progress reported up to July 2016:

- 28% of the actions have been achieved or substantial action has been undertaken.
- 67% of the actions have commenced and are progressing.
- 2% of the actions are at commencement stage with the expectation that they will be achieved in the timeframe associated with them.
- 3% actions have not yet commenced. Of these, five will commence later this year.

Rural Innovation and Development Fund (CEDRA)

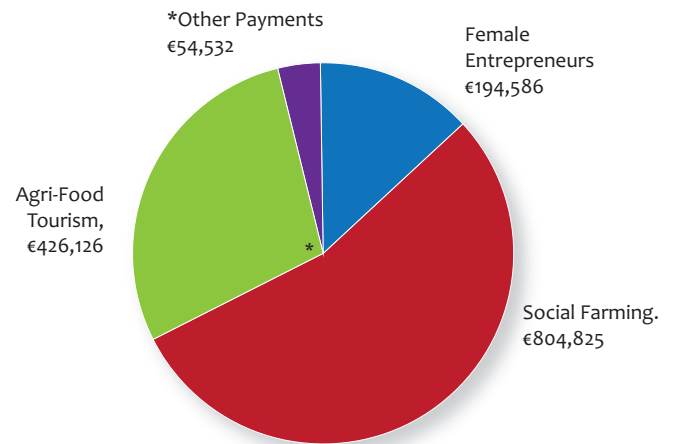
A range of projects under the Rural Innovation and Development Fund (RIDF) linked to the recommendations of CEDRA (Commission for the Economic Development of Rural Areas) were funded by the Department over 2016 (see figure below). An available fund of €1.5m was used to support the following areas: Rural Female Entrepreneurs, Social Farming and Agri-Food Tourism and Local Markets.

Initiatives funded include:

- the ACORNS training programme for female rural entrepreneurs that is aimed at providing early stage female entrepreneurs living in rural Ireland with the knowledge, support and networking opportunities to advance the development of their businesses.
- social farming to enable the design, development and implementation of a national social farming network and a number of model social farms across Ireland.

The agri-food tourism area, linked to actions in Food Wise 2025, has provided funds to support both the development and expansion of agri-food trails in rural areas with a view to targeting specific supports relevant for the local area development strategies.

Rural Innovation and Development Fund (CEDRA) 2016 Total Expenditure: €1.48m



*Other Payments Carryover of commitment items from 2015

2016 Action Plan for Jobs

The Department and its agencies contributed to the Government's 2016 Action Plan for Jobs by undertaking 20 headline actions. The specific agri-food and marine actions in the 2016 Action Plan for Jobs aligned with the Food Wise 2025 strategy for the sustainable growth of the sector over the next decade. Highlights include the establishment of a Consumer Insights Centre by Bord Bia; the launch of the Meat Technology Centre; and an array of new supports under the Seafood Development Programme.

Access to Finance

There continues to be a significant take-up of the specific agri-food funds provided by the main banks. Data from the Central Bank shows that the 'primary industries' sector (consisting of primary agriculture, forestry and fishing) continues to be a large component of new Small and Medium Enterprise (SME) lending, second only to property-related lending.

- The sector accounts for €731 million or 17% of all new loans in the twelve months between September 2015 and September 2016, while primary agriculture accounted for €660 million of the total.
- During the same period, new lending to Food and Beverage companies was €167 million, or 4% of the total. This represents a significant increase on the previous 12 months when lending was €99 million.

Objective One National Policy Framework

The Department, in cooperation with other State bodies, continues to explore additional funding mechanisms and support for farmers and SMEs in the agri-food sector.

■ The Strategic Banking Corporation of Ireland (SBCI) was established by the Government as a strategic funding company that aims to deliver lower cost, long-term, innovative and accessible funding to Irish SMEs, by offering tailored flexible products through its 'on-lending partners'. In 2016, of the €544 million drawn down as loans by SMEs, 23% was to the agriculture sector, which is by far the largest sector and accounts in part for a wide geographical spread in SBCI loans.

Agriculture Cashflow Support Loan Scheme

The Minister for Agriculture, Food and the Marine, Michael Creed TD, announced a "three pillar strategy" in response to income volatility as part of Budget 2017.

Along with tax measures and farm payments, the "Agriculture Cashflow Support Loan Scheme" was announced to assist in addressing the impact of the change in the sterling exchange rate and lower commodity prices in some agriculture sectors.

The Scheme, developed by the Department in cooperation with SBCI, makes €150 million available to farmers at interest rates of 2.95%. SBCI uses the €25 million of funding provided by DAFM to leverage the total amount of €150 million and, along with the European Investment Fund's 'COSME' (the EU programme for the Competitiveness of Enterprises and SMEs), is providing the guarantee required to underpin the loan's flexibility and lower the cost of the loans. The public contribution includes €11 million from the EU's 'exceptional adjustment aid for milk and other livestock farmers'. This Scheme is providing farmers with a low cost, flexible source of working capital, which will allow them to pay down more expensive forms of short-term debt, ensuring the ongoing financial sustainability of viable farming enterprises.

Cash Flow & Financial Management Initiative

During 2016, in the context of market difficulties, a sub-group of the Dairy Forum (including the Department, representatives of the main banks, the processing sector, farm organisations and Teagasc) agreed a number of measures to improve on-farm financial planning, particularly cash-flow planning. In June the Minister launched a three part programme:

- The publication of a booklet entitled 'Cash Flow & Financial Management on Dairy Farms', which issued to all dairy farmers.
- Cash flow training was incorporated in the Teagasc dairy farm walks, where advisors are on hand for one-to-one consultations and referrals.
- A standardised 15-20 minute cash flow training module was developed to be delivered to dairy farmers at any stakeholder meetings held by Dairy Forum participants.

This programme was run in conjunction with the existing Teagasc 'Get Farm Financially Fit' engagement. Similar initiatives were subsequently designed for other sectors such as drystock and tillage.

More information on access to finance, including the Agriculture Cashflow Support Loan and other supports available, is at <http://www.agriculture.gov.ie/agri-foodindustry/agri-foodandtheeconomy/agri-foodbusiness/>.

Agri-taxation

While taxation policy is primarily the responsibility of the Department of Finance and the taxation system is administered by the Office of the Revenue Commissioners, the Department of Agriculture, Food and the Marine continuously liaise with them on 'agri-taxation' matters. There are a number of taxation measures which are exclusively aimed at farmers, while they can also avail of a number of other measures that are not exclusive to the sector. Government support to the primary agriculture sector through the taxation system has been estimated at some €350 million per annum. The implementation of the 'Agri-taxation Review' (published as part of Budget 2015) continued in Budget 2017.



Objective One National Policy Framework

Budget 2017 Response to Income Volatility

Budget 2017 included an adjustment to the farmers' 'Income Averaging' system, allowing an opt-out for an exceptional year. The system works by averaging the last five years income on a rolling basis. The nature of income averaging means that it is somewhat counter-cyclical in that in years of higher income, the tax liability is lower than it would normally be and in years of lower income, it is higher. The fall in commodity prices during 2016 compared to higher prices in previous years meant that farmers had a high tax liability in a year of low income. This opt-out facility allows farmers to pay on the basis of actual income instead of the average income. The additional liability is then paid over the following four years. This measure was available in 2016, mitigating the cash flow issues affecting many farmers.

Budget 2017 also included the following:

- Further support measures for SMEs:
 - The 'Earned Income Tax Credit' was increased by €400 to €950.
 - PRSI benefits were increased for the self-employed.
 - There was an increase in the designation of micro-brewers to 40,000 hectolitres per annum.
- Marine Taxation
 - Introduction of a fishers' tax credit of €1,270.
- Environmental agri-taxation measures
 - Renewal of CGT Restructuring Relief.
 - The extension of the Sustainable Energy Authority of Ireland's (SEAI) accelerated capital allowance scheme to non-incorporated businesses.
- Changes to the Farm and Fish Assist Schemes
 - The means test will revert to the position which applied prior to Budget 2012 whereby 70% of income will be assessed as means as distinct from 100%.
- An increase in the farmer's VAT flat-rate addition.

More information on agri-taxation, including a list of measures and the 'Agri-taxation Review', is available at www.agriculture.gov.ie/agri-foodindustry/agri-taxation/.

Legislation

In 2016, the Horse Racing Ireland Act was enacted and commenced. It aims to strengthen governance and transparency within the administration of horseracing, improve accountability and control over State funding in the sector, clarify the respective functions of Horse Racing Ireland (HRI) and the Racing Regulatory Body (RRB), and provide for streamlining of certain administrative functions.

The Department also made some 48 statutory instruments to underpin the Department's activities in almost all sectors within its remit. Details are available at www.agriculture.gov.ie/legislation/

Some of the more significant S.I.s include:

- the European Union (Identification of Equidae) Regulations 2015 (S.I. No. 62 of 2016), implementing the new European identification regime for horses.
- the European Union (Common Fisheries Policy) (Point System) Regulations 2016 (S.I. No. 125 of 2016) introduced on foot of the Crayden judgment to replace the EU points system required under Article 92 of Council Regulation(EC) No 1224/2009.
- the Welfare of Greyhounds Regulations 2016 (S.I. No. 310 of 2016), providing for records of animal remedies or veterinary treatments to be maintained and made available on request to welfare officers; and
- the European Union (Organic Farming) Regulations 2016 (S.I. No. 683 of 2016), recasting and updating the regime governing organic production.

Statistical and Analytical Reports

- *Woodflow and forest-based biomass energy use on the island of Ireland (2015)*.

This COFORD Connects Note provides the 2015 woodflows for the Republic of Ireland and for the island of Ireland, together with an analysis of the use of forest-based biomass for energy production. It is based on national wood harvest and forest product trade data, compiled on behalf of the Department of Agriculture, Food and the Marine.

<http://www.coford.ie/media/coford/content/publications/projectreports/cofordconnects/cofordconnectsnotes/00703CofordNotesWoodflowPP4519042017.pdf>

Objective One National Policy Framework

■ Annual Forest Sector Statistics

The Forest Service has the responsibility for the collection and publication of forest statistics. This 2016 publication reinstates annual reporting on the forest estate and forest industry and brings together previously published and new statistics into a single publication.

<http://www.agriculture.gov.ie/media/migration/forestry/forestservicegeneralinformation/AnnualForestSectorStatistics2016281216.pdf>

■ Fact Sheet on Irish Agriculture.

This regular analysis was reviewed, up-dated and disseminated widely in 2016.

<http://www.agriculture.gov.ie/publications/2016/>

■ Annual Review and Outlook for Agriculture, Food and the Marine 2015/2016.

This contained a broad range of analysis and commentary relating to the performance of farm income and the agri-food sector.

<http://www.agriculture.gov.ie/media/migration/publications/2016/AnnualReviewOutlook20152016200716.pdf>

Aggregate Farm Income

Overview of 2016 Agricultural Output

Output, Input & Income in Agriculture, 2015/2016	2015 Value €m	2016 Value €m	% Change 2015/2016
Goods Output at Producer Prices	7,136.3	7,048.8	-1.2%
Agricultural Output at Basic Prices	7,401.5	7,399.7	-0.0%
Intermediate Consumption	7,401.5	7,399.7	-0.0%
Gross Value Added at Basic Prices	2,375.1	2,376.6	
Fixed Capital Consumption	774.2	774.2	
Net Value Added at Basic Prices	1,600.9	1,602.4	
Other Subsidies Less Taxes on Production	1,401.8	1,534.7	
Factor Income	3,002.6	3,137.1	
Compensation of Employees	489.0	503.6	
Operating Surplus	2,513.6	2,633.4	+4.8%

CSO - Output, Input & Income in Agriculture Preliminary Estimates 2016

Primary production was relatively unchanged in 2016, with the CSO estimating that the value of Goods Output was over €7bn, down just 1% on 2015. As there was no change in the value of Intermediate Consumption and a rise in Other Subsidies less Taxes on Production, operating surplus grew by almost 5% or €2.6bn.

Objective One Innovation



National Research Programme

The Department operates three competitive research funding programmes, Food Institutional Research Measure (FIRM), Research Stimulus Fund (RSF) and the Programme of Competitive Forest Research for Development (CoFoRD). Over the last five years, some €124m has been invested in agri-food, marine and forestry research through these programmes. The Department monitors progress on on-going projects which have received research grant awards under FIRM, RSF and CoFoRD.

2016 Research Call and resulting awards

Arising from the 2016 Research Call, 43 research projects were awarded over €28 million in December 2016 under the Department's three public good competitive research programmes: FIRM, RSF and CoFoRD.

The 43 awards involve collaborations between 19 different institutions and organisations including Teagasc, a number of universities and institutes of technology. The research investment announced will provide direct employment for 186 people including 65 contract researchers and 83 post graduate research opportunities in the form of PhDs (66) and Masters degrees (17).

As part of the on-going North-South cooperation on agri-food research and innovation, the Department of Agriculture, Environment and Rural Affairs, Northern Ireland, teamed up with DAFM to provide funding of over €2 million to enable 3 research organisations in Northern Ireland to participate in 7 successful research projects.

The content of the projects funded in the 2016 Research Call was heavily influenced by two strategic research and innovation agendas; 'Sustainable Healthy Agri-food Research Plan (SHARP)' and 'Forest Research Ireland (FORI)'. Accordingly, the projects cover a number of key overarching themes including; sustainable food production and processing; managing for environmental protection and enhancement; sustainable forest management; delivering food safety & food quality; and food for improved nutrition and health.

Irish Research Council (IRC) Partnership

The Department continued its partnering arrangement in 2016 with the IRC on their Employment Based Postgraduate Programme, with the Department funding one project in the area of agri-food. This programme allows companies to partner with research institutions to undertake a specific in-house programme of research part-funded by themselves and the State.

Objective One Innovation



International Research Initiatives

A US-Ireland Research and Development Partnership Call in Agriculture was opened for the first time in March 2016. The initial Call was a pilot in three priority areas in plant and animal science. The Call enabled scientists from the US, Ireland, and Northern Ireland to develop collaborative tri-jurisdictional research applications for submission under the USDA's National Institute of Food and Agriculture 2016 Agriculture and Food Research Initiative Call for Proposals – a major competitive grant programme addressing critical societal issues.

In 2016 the Department continued to extend the use of competitive funding allocations to facilitate Irish researcher participation in a number of new European Research Area Networks (ERA-NETS) research Calls including in the areas of Sustainable Animal Production Systems (SusAn), Sustainable Forests (SumForest) and Sustainable Water Use (WaterWorks). In addition, the Department managed the evaluation, as well as providing co-funding, for a new ERA-NET Call in GHG mitigation and monitoring in agriculture and silvi-culture (ERA-Gas).

Furthermore, the Department continued in 2016 to lead input into the on-going progression of two agri-food relevant Joint Programming Initiatives (JPIs) with other EU Member States, namely; 'A Healthy Diet for a Healthy Life' (HDHL) and 'Agriculture, Food Security and Climate Change' (FACCE), as well as the broader Global Research Alliance on Agricultural Greenhouse Gases.

Horizon 2020

Horizon 2020 (2014-20) is the EU Framework Programme for Research and Innovation. DAFM and the Marine Institute (MI) are responsible for Societal Challenge 2 (SC-2) which has a fund of €3.8 billion - including €850m allocated to the Bio-based Industries (BBI) Joint Undertaking. DAFM and MI provide National Delegates (ND) and National Contact Points (NCP) for SC-2 which covers Agri-food, Forestry and Marine activities, Rural Development and the Bioeconomy and also provides a representative to the BBI States Representative Group. Overall, the ND and NCP provide guidance and support to the Irish research community (academia, industry, local government and other rural actors) to ensure maximum drawdown of funding. The Government has set a national drawdown target of €1.25 billion for Horizon 2020 including the drawdown target of €77m (2%) from the (SC-2) budget which, by 2016, Ireland was on target to achieve.

Codex Alimentarius

Ireland's participation in Codex continued in 2016. The Department also continued to operate the Irish Codex Advisory Committee (ICAC) in 2016, which afforded the main stakeholders in Ireland an opportunity to contribute to the formulation of the Irish position on all Codex issues. Officials from the Department, other Government Departments and State Agencies represented Ireland at 7 sessions of different Codex Committees in 2016 and 16 related EU Council Working Party meetings reflecting the mix of expertise required to deal with the complex range of issues under discussion.

Objective One Food and Drinks Sector



Overview

The agri-food sector continued to play a vital role in Ireland's economy in 2016 with food and drink exports rising by 2% to reach €11.15 billion, marking growth of 41%, or €3.27bn, since 2009. An 8% fall in the value of exports to the UK to €4.1 billion (37% of total exports) was offset by increases in other destinations. Exports to the UK accounted for an estimated €4.13 billion (37% of total), other EU around €3.5 billion (32%) and third countries €3.5 billion (31%). The strongest export performers were beverages, beef and seafood.

Spirit Drinks

Highlights of 2016

In 2016 Irish Whiskey exports exceeded €500m for the first time. This was an increase of 13.8% on Irish Whiskey exports in 2015 and brought cumulative growth of 82.5% over the four years since 2012. The most important market was the United States.

Together with Irish Cream exports, which were valued at €291m, this represented a major contribution by Irish spirit drinks to the export performance of Ireland's food and drinks industry.

Implementation of EU Regulation 110/2008 – verification visits

Following the submission to the European Commission of technical files for Ireland's three protected spirit drinks geographical indications (GIs) - Irish Cream, Irish Poitin and Irish Whiskey - a tailored verification system was established in 2015. Verification checks for Irish Cream are carried out by DAFM and those for Irish Poitin and Irish Whiskey by the Revenue Commissioners. The three spirit drinks are protected on an all-island basis.

Applications for verification can come from companies producing, maturing, bottling and labelling these spirit drinks. Under Regulation 110/2008 a charge is required.

In 2016 DAFM received applications from six Irish Cream Producers. Details of verified Irish Cream producers are available on the Department's website.

Irish Whiskey:	2012	2013	2014	2015	2016
Total €m	276,032	316,916	348,067	442,427	503,764
United States €m	122,129	147,161	165,397	233,343	291,049

Objective One Food and Drinks Sector

Food Competitiveness Fund

The Department provides funding to Enterprise Ireland to assist food companies to improve competitiveness through:

- lean manufacturing programmes
- leadership development at CEO and 2nd tier management level
- training and
- €5,000 innovation vouchers used by companies to commission research from universities, Teagasc and Institutes of Technology.

Expenditure on these measures in 2016 amounted to €2 million. Large projects are completed over a year or more.

Beef and Sheep-Meat Capital Investment Scheme

Residual payments under the Scheme, which is managed by Enterprise Ireland and funded by the Department, amounted to €800,000 in 2016. The Scheme funded investments, which were selected on a competitive basis, to improve efficiency and add value to primary processing.

EU Promotion Programmes for Agricultural Products

New EU regime 2016

The new policy, introduced under Regulation (EU) No 1144/2014 with a tag-line 'Enjoy, It's from Europe', aims to assist agri-trade bodies in opening markets and diversifying trade partners as well increasing consumer awareness of the efforts of EU farmers. EU funding rises from 50% to 70%; optional national 20% funding ends.

A call for proposals issued in February 2016 and submissions were evaluated by the new EU Consumer, Health, Agriculture and Food Executive Agency (CHAFEA). A Bord Bia proposal for €3.75m for a Beef and Lamb programme in China, Japan and Hong Kong was among those selected for funding and will commence in 2017. As it is a single agency programme the Department will be the EU paying agency. Multi-Member State programmes will be managed by CHAFEA.

Six programmes under the previous Regulation continued, including two in receipt of 20% Department funding.

Milk Moments

A 3 year programme commencing in 2016 with partners in 5 Member States, Milk Moments aims to increase milk consumption and improve perception of milk. The National Dairy Council (NDC) are managing €780,000 over 3 years.

Discover Farmhouse Cheese

Run in the Netherlands, Ireland and Germany, Discover Farmhouse Cheese aimed to increase farmhouse dairy/cheese consumption over the three years ending July 2016. The €1.4m budget included €300,000 for Ireland (funded 50% EU; 30% Department; 10% National Dairy Council; 10% Association of Irish Farmhouse Cheesemakers (CAIS)). The final evaluation found that consumption and awareness of cheese had increased substantially during the period of the programme.

Just Add Mushrooms

This programme with a €2.7m budget, was run in Ireland and the UK over three years to July 2016 with the aim of communicating the nutritional and culinary benefits of mushrooms to women aged 25-45, health professionals, mass caterers and children in schools. The final evaluation found that sales had increased over the period by 22,500 tonnes in the UK and 7,000 tonnes in Ireland, well ahead of the 17,000 and 1,200 tonne respective targets.

Cheese Up Your Life

Developed by France, Ireland, UK and Denmark, the programme commenced in January 2015 with the aim of educating consumers about the quality and diversity of cheese offered by European agriculture. The total budget is €4.98m, of which approximately €620,000 is managed by the NDC. For further information see www.cheeseupyourlife.ie



Objective One Food and Drinks Sector

Food Dudes Programme/School Fruit & Vegetables Scheme

The Food Dudes Programme is an evidence based incentivised behaviour changing programme which is managed by Bord Bia and funded by the Department and the EU School Fruit and Vegetables Scheme (SFVS). It aims to increase fruit and vegetable consumption amongst primary school children through repeat tasting of fruit and vegetables over a 16 day period with the support of role models (Food Dudes) and small rewards. Small red and green lunch boxes to bring fruit and vegetables regularly to school, posters and consumption charts re-enforce the impact during a follow-on period. The programme was developed by Bangor University, Wales.



The Food Dudes Programme was rolled out to 95% of primary schools over a 10 year period to 2014. A Boost programme was piloted in 2014 and reached 719 schools and 85,708 pupils in 2016.

The programme is referenced in the Healthy Ireland; Obesity Policy and Action Plan 2016-2025 *with the expansion of current effective programmes, such as Food Dudes....in the promotion of fresh produce and its role in a healthy, balanced diet.*

Food Dudes has been evaluated several times and each evaluation has shown a sustained increase in fruit and vegetable consumption over time. The most recent evaluation was carried out by UCD in 2016. It comprised 3 studies:

- a longitudinal study revisiting children who had participated in an evaluation 6 years earlier
- a second study focusing on the Senior Cycle
- a final study focused exclusively on the Junior Cycle.

The longitudinal study was the first of its kind in Ireland. It showed that this particular group of children were consuming 13% more fruit and 6% more vegetables in 2016 than prior to the 2010 Food Dudes intervention. The second and third studies both showed that fruit and

vegetable consumption increased in both target groups after the Food Dudes Boost intervention. This was more effective amongst the Junior Cycle, especially in relation to vegetables where there was more than a four-fold increase in quantities brought in to school and consumed in school after the 16 day intervention. The UCD evaluation also reported very positive feedback from parents and teachers.

In November 2016, the EU adopted Regulations, providing for a new Single School Scheme merging the existing School Fruit & Vegetable Scheme with the School Milk Scheme from the 2017/18 school year. Member States including Ireland will draw up and submit six year strategies to the European Commission in 2017.

Geographical Indication Schemes for Food (GIs)

Within the EU the PDO (Protected Designation of Origin), PGI (Protected Geographical Indication) and TSG (Traditional Specialities Guaranteed) schemes offer potential to recognise quality foods that are linked to a geographical region. During 2016, the Department worked with a number of proposers to develop applications, and submitted two new applications to the EU. In August 2016 Oriel Sea Salt and Oriel Sea Minerals were registered by the European Commission as PDO products, increasing to seven the number of Ireland's food GIs - Blaa/Waterford Blaa, Clare Island Salmon, Connemara Hill Lamb, Imokilly Regato, Oriel Sea Salt, Oriel Sea Minerals and Timoleague Brown Pudding.

Artisan, Local and Speciality Food

In 2016, the development of artisan, local and speciality food was advanced through measures supported by the Department, Bord Bia and Teagasc. The Department funded €36,000 in bursaries for 20 students undertaking the annual Diploma in Speciality Food Production in University College Cork. The Diploma meets skills recommendations in FoodWise 2025. It combines insights into the challenges of creating a small food enterprise, the skills required to make a business successful and essential elements of food science.

Students include speciality food producers, farmers who wish to add value to their farm produce, retailers who wish to expand into organic and artisan food producers, restaurants and chefs. Teagasc, Bord Bia and the FSAI provided modules on marketing, food science and food safety.

Objective One Food and Drinks Sector

Approval was secured in 2016 for funding for four years, up to 2019-2020, which will enhance strategic planning. A sustainability module was developed for the 2017-2018 period.

Labelling

EU Regulations on wines, spirit drinks, aromatised wines, fruit juice, coffee, chocolate, jams, jellies and marmalades set out labelling rules to ensure authenticity and to protect both consumers and producers. During 2016, the Department carried out checks at retail level to ensure that product labels were in conformity with these Regulations. The Department also co-ordinated multi-agency responses to requests from other Member States.

Bord Bia

Bord Bia supported Irish food and drink companies with market insight and expertise as they sought to build long-term trading relations in export markets in the UK, continental Europe and internationally. Bord Bia's strategic framework "Making a World of Difference 2016-2018" set out five pillars supporting its programmes and services, which will contribute to delivery of the Food Wise 2025 export targets. These are:

- Informed by consumer insight
- Enabled by valued people, talent and infrastructure
- Underpinned by Origin Green
- Realised by effective routes to market and increased business and
- Supported by strong brand communications in the digital age.

Initiatives in 2016 included:

Food Academy

A training programme aimed at supporting and nurturing start-up food businesses. Bord Bia, the County Enterprise Board network and SuperValu have joined forces to take participants on a supplier development journey with SuperValu from local to regional and then national supplier status. Intensive workshops provide companies with consumer insight, technical advice, resource planning, commercial advice, marketing development and greater business understanding. The programme continued in 2016 to deliver jobs across the country.

FoodService Academy

Run by Bord Bia and Musgrave MarketPlace, the FoodService Academy programme aims to help participants grow sales within the food service or out of, the home food market. It also offers companies an opportunity to achieve growth within Musgrave MarketPlace's foodservice business, which supplies 6,000 customers each week ranging from hotels and restaurants to pubs and nursing homes. Co-ordinated by Bord Bia and now in its second year, FoodService Academy takes place over four months and comprises workshops and mentoring.

Taste Bud Programme

Bord Bia re-developed the **Taste Bud** programme with Tesco to equip participating food and drink companies with the necessary skills to secure, grow and maintain a listing with Tesco. The programme comprises workshops, bespoke mentoring and access to consumer data, insights and personnel. Clear objectives and targets are set for each company to help them achieve key business opportunities. Taste Bud runs over 7 months, from April to October each year.

Food Works – (Bord Bia, Teagasc and Enterprise Ireland)

Bord Bia, Enterprise Ireland and Teagasc set out to find the next generation of export-ready small businesses with potential to scale up. Through a probing process, finalists are selected and proceed to develop investor ready business plans. Some are already en route to exporting. Food Works 2016 incorporated learning from the first three programmes.

Vantage Programme

Bord Bia Vantage www.bordbiavantage.ie is the on-line resource centre for small food and beverage businesses, catering for small to medium sized food businesses and helping them to grow and to develop their business at home and abroad.

Objective One Food and Drinks Sector

Quality Assurance Schemes

Bord Bia runs Quality Assurance Schemes for beef, lamb, dairy, pigmeat, poultry, eggs and horticulture. The Bord Bia Quality logo denotes that products have been produced to the QA specification and this provides a platform for promotion to increase consumer awareness. Bord Bia works continuously to develop new standards, to improve existing standards and to ensure timely and efficient auditing and certification of members of QA schemes.

The Beef and Lamb Quality Assurance Scheme (BLQAS) received €6.3m in Department funding in 2016 to fund independent farm inspections and certification. By the end of 2016 49,558 herds were certified, representing over 90% of all beef herds in Ireland. The Scheme incorporates sustainability measures including a carbon navigator to assist farmers to identify and reduce their carbon footprint and production costs. Teagasc was a key partner in developing and promoting the carbon navigator.

It is configured to meet international standard ISO 17065 with Irish National Accreditation Board (INAB) accreditation and independent verification.

Origin Green

The Origin Green sustainability programme operates on a national scale, linking the entire food and drink sector and is an important deliverable of FoodWise 2025. Origin Green incorporates measurement processes that ensure companies have the information and a framework to enhance sustainable practices. It is independently verified (SGS), and enables agri-food producers to set and achieve measurable sustainability targets which reduce environment impact, serve local communities and protect the rich natural resources on which agriculture and food and beverage production depend. Participating companies make specific commitments in areas such as greenhouse gas emission, energy conservation, water management, biodiversity, community initiatives and health and nutrition.

Since the inception of Origin Green, over 137,000 carbon assessments have been completed on Irish beef and dairy farms, an average of 800 a week. Over 37,000 individual improvement targets have been established for Irish beef farmers and another 28,000 for dairy farmers.

At manufacturing level, participating food and drink companies draw up three to five year sustainability plans to become fully verified members of Origin Green. These plans are independently verified. In the course of 2016, 98 companies became fully verified members, more than doubling the performance of previous years.

Highlights

Bord Bia launched “*The Thinking House*”, a state of the art consumer research and market insight centre adjacent to Bord Bia offices in Dublin. The Thinking House offers an array of resources “to turn data into knowledge” for food companies developing their brands, their innovation and new product development agenda. The initiative implemented an Innovation recommendation in FoodWise 2025.

Bord Bia launched a Market Intensification programme in October 2016 to assist companies with a turnover between €1 million and €30 million and high dependency on the UK market to strengthen their market position and explore market diversification.

Origin Green Event at FAO Council in Rome

Ireland co-hosted a lunchtime seminar with Kenya on ‘Origin Green’ at the June 2016 meeting of the FAO Governing Council in Rome, entitled ‘Achieving Food Security through Green Value Chains: Lessons from Ireland and Kenya’.

It showcased Ireland’s sustainable green agri-food credentials in FAO, promoting Irish agri food, Food Wise 2025 and Origin Green.

With the support of Bord Bia and the Irish embassy in Rome, attendees were provided with the best of Irish food.

The event also promoted the international development work supported by Irish funding.



Objective One Primary Production



Meat

Beef Production and Trade

2016 was a challenging year for the beef sector. After a good first half of the year with prices rising, with the UK's decision to leave the EU impacting strongly on currency markets. The second half of 2016 saw a continuing reduction in prices until the middle of the last quarter which saw a slow but continuing increase in prices until the end of the year.

The total number of cattle slaughtered at DAFM approved plants in 2016 amounted to over 1.65 million head, which represents an increase of roughly 5% on the 2015 figure. The number of steers slaughtered in 2016 dropped by approximately 6,500 to 607,000 animals, while the number of heifers slaughtered rose by 12,000 head to 427,000 animals. Young bull slaughtering rose sharply by 25% to reach 187,000, while cow slaughtering increased by 11.6%, or 37,000 to reach 363,000.

The December 2016 CSO livestock survey showed that the total number of cattle in the national herd rose by 3% versus December 2015 to reach 6.6 million. The beef cow herd decreased by 11,200 head or 1.1% in 2016. The dairy cow herd however, increased appreciably by 55,300 or 4.5%. Total male cattle numbers were up by 71,100 or 3.7% and female cattle numbers jumped by 120,100, an increase of 2.7%. There was a marked reduction in the numbers of male cattle older than two years of 6.2%, with an increase in cattle between one and two years of age of 8.1% for males and 6.3% for female animals. Male and female cattle under one year of age rose by 3% and 2.1% respectively.

In 2016, beef exports including offal, were valued at €2.38 billion, a small decrease of 1% on the 2015 figure. At 270,000 tonnes, exports to the United Kingdom represented 50% of total Irish beef exports in volume terms or €1.1 billion, a comparable figure to the previous year in value terms. Whilst the importance of the UK as a market for Irish beef highlights the challenges of Brexit and its possible impact on Irish agricultural exports, the strong performance of exports to other markets in 2016 should be noted also. Exports to Continental Europe increased by 9% to reach 240,000 tonnes, worth approximately €1bn. Some 95% of all Irish beef exports by value went to EU countries; however shipments of Irish beef to third country markets jumped significantly to approximately 25,000 tonnes, worth €60m. In terms of live exports in 2016, there was a 21% decline in cattle leaving the country. This is a reduction of 37,000 head on the 2015 figure. This reduction was due to lower demand in Northern Ireland, where exchange rate fluctuations, consumer preferences and retail demand all impacted on buyers, whilst issues regarding the transport of live animals in the Netherlands contributed to a slowdown in the live trade. There were positive developments in other markets however as exports to Spain increased by 25% on 2015 and almost 20,000 cattle were sent to Turkey from September to the end of the year.

2016 saw prices for beef cattle fluctuate during the year due to a range of factors including the interaction of supply and demand as well as the impact of the Brexit result on the euro/ sterling exchange rate. Deadweight prices (excluding VAT) for the benchmark R3 steer grade averaged €3.77/kg for the year. Average prices for R3 Heifers in 2016 were €3.91/kg and O4 Cows were €3.00/kg. Steer, Heifer, Cow and Young Bull average carcass weights show little change, with slight decreases in 2016 by 2kgs, 1kgs, 2kgs and 4kgs respectively compared to 2015.¹

Production cost decreases provided some positivity for the sector in 2016 with fertiliser and fuel prices down and feed prices remaining stable when compared to 2015. Feed use however, was down in 2016 resulting in saving to farm budgets.²

¹ <http://www.agriculture.gov.ie/media/migration/farmingsectors/beef/annualreport/BCC2016AnnualReport090217.docx>
² Teagasc Annual Review and Outlook 2017

Objective One Primary Production

Looking at calf births in 2016, the number of registrations was up 2% or 42,500 head on 2015. It should be noted however that this increase was as a result of a large increase in dairy type animals being born and a significant decrease in beef type animals. Looking at the breeds this can be clearly seen as Friesian calf registrations rose to over 700,000 head in 2016, with *Limousin*, *Charolais*, and Belgian Blue breeds all registering decreases, some by a quite significant percentage (*Charolais* down 5.2%). The growth in popularity of the Aberdeen Angus and Hereford herds continued in 2016, with registrations increasing by 7.2 and 7.8 percent respectively.³

Beef Policy Developments

2016 also saw further progress in relation to furthering Ireland's reputation in the production of sustainable beef and sheepmeat with figures from Bord Bia showing that there was an increase in the number of farmers within the Beef and Lamb Quality Assurance Scheme, with the total number of members at 49,500 at 31st December 2016.

Beef Data and Genomics Programme

The Beef Data and Genomics Programme (BDGP) was launched in April 2015. Funding of €300m has been allocated for the programme which runs for 6 years from 2015.

It is expected that through the use of genotyping and data collection that farmers will be more easily able to identify the best breeding stock from which to source their replacement animals and that the selection of these higher quality animals will ultimately lead to a reduction in emissions from the agricultural sector in Ireland.

In total, just under €84 million euro has been paid out by the BDGP for the two scheme years to date.

Ireland's Rural Development Programme includes a provision for a Knowledge Transfer (KT) programme which is informed by experience with the Beef Technology Adoption Programme (BTAP). The programme which commenced in 2016 moves away from the task-based approach of the BTAP scheme and focus on key policy priorities including profitability, environmental sustainability, breeding and herd health.

One to one engagement between the KT Facilitator and farmer is complemented by group discussion and the sharing of experience and information between participants.

Approximately 24,500 farmers continued to participate in the Programme during 2016. Payments amounting to €36.3m issued to almost 20,000 participants in December 2016 in respect of the 2016 scheme year and a further €14.6m issued during the year in respect of 2015 scheme year.

Sheep sector

At 2.63m head of sheep slaughtered, there was a 3% drop in the throughput at Department-approved plants in 2016. The number of animals imported in 2016 stood at 430,860 head, a sharp increase of almost 28%. The vast majority of these were sourced from Northern Ireland, with small numbers coming from Belgium, France, Spain, Germany and the Netherlands.

The national average price for the year (excluding VAT) was €4.30/kg which represents a decrease of 4.4% on the 2015 price. Prices during the year followed approximately the same pattern as in 2015, with highs in April and lows in late October and early November.

The total volume of sheepmeat available for export reached 49,000 tonnes, and over the course of 2016 the total value saw a rise of 4% to reach €240m. The United Kingdom and France together accounted for 60% of exports, while Germany, Denmark, Sweden and Belgium saw strong growth as well. Switzerland and Hong Kong were the main third country markets.

Fertiliser and fuel costs were down quite significantly for sheep farmers in 2016 with feed costs roughly similar to 2015. Feed use was however slightly up on 2015.

The Programme for Government includes a commitment for the introduction of a new targeted support scheme for the sheep sector. A budget of €25 million euro was provided for this scheme in Budget 2017. Following extensive work by the Department, which included consultation with stakeholders, approval was received for an animal welfare scheme for sheep as part of Ireland's second amendment to its Rural Development Programme.

³ Bord Bia Supply Review and Outlook for Irish & EU Beef Sector 2017

Objective One Primary Production

The scheme, which was launched in December 2016, provides support of €10 per ewe to farmers with breeding ewes flocks. The scheme will run for a 4 year period up to 2020 and will be renewable annually. The scheme represents a clear acknowledgement of the contribution the sheepmeat sector makes to the Irish agri-food sector, which in 2016 saw an increase in exports of sheepmeat of 3% in volume and 4% in value terms to €240 million supporting some 35,000 farm families directly, as well as providing several thousand jobs indirectly in rural areas.

Under the Rural Development Programme (RDP) 2014-2020 provision has been made for improving efficiency and profitability in sheep production under the Knowledge Transfer measure which has a budget of €100m. The experience in the Sheep Technology Adoption Programme (STAP) has informed the development of this measure. In addition to profitability, the emphasis is on the key issues of business skills, environmental sustainability and herd health, with increased interaction between individual farmers and advisors in order to customise information exchange. The Knowledge Transfer Programme for the sheep sector was launched in 2016.

2016 Market Access

Significant progress was made on a wide range of market access issues in 2016, including:

- The agreement of a veterinary health certificate allowing Ireland to export sheepmeat to Iran.
- The approval of three Irish meat plants to export beef to Israel following an inspection visit by the Israeli Authorities in February and updating of the veterinary health certificate for Israel.
- The hosting of a South Korea inspection visit in May 2016 in relation to beef market access and a separate visit in October 2016 in connection with maintenance of access to the pigmeat market in Korea to Irish meat plants.
- The agreement of a health certificate for the export of fresh meat/meat products of bovine origin to New Zealand.
- The approval of 27 meat establishments to export intact beef to Canada.
- The agreement of a health certificate to export green trip of bovine origin from Ireland to Namibia.
- The hosting of a successful inspection visit from an AQSIQ delegation in January 2016 in connection with progressing our application to export beef to China
- The agreement on the wording of the veterinary health certificate for the export of poultry meat and poultry meat products to the Maldives.

Pigmeat

The Irish pig sector experienced another challenging year in 2016, a 0.8% rise in domestic output, a marginal increase in EU output of c. 1% and a difficult global market at the start of the year as a result of the Russian ban.

Throughput at export approved plants totalled almost 3.25 million pigs, an increase of 2% compared to 2015 and prices increased 2% during the year. While export volumes rose by 2%, an increase in pig processing particularly in the second half of the year, left the value of Irish pigmeat exports 4% higher during 2016 at €615 million.



Objective One Primary Production

Trade to our largest single market, the UK, showed some decline due to some unfavourable exchange rate movement which led to a 4% drop in shipments. The value of trade was estimated at €345 million, a drop of 5%. The shift in focus towards international markets was due to the absence of the Russian market and brisk demand from Asia. Exports of pigmeat to China, Ireland's second most important market, reached over 65,000 tonnes with continuing markets in Vietnam, the Philippines, Japan and South Korea.

In total, international exports of Irish pigmeat are estimated to have grown by over 20% to c. 95,000 tonnes, valued at an estimated €170 million.

While exports performed well during 2016, it is important to note that the domestic market remains the primary volume outlet for Irish pigmeat. Domestically, it is estimated that pigmeat consumption increased marginally to 148,000 tonnes for 2016.

Pigmeat prices at the start of the year remained weak, falling to their lowest levels in five years (€132.55/100kgs). Prices rallied however from April onwards rising on the back of seasonal demand across Europe and continued strong demand from China. This resulted in the strongest year end price in three years (€154.66/100kgs).

The aid under the Commission financial package for pig (as well as dairy) farmers agreed in late 2015, from which €0.5m in EU funding was provided for Irish pig farmers and matched by the Government thus providing a €1m package, was paid by June 2016.

Pig Industry Stakeholder Group

The Pig Industry Stakeholder Group compiled a report outlining recommendations for the sector, which was presented to the Food Wise 2025 High Level Implementation Committee in January 2016 and publicly launched shortly thereafter. In late 2016, a Pig Implementation Strategy Group, was established to oversee the implementation of the measures recommended in the report.

Pig Salmonella Control Programme

The Pig Salmonella Control Programme (PSCP), co-funded between industry and the Department, continued during 2016.



Objective One Primary Production



Poultry and Eggs

At the end of 2016, there were a total of 239 hen egg units registered with this Department, a slight increase on the 2015 figure. This total figure consisted of 168 Free Range Hen Egg Units accounting for 41% of total hen places and 37 Enriched Caged Hen Units accounting for 55.5% of total hen places. The remaining were 28 Organic Egg and 6 Barn Egg Units which made up 2.5% and 1.1% of total hen places respectively.

Controls are implemented through inspections of Food Business Operators (FBOs) for compliance with food safety and authenticity legislation. Approximately 2,700 inspections were undertaken on poultry meat and egg establishments in 2016 under the Food Hygiene and Marketing Standards Legislation. In addition, 277 egg samples were taken from food business operators and sent for various analyses in 2016.

2016 saw Irish egg companies continuing to secure increased market access for hen eggs into third countries in the Middle East. There was a substantial increase in the number of consignments of Irish produced hen eggs exported by air freight for sale at retail level in the United Arab Emirates.

Under the Rural Development Programme (RDP) a Knowledge Transfer Poultry Programme came into operation in June 2016. The focus of the programme is on the General Principles of Poultry Management. The topics covered include Animal Health and Management, Biosecurity, Farm Health and Safety, Farm Progression and Profitability & Financial Management.

Objective One Primary Production



Milk

Dairy Markets

2016 was a year of continued price volatility in the dairy sector, particularly for the first half of the year. The outlook improved somewhat towards the end of the year, with better raw milk and dairy commodity returns evident. Whilst the longer term demographic and demand perspectives remain very positive, factors effecting global dairy prices included the ongoing Russian Ban, volatility in global and Chinese demand, coupled with sustained production increases among key global producers including the EU, US and New Zealand in the earlier part of the year.

In Ireland, the weaker dairy market situation was reflected in significant producer milk price decreases, with Irish co-ops decreasing prices significantly until mid-year coinciding with peak Irish production in the sector. Whilst there was a significant variation between the first and second half of the year, the average milk price paid to producers in 2016 was approximately 28.5 cents per litre (inc. VAT and bonuses), which represented a decrease of around 7% on 2015, which was itself a poor year for producer returns in the sector.

With respect to deliveries, annual raw milk production in Ireland in 2016 showed a moderate increase of 4% to approximately 6.8 billion litres, compared to a 13% increase in 2015, the first full calendar year following quota abolition.

Notwithstanding a difficult international market context, a recovery in international demand as the year progressed saw exports of Irish dairy products and ingredients valued at €3.38bn for 2016, an increase of 2% on the previous year. This represented a positive performance in the context of significant headwinds on international markets.

EU Market Measures

The utilisation of EU Market measures, initially deployed in September 2014 in response to the Russian Federation Ban, continued through 2016 as it had in 2015, in response to the prolonged nature of EU and Global dairy market turbulence.

SMP and butter Private Storage Aid schemes, which were made continuously available with the closing dates for applications extended on a number of further occasions during 2016. A revised cheese PSA scheme was fully utilised in early 2016. SMP Intervention was also continuously available during 2016, with the threshold aggregate levels at EU level extended twice, initially from 109,000 to 218,000 tonnes and subsequently to 350,000 tonnes. This represented a significant market stabilising effort by the Commission, supported by Member States.

Objective One Primary Production

For 2016, some 340,000 tonnes of SMP was placed into intervention, including some 36,000 tonnes sold in by Irish operators.

Following on from measures introduced in 2014 and 2015, in July 2016, agreement was reached at Council on a further €500m package of measures to assist the dairy sector which was comprised of two key elements, an EU-wide production reduction scheme with funding of €150m and an “Exceptional Adjustment Aid” fund of €350m for allocation to Member States based on individual envelopes.

- The first element was a €150 million EU-wide measure that was designed to compensate farmers for reducing their milk output in the final quarter of 2016 compared to the same period in 2015 (at a rate of 14c/kg). In Phase 1 over 99% of available resources in terms of finances and tonnages were applied for.
- In Ireland, applications equating to approximately 74.2 million kilos of potential reduction, from some 4,500 producers, were received.
- The second element of the package was a €350 million fund allocated to Member States in the form of national envelopes, for use in accordance with their domestic circumstances. Whilst eligibility criteria applied, Member States are afforded a large degree of flexibility in terms of the measures they could adopt.

- As part of Budget 2017 Minister Creed announced a new low cost loan fund for the livestock and tillage sectors which utilised Ireland’s €11.1m allocation, in conjunction with national funds, to leverage a greater fund in the region of €150m to provide a low cost loan model for Irish farmers.
- The package also recommended the establishment of an Agricultural Markets Task Force to examine issues such as market transparency, access for farmers to financial instruments and futures markets to hedge price risks, and options for strengthening farmers’ collective actions.

Farm Partnerships

Development of the Department’s Register of Farm Partnerships, established in 2015 to take over from the Milk Production Partnership Register has been ongoing. Participation on the new register has been broadened to include enterprises in addition to dairying. Entry on the register is a pre-condition for access to support schemes aimed at encouraging the development of farm partnerships in Irish agriculture, such as the Support for Collaborative Farming grant Scheme and the preferential stock relief for registered farm partnerships. The Department also ensures that the members of such registered partnerships are fully catered for in the implementation of the CAP Reform Schemes such as TAMS, GLAS, ANC and BPS. By the end of 2016 the number of farm partnerships on the Register stood at 1,600; 550 of which were former Milk Production Partnerships.



Objective One Primary Production

Crops

Cereals

The overall production of cereals for the country was estimated to be close on 2.3 million tonnes for 2016 down from 2.6 million tonnes in 2015. A reduction in the area harvested in addition to lower yields has contributed to the overall reduction in grain produced in 2016.

The total cereal area harvested in 2016 was 277,400ha representing a fall of 14,300ha from 2015. The area of winter barley exceeded winter wheat for the second successive year.

Yields in 2016 were estimated at 1.5t/ha lower across the main winter crops (wheat and barley) when compared to 2015 which also contributed largely to the decrease in overall production.

Generally harvesting conditions were relatively good across the country. However, coastal counties from Wexford, through Cork, up to Donegal all experienced very poor harvesting conditions which result in a delayed harvest.

Area, Yield and Production of Cereals 2016*

	Area (000 ha)	Yield (t/ha)	Production (000 tonnes)
Wheat	67.1		638
Winter	59.7	9.7	579
Spring	7.4	8	59
Barley	187.4		1,453
Winter	73.9	8.6	628
Spring	133.5	7.3	825
Oats	22.9		181
Winter	13.1	8.3	109
Spring	9.8	7.3	72
Totals	277.4		2,272

Source: Teagasc Harvest Report estimate

*refers to all production, which is subsequently sold or used alternatively typically for feed

Objective One Primary Production

Crop Variety Evaluation

Overall conditions for sowing both winter and spring crops were challenging. Harvesting conditions in 2016 were poor with harvesting in some areas being particularly challenging. 324 varieties of grass, clover, barley, wheat, oats, forage maize, oilseed rape, beans and potatoes were evaluated in National and Recommended List trials in 2016. The varieties of each species considered most suitable for Irish producers were selected from these trials and published in Recommended List Booklets and on the Department's website; www.agriculture.gov.ie.

The National Catalogue of Agricultural Plant Varieties (NCAPV) and the National Journal of Plant Variety Rights (PVR) were also compiled and published. In conjunction with the malting and distilling industries, DAFM continued evaluation work specifically to identify the most suitable barley varieties for malting and distilling.

Number of Varieties Evaluated in 2016*

Crop	Number
Cereals	160
Grass	84
Forage Maize	20
Oilseed Rape	23
Clover	14
Potatoes	15
Field Beans	8

* Varieties that are duplicated in different trials are excluded.

A successful Open Day was held in June in association with the Irish Seed Trade Association at DAFM's crop evaluation headquarters in Backweston Farm, Leixlip, Co. Dublin. Trial inspections and information visits for interested groups of breeders, agents, consultants and farmers were also hosted at the three DAFM centres and at other outside trial locations.

Seed Certification

The National Catalogue of Agricultural Plant Varieties 2016 is available on the Department's website. For the main agricultural crops, the only seeds that may be marketed in Ireland are of those varieties listed in this catalogue:

<https://www.agriculture.gov.ie/media/migration/publications/2016/NatCatAgriculturalPlantVars2016030216.pdf>

The EU Common Catalogue of Varieties of Agricultural Plant Species available at:

http://ec.europa.eu/food/plant/plant_propagation_material/plant_variety_catalogues_databases/search/public/index.cfm

Area of Crops Certified in 2016

	Area of Crops Approved under the Seed Certification Scheme in 2016 (ha)	Tonnes of Seed Certified Under the Seed Certification Scheme in 2016
Cereals	6,974	51,329
Potatoes	209	3,500
Oilseed Rape	274	344
Beans	331	1,941

In 2016, all grass seed used in Ireland was imported as certified seed and the Department oversaw the formulation and labelling of grass seed mixtures.



Objective One Primary Production

Seed Potato Laboratory

During 2016, 713 varieties (includes potato seedlings not yet named) were maintained in vitro at the Potato Laboratories, Tops, Raphoe, Co. Donegal. Approximately 41,000 potato mini-tubers from 48 different potato varieties and 16 unnamed potato seedlings were produced in virus-proof tunnels. Thirteen new potato seedlings were tested for distinctness, uniformity and stability as prescribed by the International Union for the Protection of New Varieties of Plants (UPOV). A field reference collection of 573 named potato varieties was also maintained.

During 2016, the Seed Potato Laboratory was entrusted by the Community Plant Variety Office (CPVO) to perform technical examinations on its behalf for *Ipomea batatis* (sweet potato).

Horticulture 2016

While duller weather in 2016 did impact production levels within some sectors across the industry due to lower light levels, prices and demand for most products remained strong in 2016. The impact of a weakening sterling as a result of the UK's decision to leave the EU had a significant effect of reducing farm gate output particularly within the mushroom sector, where over 80% of production is exported to the UK (source Bord Bia).

Horticulture Output Value at farm-gate, 2015-2016

Product	2015 € m	2016 € m	% change 2015 v's 2016
Mushrooms	137.0	121.7	-11.1
Potatoes	86.7	86.5	-0.2
Field Vegetables	67.1	73.4	9.4
Protected Crops	86.1	86.3	0.9
Outdoor Fruit Crops	9.5	11.0	15.8
Bulbs, outdoor flowers and foliage sector	8.1	8.8	8.6
Hardy nursery crops, and other horticulture sectors	40.6	45.4	12
Total	435.1	433.1	-0.4

Source: DAFM estimates.

While many Irish growers continued to make significant capital investments in 2016 to improve production efficiency as well as the quality of their produce, the weakening value of sterling did impact, with planned investments not proceeding in some sectors within the horticultural industry. Energy costs still represent a significant input cost for the industry, especially those operating under heated glass. This is leading many growers to continue to invest in alternative energy sources and energy saving measures.

In total, €3.87m in grant aid was paid to horticultural producers during 2016 under the Scheme of Investment Aid for the Development of the Commercial Horticulture Sector. This facilitated capital investment by growers of close to €10m in specialist buildings and equipment during the year.

Objective One Primary Production



Cattle

The Irish Cattle Breeding Federation (ICBF) continued to make excellent progress in 2016 towards optimising genetic gain for our national dairy and beef herd.

DAFM provided funding of €0.925m for projects aimed at improving profitability such as progeny testing, breeding information campaigns, research on genetic evaluations and data enhancements.

Specific highlights for ICBF in 2016 included;

- The continued operation of the new Beef Data and Genomics Programme. This RDP funded initiative paved the way for the launch of the Genomics Beef Evaluations.
- Continued high uptake of Genomically selected Dairy AI bulls, with 60% of recorded dairy inseminations being to these bulls. The results from both the Next Generation Herd in Moorepark, and the 'Daughter Proven' results continue to show that these are helping to accelerate the rate of genetic gain in the National dairy herd.
- Further enhancement of the National cattle breeding database. Large volumes of essential data from a range of sources such as commercial farms and industry stakeholders continue to be collected which are essential for the production of high quality breeding indexes.
- Given the poor price for milk the number of dairy cows being milk recorded was maintained at nearly 0.65m cows, which was a good achievement.
- The Gene Ireland progeny test programme continues to test a range of young bulls that are suited to the unique grass based production conditions.

The Department also provided ICBF with a grant of €1m in 2016 to support its general operational activities.

Livestock

Sheep

The National Sheep Breed Improvement Programme is operated by *Sheep Ireland*, working in conjunction with stakeholders. DAFM provided investment funding of €350,000 for a range of measures designed to implement a world class breeding programme.

Significant progress was made in a range of areas in 2016 including;

- A sheep genomics project for the Irish sheep industry called OVIGEN in partnership with Teagasc and UCD.
- Continued growth in the number of pedigree ram breeders participating in LambPlus.
- Continued growth in the proportion of performance recorded breeding rams presented for sale in 2016.
- New Terminal & Replacement Indices launched to replace the old 'Overall Sheep Value' Index.
- Expansion of the Sheep Ireland Central Progeny Test (CPT), by increasing the number of commercial ewes being performance recorded in this programme.
- Further links established with the Teagasc Better Farm sheep programme through data sharing.
- Further increase in commercial farmer awareness of the benefits of sheep genetic evaluations through many public events.

The Department provided a further €190,000 to Sheep Ireland in general funding support during 2016.

Objective One Primary Production



Horse and Greyhound Racing Industries

In 2016, Horse Racing Ireland received €59.2m and Bord na gCon received €14.8m from the Horse and Greyhound Racing Fund.

Support for the non-thoroughbred horse industry

The Department recognises the very important contribution of the non-thoroughbred horse industry to the economy and to the social fabric of many communities throughout the country. The sector contributes substantially to the generation of income from a valuable alternative farm enterprise, to employment, tourism, rural development and the social community and cultural life of the country. In 2015, the Minister launched a strategic report on the sector entitled “Reaching New Heights: Report of Irish Sport Horse Industry Strategy Committee”. Progress on implementing some of its recommendations was made in 2016, notably through Horse Sport Ireland’s international marketing endeavours and the development of a Knowledge Transfer Scheme for breeders. In 2016, the Department commissioned consultants Indecon to undertake a review of the structure of Horse Sport Ireland and its affiliates.

In 2016, the Department provided €1.827m to this sector by way of grant aid to Horse Sport Ireland for activities aimed at improving the quality of the Irish sport horse and at developing the sector. Included in this sum was

an allocation of €650,000 specifically to facilitate marketing, increased prize-money across a range of competitions and to stimulate some innovative events.

Under the new Rural Development Programme (RDP) provision has been made for improving efficiency and profitability in the equine sector through the Knowledge Transfer measure which has a budget of €100m. The programme which commenced in 2016 involves one to one engagement between the KT Facilitator and farmer, complemented by group discussion and the sharing of experience and information between participant.

Equine Infrastructure Grant Scheme

In 2016, a total of €845,763 was provided by the Department towards equine related measures. These included:

- Grant aid to the Irish Equine Centre for research on the development of a mass spectrometry-based method for the detection of antibiotics in equines and Epidemiological analysis of *Clostridium difficile* in horses.
- Grant aid was distributed across a variety of equine projects with the specific aim of improving equine quality. These included aid for the formulation of genetic indexes, DNA testing to verify pedigree, studbook establishment and development, performance testing and promotion of equines.
- Support for training initiatives by the Irish Thoroughbred Breeders Association (ITBA) and the Racing Academy and Centre of Education (RACE).

Objective Two



OBJECTIVE 2 - FOOD SAFETY, ANIMAL HEALTH AND WELFARE AND PLANT HEALTH

Objective Two

Performance Budgeting

Food Safety, Animal Health and Welfare and Plant Health

High Level Objective: “Promote and enhance the already high standards of food safety, consumer protection, animal health and welfare and plant health”

INPUTS – FINANCIAL & HUMAN RESOURCES

	2016 Estimate*			2016 Outturn		
	Current	Capital	Total	Current	Capital	Total
	€000	€000	€000	€000	€000	€000
B.1 ADMINISTRATION PAY	89,516	-	89,516	89,378	-	89,378
B.2 ADMINISTRATION NON PAY	30,328	7,092	37,420	29,096	7,012	36,108
B.3 FOOD SAFETY, PUBLIC HEALTH, ANIMAL HEALTH & PLANT HEALTH)	80,391	200	80,591	77,446	198	77,644
Programme Total:	200,235	7,292	207,527	195,920	7,210	203,130

* 2016 Estimate as amended by supplementary estimate.

Staff Numbers - Objective 2	2016 Estimate	2016 Actual
DAFM	1,644	1,291



Objective Two

Performance Budgeting

Programme B: Context Indicators



Objective Two Food Safety



Food Safety and Hygiene Controls

Food safety and hygiene standards continued to be assured in 2016 through the implementation by the Department of its service contract with the Food Safety Authority of Ireland (FSAI).

A new three year Service Contract became effective from 1 February 2016. Its ambit covers controls on:

- Meat hygiene
- Milk and milk products
- Egg and egg products
- Pesticides
- Horticulture
- Border Inspection Posts
- Residues
- Zoonoses Directive
- Food labelling

The Department held scheduled meetings with the FSAI during 2016 to review progress under the terms of the contract and provided quarterly and annual reports to the FSAI as required by the contract. Additionally, on an ongoing basis, it liaised closely with the FSAI on the investigation and close-out of food incidents notified on the Rapid Alert System for Food and Feed (RASFF) as well as food safety complaints. Specifically in 2016 the Department co-ordinated the investigation of 97 food complaints of which 53 were rapid alerts on behalf of the FSAI and the European Commission. These ranged from conformance with labelling legislation, foreign objects allegedly found in products and quality issues. These investigations were in addition to the normal monitoring of food to ensure that the maximum acceptable level of residues is not exceeded.

The Department also participated in five Directorate General for Health and Food Safety Audit/Fact Finding Missions in respect of Feed Importers, Genetically

Modified Organisms, Controls on Organic Farming and Labelling, Food Hygiene to prevent Microbiological Contamination and National Audit Systems.

Milk and Meat

Based on the fundamental principle that each food and feed business operator (FBO) is responsible for the safety of the food/feed they produce, all dairy and meat establishments must be compliant with the requirements of the European Food Hygiene Regulations (known as the “Hygiene Package”). Food Business Operators (FBOs) must also adhere to the internationally accepted HACCP (hazard analysis and critical control point) principles, which give FBOs the flexibility to adapt control systems to the specific requirements of their operation. Throughout 2016, the Department continued to monitor and verify that all such approved establishments remained compliant with these principles. The Department maintains a list of approved and registered food establishments on its website.

(<http://www.agriculture.gov.ie/foodsafetyconsumerissues/dafmapprovedestablishments/>)

The Department also carries out its own risk-based controls at establishments under its supervision. During 2016 the Department controls system in meat plants moved from a focus on individual inspections to an audit model. A new focus on broader risk assessed audits of activities impacted on the overall number of controls. 2,535 controls were carried out on meat establishments in 2016 to verify that the relevant legislative requirements are being fulfilled at all stages of production, processing and distribution. Supplementary technical controls included 6,611 visits to Meat FBOs. The Department also issued 44,871 certificates in support of meat trade to internal and international markets.

Objective Two Food Safety

The corresponding number of controls carried out in dairy establishments (including market support) was 2,750. Supplementary technical controls included 10,367 samples taken in 2016. The Department also issued 25,123 certificates in support of dairy trade to internal and international markets.

A total of 436 notices were served on Milk and Meat FBOs, notifying them of infringements under the Hygiene Regulations and follow-up action was taken as necessary.

Horticulture

The Department continued to increase the number and intensity of its hygiene inspections at primary horticultural level in 2016.

In addition to the increased number of routine hygiene inspections for horticultural producers, increased sampling for microbial and chemical contaminants continued in 2016. These included:

- 280 samples of food analysed for *Salmonella* spp
- 275 samples of food analysed for *Listeria monocytogenes*
- 20 samples analysed for *E. coli*
- 150 samples of sprouts analysed for VTEC/STEC
- 191 samples of potatoes and field vegetables were analysed for cadmium and lead
- 16 samples of apple and fruit juice was analysed for a mycotoxin, patulin
- 65 samples of lettuce, spinach and rocket were analysed for nitrates
- 90 samples of water used for irrigation and washing of horticultural produce
- a soft fruit survey was undertaken during the year, 220 samples of a variety of soft fruits were analysed for microbiological pathogens

There were a total of 156 inspections of businesses involved in the production of horticultural food products by the Department in 2016. There were 103 Compliance Notices issued notifying FBOs of non-compliances under the Hygiene Regulations and follow-up action was taken as necessary. Three compliance notices were issued for serious non-compliances; these related to serious breaches in food safety legislation. The majority of non-compliances were minor and related to general hygiene measures.

The Department continued to update the information it has regarding horticultural food producers, thus

enabling further progression of the risk analysis for this sector and hence the enhancement of the Department's Annual Inspection Programme.

Feedingstuff Controls

The focus of the animal feedingstuff legislation is to ensure that feedingstuffs do not endanger food safety, do not pose a risk to animal health, meet the minimum standards prescribed, are accurately labelled, and are fully traceable. Feedingstuffs controls are implemented through inspections of Feed Business Operators (FeBOs) for compliance with Feed Hygiene and Feed Marketing legislation and through the sampling of animal feed at all stages of the feed chain, viz. importation, storage, manufacture and use at farm level. Feed samples are subject to a broad range of analysis including both: (i) qualitative analysis to verify the accuracy of labelling information necessary for purchasers to make the optimal choice for their needs, and (ii) tests to ensure the safety of feed and food.

In 2016, 1,124 inspections were carried out in total. Infringements associated with HACCP procedures accounted for the majority of notices issued to FeBOs, totalling 67%. Hygiene infringements represented a further 9% while infringements relating to labelling and traceability both accounted for 6% respectively. The remaining 11% of infringements related to various other aspects of feed production. All infringements notified to FeBOs were recorded, followed up and resolved.

1,357 samples of animal feed were taken in 2016 and sent to a number of laboratories for various analyses. Out of a total of 9,000 individual tests carried out, 68% (circa 6,100) of these tests related to feed and food safety of which none were found to be outside of tolerance levels. The remaining 32% of analysis (circa 2,900) related to qualitative tests of which 19% were found to be outside of tolerance levels. The level of analytical infringements continues in a downward trend from previous years. All analytical infringements relating to test results in 2016 were recorded, followed up and resolved as part of the annual inspection programme.

The feedingstuffs inspection and sampling programme carried out in 2016 did not identify any significant issues or results that would be deemed serious from a feed and food safety perspective. This reflects the awareness of the feed industry on its obligations in relation to feed and food safety legislative requirements and the high levels of investment in systems to ensure that standards are met.

Objective Two Food Safety

Residues Surveillance in Food

The Department implements a comprehensive National Residue Plan designed to protect consumers from illegal residues in food. During 2016, 19,300 samples were taken from eleven food producing species and tested for a range of substances that fall into four broad categories:

- banned substances such as growth-promoting hormones;
- approved veterinary medicines;
- animal feed additives and
- environmental contaminants.

Samples were taken on farms, at slaughter plants and at primary processing plants and packing plants. These were analysed at approved laboratories. To enhance consumer protection, analytical capability is continuously updated through the extension of the range of substances monitored and through improvements in the sensitivity of analytical methods. All positive results were investigated on the farm of origin with a view to taking the necessary enforcement measures up to and including legal action.

Pesticide Residues

In addition to the residue testing on food of animal origin, a comprehensive pesticide residue control and testing programme is undertaken by the Department. These tests, which incorporate the EU coordinated programme, are conducted primarily on cereals and horticultural products. Further details on these tests are set out in the Agricultural Laboratories section of this chapter.

Approval, Inspection and Control of Plant Protection and Biocidal Products

Pesticide active substances contained in plant protection and biocidal products are approved centrally by the European Commission on the basis of detailed assessments prepared by Member State regulatory authorities. Pesticide products containing approved active substances are authorised at national level in accordance with zonal evaluation, mutual recognition and decision-making criteria agreed at EU level. Detailed assessment and peer review work progressed for 9 active substances during 2016, with 2 substances completing the regulatory process. Detailed assessment work for 22 products was progressed during 2016. In addition authorisations were granted through the mutual recognition process for 122 plant protection products and for 58 biocidal products during the year.

Only plant protection and biocidal products which are included in the Official Register may be placed on the market. Some 1,148 plant protection products containing 226 active substances, were included on the Register at the end of 2016. Details are available on the Department's website, which may be interrogated by product name, by active substance or by function and crop. At the end of 2016, 2,523 products were included on the Biocidal Product Register in Ireland.

The Department, in collaboration with the Environmental Protection Agency, Teagasc, local authorities, WEEE Ireland, European Recycling Platform, Enva Ireland Ltd. facilitated an initiative allowing the collection, recovery and disposal of hazardous waste from farms. This waste comprised largely of waste oils, pesticides, veterinary healthcare products, paint, oil filters, acids/bases as well as batteries and waste electrical equipment. In 2016, 10 collection centres were operated with nearly 2,000 farmers using the centres to dispose of approximately 140 tonnes of hazardous wastes and almost 70 tonnes of batteries and waste electronic equipment in a safe and responsible manner, protecting human health, and the environment.

The Department carries out follow up actions in relation to breaches of Maximum Residue Levels (MRLs) and unauthorised uses identified by the Pesticide Control Laboratory. In 2016, the surveillance programme sampled and analysed 1,110 food items. MRLs for pesticide residues in food were exceeded in 24 of the samples analysed (2.2%) but no consumer health risk was identified. Twenty-one breaches related to produce of non-Irish origin. In each instance, warning letters were issued advising these wholesalers and officials that the produce would be subjected to statutory action if a repeat infringement was detected. The remaining 3 breaches related to produce of Irish origin. The growers in question were investigated for possible cause of the non-compliances. In addition, occurrences of unauthorised uses of PPPs were investigated and follow-up action initiated, including targeting of produce for future sampling. There were no additional breaches relating to import controls.

Objective Two Food Safety

Fallen animal testing/disposal

In 2016 the Department provided financial support for the collection of certain fallen animals, in particular bovines over 48 months of age, numbering approximately 60,000, for sampling as required under the ongoing national BSE surveillance programme.

In 2016 there were 20,000 sheep and 130 goats tested for scrapie under the ongoing national TSE surveillance programme.

The Department has approved 40 knackeries under the ABP regulations for the collection and disposal of fallen animals.

Import Controls on Animal Products

1,383 importers of products of animal origin are registered with the Department. During 2016, there were 2,416 consignments of animal and fishery product imports through Border Inspection Points (BIPs) approved for entry into the EU. Of these, 12 consignments were rejected. (The figures for 2015 were 1,250 consignments imported, of which 9 were rejected).

Licences or authorisations for these products issued in accordance with national rules are as follows:

	2016	2015	2014
Trade and Research samples	762	782	722
Non-harmonised products	8	14	23
Re-imported consignments	58	17	20
Pathogenic agents	33	37	28
Autogenous Vaccines	4	3	0

Animal Identification and Movement (AIM) System

AIM is a generic movement system covering bovine, ovine, caprine, porcine and equine animals. It manages the identification (issue of tags) for ovine, caprine, and porcine animals and records movements at herd level for these species.

During 2016, various security enhancements were made to AIM in line with the Department's commitment to ISO 27001:2013 Information Security certification.

The new electronic ID (EID) compatible bovine ear tag format was introduced in November 2016 in tandem with a new approval system for suppliers of ear tags for cattle. At the end of 2016, two companies were fully approved to supply tags to farmers and an application by a third company had been significantly progressed.

Equine registration facilities were enhanced to enable Passport Issuing Organisations to notify new registrations of animals born in Ireland or introduced into Ireland to the central database within 15 days of their registration of the animal.

Bovine factory facilities were extended to include the provision of Clean Livestock Policy and Food Chain Information by the Food Business Operators at intake to improve food safety and to provide a count of herd residencies for animals.

New facilities were provided to sheep and goat keepers to view old census data and to record census 2016 data online.



Objective Two Animal Health



Scheduled Diseases

Vigilance against the introduction of diseases such as foot and mouth disease, avian influenza, bluetongue and African swine fever, remains a priority for the Department and previous experiences have demonstrated the absolute necessity of properly regulating trade, ensuring high levels of biosecurity, surveillance, contingency arrangements. Robust legislation is in place to deal speedily and effectively with disease threats and outbreaks. During 2016 Department staff investigated eight notifications of suspected disease.

Contingency Planning

Contingency plans are in place for such exotic diseases. These plans are based on existing EU legislation and criteria identified during outbreaks in Europe. They aim to mitigate the risk of introducing disease into Ireland and to control and eradicate them quickly if outbreaks occur. The continued focus of the Department in 2016 was on constantly reviewing, refining and updating our various contingency plans and arrangements and ensuring that we have all of the necessary measures in place and tools available to us to deal with any suspect or outbreak of these diseases.

	Disease Number investigated	Number confirmed
Avian influenza	1	0
Bluetongue	2	0
Foot and mouth disease	2	0
Rabies (canine)	3	0
	8	0

In addition 9 sero-positive equidae detected on routine screening programmes were investigated (6 equine viral arteritis, 1 equine piroplasmiasis and 2 glanders). No case of disease was confirmed.

BSE

The Department is responsible for the effective coordination of BSE policy and surveillance, testing and compensation arrangements, and the funding of same, as provided in Regulation (EC) 999/2001 and S.I. 532/15. There were no cases of BSE in 2016.

Scrapie

Scrapie is a compulsorily notifiable disease in Ireland. In 2016, one new flock was identified with atypical scrapie and one with classical scrapie.

Under the Active Surveillance Programme, 21,565 scrapie tests were carried out in 2016, comprising: 10,762 sheep tested at slaughter plants; 10,615 fallen sheep; 55 depopulated sheep; and 133 fallen goats.

Objective Two Animal Health

A National Genotype Programme (NGP) is in place to encourage sheep breeders to raise genetic resistance to scrapie in the National Flock. This is a voluntary programme and since it was introduced in April 2004 up to the end of 2016, a total of 85,786 sheep have been genotyped.

Animal Health Computer System (AHCS)

AHCS is the primary computer system concerned with supporting the Department in managing its disease testing programmes for animal diseases such as TB, Brucellosis, BSE and BVD in cattle and Aujeszky's disease in Pigs

Approximately 1,200 Department staff and 1,000 Private Veterinary Practitioners use the application on a daily basis. During 2016, significant work was completed towards the development of a critical incident response capability to manage outbreaks of economically significant animal diseases. In addition, various enhancements were implemented on the administration programme and compensation module for the TB eradication programme.

Class B Diseases

Bovine Tuberculosis

Approximately 98.1% of the national herd was tested for bovine TB in 2016. There was an increase in the number of reactors detected, 16,914 in 2016 compared to 15,317 in 2015. This increase was due, in the main, to the increased use of the Gamma Interferon Blood test which leads to the identification of reactor animals at an earlier stage in the disease cycle. Notably however herd incidence of TB decreased from 3.37% to 3.27% in the same period, evidence that the Department's eradication policy continues to make progress.

It is not possible to attribute the decline in the incidence of the disease to any single factor. Nevertheless, the main factors involved would appear to be the badger removal policy which has been in place for some years now. In addition, the integration of the Animal Health Computer System (AHCS) with the Animal Identification and Movement System (AIM) has facilitated more effective management of our TB eradication programme delivery, including enhanced quality controls of delivery of the traditional skin test (SICTT). Furthermore the increased use of blood testing to compliment the skin test has resulted in earlier identification of reactors during breakdowns, resulting in earlier de-restriction (almost 56 fewer herds remained restricted at the end of 2016, compared with the same time in 2015). Trends over the past three years are set out in the table below.

Table 2.2: Incidence of Bovine Tuberculosis

	2014	2015	2016
Herd Incidence	3.64%	3.37%	3.27%
Number of Reactors	16,145	15,317	16,914
Number of newly restricted herds	4,111	3,823	3,682

Objective Two Animal Health

Compensation Schemes

The On-Farm Market Valuation Scheme is the main measure for compensating farmers for the removal of reactors. Other schemes such as Depopulation Grants, Income Supplement and Hardship Grants compensate for income losses due to restriction. Approximately €14m was spent during 2016 on all compensation elements of the TB Eradication and Brucellosis Monitoring Schemes. The rates payable under the supplementary compensation schemes were adjusted mid-2016. See table for the comparable rates.



TB Compensation Rate Changes May 2016

Pre-May 2016		May 2016 Onwards		
Animal Type	Rate €	Animal Type	Herd Type	Rate €
Depopulation Grant				
Dairy cows/ In-calf heifers/Pedigree Bulls > 12 months	228.52	Cows/In-calf heifers/ Pedigree Bulls > 12 months	Dairy	220
Other Cows/In-calf heifers Pedigree Bulls > 12 months	126.96	Cows/In-calf heifers/	Sucklers	152.36
Other Animals	76.16	All other bovine animals	All herd types	76.16
Income Supplement				
Other Cows	38.09	Cows in a dairy herd	Dairy	55
Dairy cows and other animals	25.39	Cows in a suckler herd	Suckler	38.09
		All other bovine animals	All herd types	25.39

Hardship Grant*

Suckler cow	38.00
Dairy cow	25.00
Other bovine animal	25.00

*Changed to now also apply to dairy farmers when producing milk

*Subject to a maximum of €250pm not exceeding 4 months within the period 1 Nov to 30 Apr

Note: Herds operating as restricted feedlots or dealers do not qualify for payment under the above schemes.

Objective Two Animal Health



EU Co-funding

The EU paid €10.65m towards the 2015 Irish bovine TB eradication programme in August 2016.

Bovine Diseases Levies

Receipts from Bovine Diseases Levies amounted to €6.27m in 2016 compared with €6.52m in 2015.

Prosecutions

The Investigations Division continued their investigations of irregularities of the Bovine Tuberculosis Eradication scheme under the Animal Health and Welfare Bovine Tuberculosis Regulations 2015, the European Communities (Identification of Bovines) Regulations 2009 and the Animal Health and Welfare (Bovine Movement) Regulations 2014 (as amended). Resulting from those investigations, there were two successful prosecutions during 2016, this compares to five successful prosecutions in both 2014 and 2015. During 2016, three new cases were submitted to the Chief State Solicitor's Office for prosecution.

Animal Health Ireland

Animal Health Ireland (AHI) was launched in 2009 and is a private company limited by guarantee. The main role of AHI is to address what is known as “production” or “non-regulated” diseases with the aim of improving the profitability, sustainability and competitiveness of livestock farmers. In 2016, the Department provided funding of €710,000 which was matched by industry stakeholders.

AHI concentrates on a number of key programmes relating to Bovine Viral Diarrhoea (BVD), Infectious Bovine Rhinotracheitis (IBR), Johnes, Beef Health Check and Mastitis. These programmes are endorsed by the Department and are referenced in FH2020.

AHI commenced a national voluntary BVD eradication programme in January 2012. This was followed by a compulsory phase of the programme which commenced in January 2013. The legislative basis for this is set out in S.I. 118 of 2014, and it requires all animals born after 1 January 2013 to be tested for the presence of the BVD virus. Animals found to be persistently infected (PI) with the virus cannot be sold through the mart system and must be disposed of to a knackery, abattoir or meat plant. The rate of compliance with the requirement to test for BVD is just fractionally less than 100% of calves born being tested for the disease. A key focus during the course of 2016 was the removal of PI animals that had been retained in herds beyond the period of 7 weeks from the initial test.

Farm Animal Welfare Advisory Council

The Farm Animal Welfare Advisory Council (FAWAC) is an independent advisory body to the Minister with a wide representative base including veterinary representative bodies, animal welfare organisations, farming bodies and Government Departments – North and South. Since it was established in 2002, FAWAC has become recognised for its' crucial role in promoting animal welfare. It provides considerable useful advice to the Minister and has been particularly successful in publishing a series of welfare guideline booklets on a range of areas, such as dairy, beef, pig, sheep and poultry farming and animal welfare guidelines for horses at gatherings and sales. These guidelines were produced in an effort to assist all those who are responsible for ensuring the welfare of horses at fairs, marts and sales. Further information is available on the website www.fawac.ie.

The Early Warning/Intervention System

The Early Warning / Intervention System (EWS) for animal welfare continued to operate successfully throughout the country in 2016. The objective of the system, which operates under FAWAC, is to provide a framework within which animal welfare problems can be identified and dealt with before they become critical. In many cases animal welfare cases arise as a result of issues relating to the health and personal circumstances of the herd-owner and in those circumstances EWS representatives advise farmers to consider seeking assistance from their GPs.

Objective Two Animal Health

Scientific Advisory Committee on Animal Health and Welfare

The principal function of the Committee is to provide the Minister with advice from a scientific perspective on issues where independent expert opinion is warranted. The committee examined a number of animal health & welfare matters in the course of 2016. Current topics include the welfare implications of the proposed time limits for the castration of cattle and sheep, the dehorning/disbudding of cattle, the tail docking of sheep and the opinion of the Committee on the use of Electro Ejaculation devices to facilitate the collection of semen.

Animal Welfare Organisations

In 2016, the Department supported 137 organisations throughout the country who are directly involved in the delivery of animal care and welfare services, with payments of €2.46 million. The funding provided is intended only as a contribution to the overall costs of an organisation. All successful applicants were required to sign up to Terms and Conditions which set out high standards of animal care and welfare prior to funding. Welfare bodies were also advised that from 2017 no application will be considered unless the organisation is registered with the Charities Regulator. Details of successful applicants are available on the Departments website at:

<http://www.agriculture.gov.ie/animalhealthwelfare/animalwelfare/fundingtoanimalwelfareorganisations/>

Control of Horses

The Control of Horses Act 1996 was introduced to address the risks posed to the public by stray and abandoned horses. Under the legislation, local authorities have responsibility for implementing the Act, and the Minister for Agriculture may provide financial assistance to the local authorities towards expenses incurred in control of horse activities. In 2016 the Department provided funding of €725,000 to local authorities towards expenses incurred by them under the Act. The Department continues to engage with local authorities on an on-going basis in an effort to achieve savings and efficiencies in operation of the Act. In addition funding is provided to local authorities for the development of horse projects in their respective areas which help to foster community, leadership and education in responsible horse ownership for young people.

Ireland achieved Aujeszky-Free Status

Ireland achieved Aujeszky free status in October 2012 and testing is conducted on an on-going basis to demonstrate this status. As an Aujeszky's Disease free region Irish herd owners can now export live pigs to other AD free regions without the high cost of compulsory isolation, herd surveillance and blood testing. Ireland retained its Aujeszky free status in 2016.



Objective Two Plant Health



Plant Health

Systematic and targeted surveys for *Chalara fraxinea*, commonly known as 'Ash Dieback disease' initiated in 2013, were repeated in 2016. By the end of the third quarter in 2016, there were confirmed findings of the disease in 255 forest plantations distributed over 21 counties in native hedgerows in 16 counties, and in roadside / motorway landscaping plantings in 14 counties. Taken together the new findings by the third quarter in 2016 indicated a continual widening of the general geographic distribution of the disease and that the disease was present, to a greater or lesser extent in all 26 counties in Ireland.

Further to the results of the 2016 surveys and within the framework of the All-Ireland Chalara Control Strategy, a comprehensive review of policy objectives and options in relation to the disease was initiated by officials from the Department and DAERA in Northern Ireland. The focus of the review is the development of new strategic approaches to the disease and options available to the two administrations for reducing the potential impact of the disease on the island as a whole, in particular the updating and the targeted application of support schemes such as the Reconstitution Scheme and the Woodland Improvement Scheme.

Ireland (except Galway City) has a temporary Protected Zone (PZ) status for the harmful organism *Erwinia amylovora* (Fireblight), which allows Ireland enhanced protection from importing Fireblight on plant material of national importance such as whitethorn, mountain ash and apple species. The temporary PZ expired in 2016 and Ireland successfully negotiated its extension until 2018.

DAFM continued to survey for the presence of the harmful organism *Phytophthora ramorum* in 2016. A number of findings of the disease were detected in horticultural nurseries/garden centres and on plants imported from other Member States. All infected plants and host plants within the vicinity were destroyed.

A first finding of the harmful organism *Dothistroma septosporium* in Ireland was confirmed by DAFM at the beginning of September 2016. Findings were made in Scots pine trees in two forests in the southwest of the country, one in west Limerick and one in north Cork. Subsequently a finding was made on a horticultural nursery. The disease, which affects a range of conifer trees and in particular a number of pine species, is regulated under the EU Plant Health Directive 2000/29/EC. A formal report on the finding was submitted to the European Commission and other Member States. Surveys are ongoing and appropriate official measures are being taken.

Xylella fastidiosa is a bacterium that infects the xylem tissues of a wide host range of plants (over 300 plant species). In 2016 it was found on a nursery in Germany. Ireland carried out a survey for the disease in 2016 and submitted over 70 samples for laboratory analysis. The disease was not found to be present.

DAFM applied for two new Protected Zones in 2016: *Paysandisia archon* and *Ceratocystis platani*. *Paysandisia archon* (Palm Borer) is a moth whose larvae feed on palm trees and only attacks trees of the palm family (*Arecaceae*). *Ceratocystis platani* is an invasive fungal pathogen of Plane trees.

Objective Two Plant Health



In 2016, DAFM and DAERA continued to work towards the shared objective of achieving and maintaining good plant health status on the island through continued sharing of information, science and diagnostic capability. In addition, a comprehensive plant health action programme was implemented in 2016 to maintain Ireland's high plant health status, including the following:

- In 2016 under DAFM's Plant Health Import Controls Programme; 1,542 inspections took place on consignments of plants and plant products imported directly to Ireland through Dublin Airport from third countries. In 2016 1,551 inspections took place on consignments of plants and plant products imported directly to Ireland through Dublin Port from third countries. Quarantine pests were intercepted on a number of occasions on these consignments. The relevant consignments were refused entry at the border, with the result that these pests were not given the opportunity to become established in Ireland.
- Nurseries and garden centres were intensively inspected for quarantine pests and, where found, eradication measures were implemented to ensure continued trade from these premises.
- Surveys were carried out in public parks, private gardens and the wider environment for harmful organisms on foot of several European Commission emergency decisions.
- Sampling was carried out on farms producing potatoes, maize and beet for harmful organisms specific to these crops.
- Over 800 inspections were undertaken at nurseries, garden centres, public parks and private gardens for the presence of *Phytophthora ramorum* with over 200 samples sent for laboratory analysis.
- Over 1,200 samples were sent to the laboratory to analyse for the presence of Fireblight. Eradication measures were employed for all findings.
- No finding of the brown rot or ring rot diseases of potatoes was detected following ongoing intensive testing of seed and ware potatoes.
- Inspections were undertaken on plant propagating material at several locations to ensure disease free material was available.

Objective Two Laboratory Service



VETERINARY LABORATORIES

Reference Laboratory Functions

Virology is an EU National Reference Laboratory (NRL), for a number of OIE listed diseases. It is required to have a diagnostic capacity; to perform surveillance; and to participate in proficiency trials (PTs) on an annual basis. The PTs, prepared by the EU Community Reference Laboratories, consist of samples which must be tested by a wide range of serological, virological and molecular techniques. The results were presented at the annual meetings of the National Reference Laboratories throughout 2016 and were in compliance with the relevant EU legislation. Virology is also the designated NRL for BVD, supporting the National BVD eradication programme, providing confirmatory testing and other assistances to the scheme.

Virology

Gross testing numbers for 2016 were 97,417 with Feb, Nov and Dec having the highest monthly figures (~10k). There were 2,168 submissions which initiated in Virology, accounting for 53% of test numbers and 8,217 submissions (47% of test numbers) which initiated in other parts of Laboratory Service. In 2016, Virology served 522 clients including DVOs, AI stations, PVPs, etc. and had a range of 103 different tests for a variety of largely viral pathogens.

Viral diseases of ruminants

Surveillance for Schmallenberg virus (SBV) infection

The Schmallenberg virus, which is transmitted by biting midges, can cause disease in infected cattle and sheep resulting primarily in the birth of malformed calves and lambs. It is not known to pose any risk to human health. In 2016, 2,931 samples were tested for SBV antibody, with 705 (24%) found to be non-negative; 153 samples were tested using the SBV PCR, with 3 found to be positive. This demonstrates the first Irish detection of this virus in 3 years.

Surveillance for Bluetongue virus infection

Bluetongue surveillance is performed on imported cattle and on any cattle or sheep presenting clinical signs consistent with the infection. In 2016, there were 2,464 Bluetongue Ab and 733 Bluetongue PCR tests performed. There were 164 (7%) Bluetongue Ab of cattle samples positive and zero Bluetongue PCR recorded as positive. Countries of origin include Austria, Denmark, France, Germany, the Netherlands and UK.

Surveillance for Enzootic Bovine Leucosis (EBL)

In 2016, there were 3,279 EBL Ab tests performed. There were no EBL antibody positive results. There were also 70 EBL PCRs on suspicious bovine lesions, again all proving negative. With Lumpy Skin Disease now a real threat, 260 Capripox PCRs were performed in 2016, all proving negative.

Objective Two Laboratory Service

Diagnostic testing for diseases of cattle - Respiratory virus infection

In 2016, there were 3,686 PCRs performed on nasal swab samples for bovine respiratory viral pathogens, with 277 (6.1%) detected as positive. A further 4,482 PCRs were performed on other tissues, with 268 (7.2%) detected as positive. A PCR for Bovine Influenza D was introduced on a selected basis in 2016 with 18 positives detected in a small survey.

Infectious bovine rhinotracheitis (IBR)

In 2016, there were 8,499 IBR gB antibody tests and 3,081 IBR gE antibody tests performed, with 6,914 of samples sent related to diagnostic investigation and 2,656 related to AI station regulation. Overall, there were 2,250 (26%) IBR gB positive and 535 (17%) IBR gE positive results. There were 384 BVD PLA tests on bulls related to AI stations in 2016.

Support for industry-led disease control – Bovine Viral diarrhoea (BVD) eradication

Virology Division carries out a range of BVD testing as part of its official NRL function, including confirmatory testing of samples from animals which tested positive through private laboratories under the auspices of the national BVD eradication scheme. In 2016, as part of AHI/VLS confirmatory testing and in conjunction with Sligo RVL there were 2,795 submissions with 1,378 (49%) of submissions having only 1 or 2 samples per submission. Overall, there were 3,328 calves tested using BVD Ag ELISA, 2,078 of which went on for BVD PCR testing. Overall, 1,449 (44%) of calves tested positive for BVD virus, by ELISA (1,326) or PCR (123). In addition there were 3,154 dams tested using Ag ELISA, 67 (2%) of which were found to be BVD virus positive. Additionally, 2,623 “other” animals were tested using BVD Ag ELISA, 5 of which went on to BVD PCR testing. This group includes among others imported animals, animals born pre-2013 and animals born post-2013 with no assigned BVD status. Of them, 10 (0.4%) were BVD positive and 11 were inconclusive.

In 2016, BVD antibody testing was trialled on programme samples with 8,604 tests performed, 4,884 being found negative. Over 2016, 10 BVD IG and 6 BVD TWG meetings were contributed to by Virology staff. Virology Division hosted of 3 meetings with laboratories and industry in support of BVD eradication and the genomics programmes.

Virology Division was heavily involved in the approval of suitability for BVD testing of new ear tag types across 7 laboratories. Finally, Virology staff visited 2 BVD testing laboratories to investigate anomalous BVD programme results.

In non-programme BVD virus testing, there were 379 BVD PLA tests and 121 BVD VNTs performed in 2016.

Virology Division also continue to support the Johnes Disease Pilot Programme and conducted 5,589 Mycobacterium Screening antibody and 1,163 Mycobacterium Verification antibody tests in 2016. 585 (9%) of those serology samples proved non-negative.

Viral diseases of pigs

Porcine respiratory and reproductive syndrome (PRRS) is still a significant problem for the industry after the 2013 country-wide outbreak. Virology Division continues to provide a diagnostic facility to the pig industry and supports monitoring programmes in boar AI stations, and during the course of 2016 over 1,832 samples were tested by ELISA (309 positive) for PRRS antibody and 2,079 samples by PRRS PCR (156 positive). The positive PCR results are indicative of current infection. No evidence of infection was detected in samples submitted from boar AI stations.

Virology Division also assist the industry testing notifiable diseases for export, certification and monitoring purposes. Aujeszky’s disease (AD) amounted for over 967 ELISA samples tested in 2016, with a further 16 negative AD PCRs. Other notifiable porcine diseases tested include African Swine Fever (67 PCR tested samples), Porcine Epidemic Diarrhoea (149 PCR tested), Porcine Rotavirus PCR (417 PCR tested), and Classical Swine Fever (115 ELISA tested). There were no positives in 2016 for any of them. Of 522 Swine Influenza samples PCR tested, 91 (17%) were positive.

Viral diseases of equidae

In 2016, Virology examined 599 equine pre-and-post vaccination serum samples for surveillance for equine viral arteritis and approved the issue of Artervac vaccine for use in stallions when appropriate. Serological surveillance allowed the antibody status of stallions to be investigated with a view to the detection of potential “shedder stallions”. In addition, semen samples were tested by PCR/VI whenever a positive serological result could not be demonstrated to have been caused by vaccination. A further 853 tests were performed on equine samples for a variety of agents, including equine influenza (119), equine piroplasmiasis (187), equine

Objective Two Laboratory Service

infectious anaemia (50), contagious equine metritis, dourine (112), glanders (64) and equine herpes virus (433) for either surveillance purposes or in support of exports. Virology Division was the lead Division in organising CEM ring trials for private laboratories and the related approval process.

Viral diseases of poultry

In 2016, the Poultry Virology Section carried out tests on samples from commercial poultry flocks for avian influenza virus (AIV) antibodies as part of major national surveys, and to satisfy requirements for movement and trade, as well as PCR tests of wild birds and on samples submitted by private vets. In total, 933 tests for avian influenza virus were done using real time RT-PCR and one positive case of H5N8 highly pathogenic avian influenza was detected in a wild duck (wigeon) found in Wexford; a low pathogenic H3N8 isolate was detected in a Brent Goose. 6,725 samples were tested by haemagglutination inhibition for H5 and H7 antibodies to avian influenza; 16,418 samples were tested by agar gel immunodiffusion for avian influenza antibodies. During this period, 614 PCR tests and 3,862 serological tests were performed for Newcastle disease virus. One isolate of paramyxovirus was detected in a wild duck. As part of the national antibody surveillance programmes for *Mycoplasma* species and for trade purposes: 37,913 sera were tested for *M. gallisepticum*, 16,196 sera were examined for *M. synoviae* and 2,226 sera screened for *M. meleagridis*. 853 PCR tests for *M. gallisepticum* and 986 PCR tests for *M. synoviae* were carried out. The poultry virology workload also comprised tests (serology and PCR), requested by the industry and veterinary practitioners, for various enzootic diseases such as infectious bursal disease (5,890), infectious bronchitis (1,474), egg drop syndrome, reo virus syndrome (1,840), chicken anaemia (2,656), Marek's disease and avian rhinotracheitis (4,520).

Bacteriology/Parasitology

This laboratory hosts a number of EU National Reference Laboratory functions for zoonotic pathogens of food, feed and animal origin. These include *Salmonella*, *Campylobacter*, *Escherichia coli*, *Mycobacteria*, Antimicrobial Resistance and Parasites. Completion of all proficiency trials organised by the EU Community Reference Laboratories was achieved.

A total of 1,445 poultry farm samples, 740 compost or related samples, 381 meal or feed mill related samples, 334 poultry carcass samples were cultured for *Salmonella* during 2016. A further 430 samples were received from external laboratories for serotyping. In accordance with mandatory EU Commission surveillance

for antibiotic-resistant bacteria in animals and food, a randomised selection of over 600 samples from poultry and meat were subjected to selective culture methods to provide a representative sets of *E. coli* and *Campylobacter* isolates coupled with specific selective tests to isolate antimicrobial resistant strains. These isolates were screened for antimicrobial resistance to a panel of up to 13 antibiotics. These results are required for a community wide joint European Food Safety Authority and European Centre for Disease Prevention and Control collated annual report into the prevalence of antimicrobial resistance in livestock/ poultry and meat for comparison with the corresponding strains detected in people. The Division participated in a number of research projects on antimicrobial resistance and monitored microbiological test in some private laboratories providing testing for food business operators.

Antibodies were detected in 4,321 (21.6%) of the 20,003 muscle juice samples from slaughtered pigs tested under the *Salmonella* National Control Programme for pigs. As the NRL for parasites, the mandatory national sampling according to Regulation 1152/2011 of foxes undertaken in 2016 showed Ireland's continuing freedom from *Echinococcus multilocularis*, one of the most lethal parasitic zoonoses in temperate and arctic regions of the Northern Hemisphere. Over 400 samples from all counties were examined for the parasite.

In addition to standard samples for respiratory disease diagnosis, samples tested for *Mycoplasma bovis* also included either joint fluid or milk samples from dairy cows in 2016 and a number of dairy herds reported multiple cases of adult dairy cows which displayed clinical signs of arthritis or mastitis associated with *Mycoplasma bovis*.

In support of the TB eradication programme, samples collected in meat plants in 2016 from 4,656 bovine animals, were tested for evidence of tuberculosis. There were 3,572 histopathological tests and 2,482 cultures performed on these tissues. There were 566 sera tested in TB ELISA to support herd investigations. In 2016, over 2,070 cultures were applied to badger tissues collected as part of badger removal following bovine TB outbreaks or badger vaccine trials. *Mycobacterial* speciation tests were performed on over 1,030 isolates. *Mycobacterium avium* subspecies *paratuberculosis* was isolated from 263 of 1,239 samples submitted for Johne's disease diagnosis with farmed deer on one premises identified as infected.

Objective Two Laboratory Service

PATHOLOGY

National Reference Laboratories and Specialist Referral Laboratories:

TSE National Reference Laboratory

The National Reference Laboratory for Transmissible Spongiform Encephalopathies (BSE and Scrapie) is accredited by INAB and tests for confirmatory diagnosis of BSE and scrapie.

Figures for TSE Submissions – 2016

Ovine NRL Result	Surveillance Category	2013	2014	2015	2016
Atypical Scrapie	Active	4	7	6	1
Classical Scrapie	Active	7	17	1	1
Classical Scrapie	Passive	0	2	0	0
Negative	Active	0	1	1	1
Negative	Passive	2	1	1	0
Negative	SMFS	0	4	0	0
Total		13	32	9	3

Bovine NRL Result	Surveillance Category	2013	2014	2015	2016
BSE Positive	Active	1 – Atypical H-type	0	1 (Classical)	0
BSE Positive	Passive	0	0	0	0
Negative	Active	1	1	0	0
Negative	Passive	12	14	11	17*
Unsuitable	Passive	0	0	0	0

*1 case reported in 2017 as was sampled on 30 December 2016

Department Referral Laboratory for Veterinary Histopathology

The Histopathology section provides expert histopathology referral and support to the Department and the Regional Veterinary Laboratories (RVLs). Areas covered include referral of diagnostic surveillance cases, forensic cases such as suspect poisonings, applied research and surveillance studies. This laboratory also provides the histological processing and immunohistochemistry capability for the Veterinary Laboratory Service. It processed approximately 30,000 slides in 2016 with standard staining methods and special staining techniques including immunohistochemistry.

Figures for Cassettes Processed 2016

H&E prep	Recut H&E	TB H&E slides	Total H&E slides produced
24,646	840	3,701	29,187

Objective Two Laboratory Service

Anatomic Pathology Laboratory

The post-mortem facility within pathology Division (known as the Dublin Regional Veterinary Laboratory) provides veterinary laboratory diagnostic and anatomic pathology services for surveillance in its catchment area. Details of findings are included in the All-Island Disease Surveillance report. The post mortem facility also provided support for the Department's statutory disease control, eradication and monitoring schemes, including TSEs, tuberculosis, brucellosis, *Trichinella spiralis* and *Echinococcus multilocularis*.

There were approximately 1,500 carcass submissions and 200 foetus submissions to the laboratory for post mortem examination, in 2016.

Clinical Microbiology (DRVL) and National Reference Laboratory for Contagious Equine Metritis

The clinical microbiology laboratory is host of the accredited CEM National Reference Laboratory, in conjunction with Virology Division. CEM is a contagious venereal condition of horses caused by the bacterium *Taylorella equigenitalis*.

In 2016 the laboratory was successful in external proficiency trials organised by the AHVLA. The laboratory performed approximately 6,000 tests in 2016.

Clinical Chemistry/Chemical Pathology Laboratory

This laboratory which among other services, performs metal (macro, trace and heavy) and metabolites and enzyme activity analyses on animal samples. In 2016, it carried out analysis on 6,500 tissue samples.

Veterinary Public Health Regulatory Laboratory

The Veterinary Public Health Regulatory Laboratory (VPHRL) is accredited by INAB to ISO 17025:2005, with

more than 30 analytical tests covering residues, contaminants, microbiological and parasitological analysis currently on its scope.

VPHRL is the National Reference Laboratory (NRL) for 6 groups of residues (Antithyroid agents, Beta-agonists, Chloramphenicol and Dapsone, Antibacterial substances including sulphonamides and quinolones, Carbadox and Chemical Elements) and also for *E. coli* and *Trichinella*.

National Residue Plan

Ireland's Residue Plan for 2016 was approved by the relevant European Commission services within the deadlines specified under the Directive.

The testing under the National Residue Plan (NRP) covers 18 distinct residue groups which fall into three broad categories:

- banned substances such as growth-promoting hormones and beta-agonists
- approved veterinary medicines
- environmental contaminants.

During 2016, more than 11,500 samples from food of animal origin were tested under the NRP and related residues and contaminants testing at the VPHRL. In 2016 VPHRL was also charged with testing of additional bovine urine samples for clenbuterol and milk samples for lead as a result of individual farm investigations.

In 2016, the number of non-compliant samples in the NCP was 21 among the target and the suspect samples. This continues the trend of low levels of residues in Irish produced food of animal origin over the past number of years. The breakdown of non-compliant samples was 8 for Thyrostats, 1 for clenbuterol, 11 for Antibiotics and 1 for lead in honey. In addition there were samples confirmed as non-compliant for clenbuterol and for lead in the samples collected as part of the farm investigations mentioned in the above paragraph.



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A breakdown of the total number of samples tested under the 2016 National Residue Plan and related residues and contaminants testing at the VPHRL and the non-compliant samples encountered is given in tables below:

National Residue Plan and related residues and contaminants testing

Compounds analysed No. and type of samples

Thyrostats	295 urine 17 serum
Trenbolone	439 urine
Zeranol	409 urine
Beta-Agonists	510 retina 752 urine 39 water 313 liver
Chloramphenicol, Florfenicol and Thiamphenicol	147 urine 373 muscle 32 eggs
Antibiotics	6673 muscle 265 kidney 344 milk 121 eggs 36 honey
Sulphonamides (including Dapsone)	577 muscle
Carbadox	93 liver
Chemical elements	437 muscle 127 milk 20 honey
Total	11,797

Non-compliant samples in 2016

Substance Group	Details of non-compliant samples
Antibiotics	11 muscle of which 5 were suspect samples Bovine: 1xSulfadiazine, 2xMarbofloxacin, 1xOxytetracycline and 1xSulfadiazine plus Trimethoprim Equine: 3xMarbofloxacin Ovine: 1xOxytetracycline +Doxycycline and 1xOxytetracycline Porcine: 1xChlortetracycline
Thyrostats	6 bovine and 2 ovine urine for Thiouracil
Beta-Agonists	28 bovine urine for Clenbuterol (1 target and 27 suspect from same farm)
Chemical Elements	33 x lead milk (special investigation samples) 1x lead in honey (suspect)

Microbiology

VPHRL provides laboratory support to the inspectorate based at meat plants and to import controls, ensuring compliance with national and international standards of food safety and hygiene. Over 1,700 official samples of meat and meat products were taken at the point of manufacture and at the border inspection points and tested for a range of microbiological parameters in 2016. Of these samples, 6 were positive for *Salmonella* (two were in imported poultry), 1 for *Listeria monocytogenes* and 3 for Shiga toxin-producing *E. coli* (STEC).

In 2016, VPHRL continued the testing of beef carcasses and meat trimmings for STEC bacteria to support the exporting of Irish beef to the US market with a total of 520 swabs and 12 trimmings samples analysed and all found negative.

VPHRL carries out water testing with a total of 347 official tested in 2016 for a range of physico-chemical and microbiological properties. Of these 14 samples were found to contain microbiological contamination of *E. coli*, Coliforms, *Faecal Enterococci* and/or *Clostridium perfringens*.



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In addition VPHRL supports the certification of animal by-products. During 2016, a total of 724 official samples of rendering products were enumerated for levels of *Enterobacteriaceae* while 75 samples from composting plants were checked for levels of *E. coli*. Results showed that 3 samples had levels of >300 cfu/g of *Enterobacteriaceae*.

Trichinella

Testing on 3,385 samples of porcine and 140 horse muscle samples was carried out in 2016 as part of the official monitoring programme, and all of them were negative.

AGRICULTURE LABORATORIES

Dairy Science Laboratories (DSL)

The Dairy Science Laboratory service comprises three laboratories, located at Backweston, Cork and Limerick. These provide microbiological and chemical testing services for milk/ milk product samples taken mainly from dairy food business operators. The work of the laboratories also underpins the certification of dairy products for export.

Official control samples – Microbiology

In 2016, the Dairy Science Laboratory service carried out approximately 20,000 microbiological analyses on 10,126 samples from milk processing establishments, liquid milk drinking plants and producers in the horticulture sector to verify compliance with food safety, water and animal-by-product legislation. As a result, the following notifications were issued:

- 11 Food Safety hazard notifications
- 48 Process Hygiene criteria non-conformances
- 8 Phosphatase/peroxidase criteria non-conformances
- 0 antibiotic residue non-conformances
- 31 non-conformance reports in relation to water samples
- 3 non-conformances reports in relation to animal-by-products samples

In addition to food safety testing, the Dairy Science Laboratory Cork analysed 679 potato samples for Ring Rot and Brown Rot and 1,286 samples for *Erwinia amylovora* (fireblight) with 25 detections of fireblight.

The three laboratories have Quality Management Systems in place based on the ISO17025:2005 standard to meet the requirements of the National Accreditation

Board (INAB). In 2016, the laboratories continued to maintain and extend their scopes of accreditation, Backweston received accreditation for 2 additional methods STEC in sprouted seeds and RT PCR for *L. monocytogenes*. Collectively the three laboratories have 56 accredited test methods across multiple matrices.

Continued participation in inter-laboratory trials organised by European Union Reference Laboratories were also undertaken.

Official control samples – Chemistry

The Dairy Science Laboratories in Limerick and Backweston conduct compositional analysis of dairy products to verify compliance with the labelling and marketing standards requirements set out in Regulation (EC) No 1169/2011 and Regulation 1308/2013. In addition DSL Backweston carries out analysis of infant formula and follow on formula to confirm compliance with the compositional parameters set out in Directive 2006/141 EC.

In 2016, 638 samples were analysed to confirm compliance with the requirements of the EU legislation detailed above.

Due to poor returns for dairy products on international markets 2016 saw the continuation of market support measures in the dairy sector. This resulted in DSLs having to carry out a range of microbiological and compositional analysis to confirm that these products meet the detailed specifications set out in EU legislation. 802 samples of intervention skim milk powder and 500 samples of APS butter were tested for 8218 parameters to confirm compliance with legislative requirements.

National Reference Laboratory (NRL)

The Backweston Dairy Science Laboratory operates as the National Reference Laboratory (NRL) for *Listeria monocytogenes*, Coagulase-positive staphylococci in food products, phosphatase in milk and Total Bacterial Count and Somatic Cell Count in raw milk.

The NRL offers a molecular typing and characterisation service for *Listeria monocytogenes* isolates, in 2016 PFGE analysis was carried out on 400 isolates and PCR analysis on 1,300 isolates. This typing information is returned to the submitting laboratories and can be of benefit to food business operators in tracing sources of contamination and determining if there are persistent strains in particular premises.

Objective Two Laboratory Service

The NRL also carries out analysis for the detection of Staphylococcal enterotoxins in food; Backweston is the only laboratory in the country to provide this service. Molecular typing is also carried out to determine if CPS isolates carry the genes necessary for enterotoxin production and in 2016 this analysis was carried out on 115 isolates.

Plant Health Laboratory

Plant Health

The total number of plant pathology samples analysed in 2016 was 1,478 (924 for Horticulture and Plant Health Division and 546 for Forest Service and 8 miscellaneous). The number of positive samples for quarantine plant pathogens was 512 (41%) (*Phytophthora ramorum*, *P. kernoviae* and *Hymenoscyphus fraxinus*). Some of the pathology testing was performed by the DAFM Blood Testing and Dairy Science Laboratories, Cork.

Entomology

The entomology service undertook the analysis of 400 samples in 2016; of which 13 were positive for quarantine pest species. The service works in close co-operation with the authorities in Dublin Airport and Dublin Port, which are a significant entry point for horticultural produce into Ireland.

In addition, the entomology service is involved in honeybee health. In 2016 the Sentinel Apiary Scheme was rolled out to enable early detection of two damaging pests to honeybees (Small Hive Beetle, *Aethina tumida* and *Tropilaelaps mite*), which are statutory notifiable pests in the EU.

Plant Health and Entomological Research

During 2016, the plant health and entomology group continued to develop co-operation with other organisations within Ireland and abroad, through involvement in the FP7 funded EUPHRESKO ERA-NET and other projects. The laboratory continued to deepen its involvement with organisations such as the European Plant Protection Organisation (EPPO), through participation in working groups and expert panels.

Feed Microscopy

The Feed Microscopy Laboratory is the designated National Reference Laboratory (NRL) for the detection of animal protein in feed. In 2016 the Laboratory analysed 250 samples for the presence of animal protein, 22 samples for prohibited material and 20 samples for botanical impurities.

In addition the laboratory successfully performed validation of methods to detect the presence of porcine DNA in animal feed.

GMOs

In 2016 a new contract was successfully negotiated with Rikilt, the Netherlands.

Some of the key achievements for the NRL in 2016 were as follows:

- Involved in Irish EUPHRESKO network and participated in a project on the Emerald Ash Borer (*Agrilus planipennis*) involving a range of partners across Europe.
- Launch of the DAFM funded FORM project (December 2016) – plant health and entomology involvement.
- The Sentinel Apiary Scheme was rolled out in 2016 to enable early detection of two damaging pests to honeybees (Small Hive Beetle, *Aethina tumida* and *Tropilaelaps mite*), which are statutory notifiable pests in the EU.
- Liaised with colleagues in the EURL for honeybee health regarding new and emerging bee health issues.
- Provided input into EPPO diagnostic protocols.
- Provided expertise and information on insects, mites and spiders for all divisions across DAFM and identified research gaps.
- Provided training to other divisions and new staff
- Provided placements for students, benefitting both students and DAFM.
- Successful participation in proficiency test for *Xylella fastidiosa* in November 2016, 100% compliance achieved.
- Addition of new test method for the detection of pathogens in Peat samples, including *Paenibacillus larvae* detection by conventional PCR.
- A new contract with Rikilt, NL to provide NRL function for GMOs for Ireland was put in place.
- Successfully organised NRL conference hosted by DAFM in Backweston.
- Validated methods to detect the presence of porcine DNA in animal feed.

Objective Two Laboratory Service

Seed Testing Laboratory

The Seed Testing Laboratory provides a seed testing service to other divisions within the Department, seed merchants, farmers, growers and forest nurseries. It is accredited by the International Seed Testing Association (ISTA). Most agricultural and horticultural seeds are required to meet minimum legal standards for germination, analytical purity and other seeds content before they are placed on the market. A total of 9,293 seed tests, on cereals, grasses, forage crops, oilseeds, pulses, vegetables, trees, etc. were completed during 2016. Approximately 59% of these tests were for germination, 25% for analytical purity, 7% for seed health, 5% for seed viability (tetrazolium), with the remaining 4% of tests comprised of advisory tests such as moisture, other seed determination, thousand seed weight, etc. The quality of cereal seed harvested in Ireland during 2016 was good due to the favourable growing season and weather conditions at harvest.

The laboratory also maintains the national cereal seed and crop wild relative genebank. In 2016 the laboratory regenerated a number of crop and crop wild relative accessions. The laboratory processed requests for seed of "heritage" barley varieties from individuals and companies interested in growing these varieties to produce malt for the craft brewing and distilling markets.

Residues

In 2016, the Pesticide Residue Laboratory (PRL) carried out the testing required under the pesticide residue control programme agreed under the Departments' service contract with the FSAI. This involved analysing 748 samples of fruit, vegetables, cereals and processed products for residues of up to 470 pesticides and metabolites, including 31 border control samples. 447 samples of food of animal origin for residues of up to 340 different pesticides and marker PCB's. Analysis of 48 infant formulae samples for up to 470 pesticides and metabolites was also carried out. The Maximum Residues Level (MRLs) for pesticide residues in food were exceeded in 23 samples.

Also in 2016, 94 samples of animal feed were analysed for seven PCB's used as markers for the presence of dioxins and 33 samples of animal feed were analysed for a limited scope of pesticide residues and metabolites (169).

Formulations

The Pesticide Formulation Laboratory (PFL) provides the analytical support necessary to assure the quality of plant protection products on the Irish market. In 2016, 82 samples of plant protection products were analysed to check that the composition of these products complied with the authorised product specifications. Of the samples analysed, 1 was out of specification.



OBJECTIVE 3
RURAL AND MARINE ECONOMY
AND ENVIRONMENT



Objective Three

Performance Budgeting for Objective Three

High Level Objective: “Promoting economic, social and environmentally sustainable farming, fishing and forestry.”

INPUTS – FINANCIAL & HUMAN RESOURCES

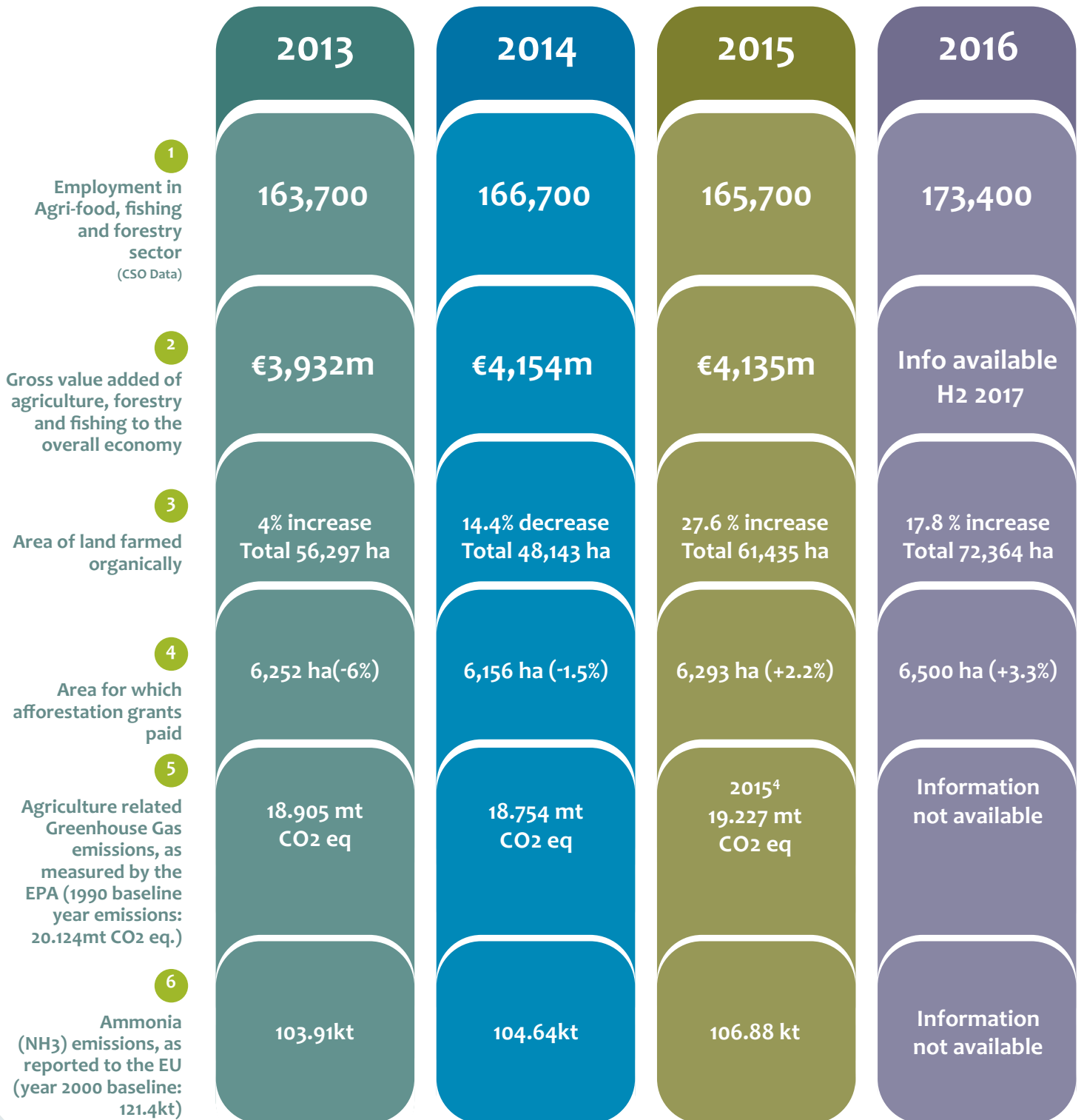
	2016 Estimate*			2016 Outturn		
	Current	Capital	Total	Current	Capital	Total
	€000	€000	€000	€000	€000	€000
C.1 ADMINISTRATION PAY	32,782	-	32,782	32,732	-	32,732
C.2 ADMINISTRATION NON PAY	9,433	233	9,666	8,779	115	8,894
C.3 RURAL ENVIROMENT	193,744	-	193,744	148,326	-	148,326
C.4 LAND MOBILITY (EARLY RETIREMENT/INSTALLATION AID SCHEMES)	4,602	-	4,602	4,406	-	4,406
C.5 DEVELOPMENT OF AGRICULTURE AND FOOD	845	41,702	42,547	655	12,074	12,729
C.6 FORESTRY AND BIOENERGY	1,775	112,029	113,804	1,598	102,204	103,802
C.7 FISHERIES	3,310	17,475	20,785	2,346	16,651	18,997
C.8 SEA FISHERIES PROTECTION AUTHORITY	11,460	1,000	12,460	9,629	387	10,016
C.9 OTHER SERVICES	1,866	-	1,866	1,112	-	1,112
C.10 HAULBOWLINE	-	8,000	8,000	-	2,262	2,262
Programme Total:	259,817	180,439	440,256	209,583	133,693	343,276
*2016 Estimate as amended by Supplementary Estimate						

Staff Numbers	2016 Estimate	2016 Actual
DAFM	487	389
SFPA	105	85

Objective Three

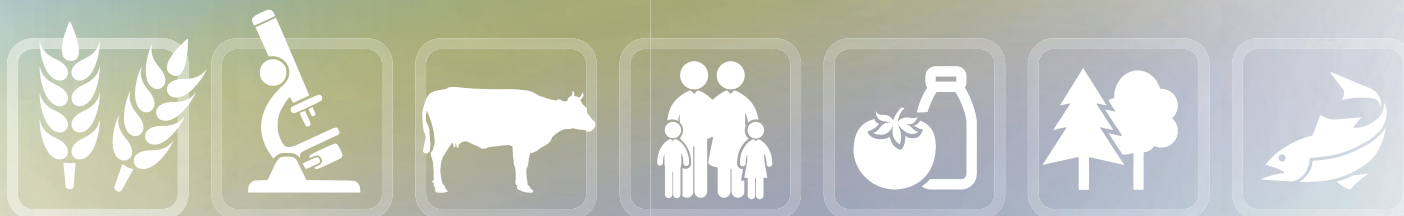
Performance Budgeting for Objective Three

Programme C: Context Indicators



⁴ EPA Provisional Greenhouse Gas Emissions 2015 excluding combustion CO₂

Objective Three Promoting Sustainable Farming



Rural Development Programme (RDP)

Ireland's 2014-2020 RDP was formally adopted by the EU Commission in May 2015 and contains a suite of extensive measures that address all farming sectors and support community led local development by means of LEADER. The Programme is co-funded by the EU's European Agricultural Fund for Rural Development (EAFRD) and the national exchequer. EU support for the RDP via the EAFRD will amount to €2.19 billion over the 7-year Programme lifespan and this EU funding will be supplemented by exchequer funding to bring the total support available under the RDP to €4 billion. The first amendment to the RDP covering, inter alia, a new tillage investment support measure, a new Burren Scheme and changes to GLAS specifications, was approved by the European Commission in June 2016. The 2nd amendment to the RDP introducing new schemes (the Sheep Welfare Scheme, the EIPs and support for Beef Producer Organisations) and further changes to the GLAS specification in respect of GLAS Tranche 3 was submitted to the European Commission in September 2016.

Rural Environment Management Scheme (REPS)

REPS was an agri-environment measure to encourage farmers to go beyond basic good farming practices and to farm in a way that benefits the landscape, biodiversity and water quality. REPS schemes delivered enhanced environmental benefits through improved biodiversity and supplementary measures. The final REPS4 contract ended at the end of December 2016. In 2016, a total of €1.8 million was paid under the REPS Scheme. This was in respect of retrospective payments for Supplementary

Measures and residual payments due to participants who had already completed their contracts. The average REPS4 payment during the scheme was €5,700.

Agri Environment Options Scheme (AEOS)

Under this Scheme, farmers are paid to undertake actions that address the environmental challenges of loss of biodiversity, improvement of water quality and combating climate change. The Scheme is based on a menu of actions, from which farmers select those best suited to their individual circumstances. Farmers with commonage land or designated Special Areas of Conservation or Special Protection Areas are in a special category and must follow a Sustainable Management Plan prepared by a planner. The overall objective of the scheme is to deliver the maximum environmental benefit for funds available. The scheme has three tranches, AEOS 1, AEOS 2, and AEOS 3.

In 2016 €32.8 million was spent on the three AEOS Schemes. The breakdown by scheme was €8m for the AEOS 1 scheme, €9.2m for AEOS 2 and €15.6m for AEOS 3. The end date for the AEOS scheme was 31 December 2016.

Targeted Agricultural Modernisation Schemes (TAMS)

The TAMS II suite of measures under the 2014-2020 Rural Development Programme (RDP) for Ireland which opened in 2015 continued to attract applications in 2016 with over 9,300 applications received by the end of the year with 5,700 applications approved. Payments were made in respect of 313 cases to a value of €3.9m in 2016. The Schemes include: -

Objective Three Promoting Sustainable Farming

- Young Farmers' Capital Investment Scheme
- Low Emission Slurry Spreading Equipment Scheme
- Animal Welfare, Safety and Nutrient Storage Scheme
- Dairy Equipment Scheme
- Pig and Poultry Investment Scheme
- Organic Capital Investment Scheme

There were also residual payments for the TAMS I Schemes (Sheep Handling, Dairy Equipment, Farm Safety and Rainwater Harvesting) amounting to €3.8m in 2016.

Locally-led Schemes

These schemes promote local solutions to specific environmental issues and complement the much more broadly-based GLAS measure under the RDP 2014-2020. The Burren Programme is now an established 5 year agri-environment scheme. Tranche 1 brought in the first intake of 198 farmers in January 2016. A second tranche in October 2016 brought in 126 farmers, and a final tranche in 2017 will bring the total to some 450 or 500. The Burren Programme is widely seen as a benchmark for environmentally focused farming in Europe.

An RFT was published in November 2016 to recruit Project teams to design and operate two other locally-led schemes - the Hen Harrier and Freshwater Pearl Mussel Projects. Both schemes are pilot projects targeting around 2,500 farmers who farm habitats crucially important to these two endangered species.

A broadly based 'bottom-up' approach for other locally-led schemes selected on the basis of at least two calls for proposals has been initiated. The first of these was launched in December 2016 and 118 projects were submitted for evaluation. Another Open Call will be launched in Autumn 2017.

Cross Compliance Checks

EU cross compliance requires that farmers must comply with 13 Statutory Management Requirements (SMRs) and 7 Good Agricultural and Environmental Condition (GAEC) standards, relating to:

- climate change
- good agricultural condition of land
- public, animal and plant health and
- animal welfare

These requirements are monitored by mandatory inspections on between 1-3% of farms annually and are an effective means of protecting the environment and ensuring that farmers comply with a wide range of

public goods regulations concerned with food and animal welfare. In 2016, a total of 1,361 Full Cross Compliance and 4,536 Animal Identification and Registration inspections were carried out in respect of the 1-3% requirement for Cross Compliance inspections.

Fertiliser and Lime Inspection Programme 2016

The sale of fertiliser and lime in Ireland is regulated by both EU and Irish legislation. This legislation ensures that products are labelled accurately and meet minimum nutrient requirements. As part of the fertiliser and lime inspection programme for 2016 a total of 231 samples were taken at manufacturer's premises (167 fertiliser samples and 64 lime samples). A total 614 individual analysis were carried out for fertilisers which resulted in an out of tolerance of 2.3%. A total of 256 individual lime analysis were carried out resulting in 5.5% out of tolerance. The level of out of tolerance found continues to be low.

There were two infringements relating to labelling and both were addressed by the manufacturers. All analytical infringements relating to test results in 2016 were recorded, followed up and resolved as part of the annual inspection programme.

Fertiliser Consumption (tonnes nutrient)

Overall fertiliser nutrient usage in 2016 has increased by 2% when compared to 2015 levels. Ground limestone usage was 967,281 tonnes in 2016. This is an increase of 8% from 893,730 tonnes in 2015.

Year	Nitrogen	Phosphorus	Potassium	Total (N+P+K)
2015	330,959	36,551	94,242	461,752
2016	339,104	37,075	95,558	471,736
Mean (11yr.)	328,179	31,630	82,279	442,090

2016 Nitrates Derogation

The Nitrates Directive requires that farmers comply with a stocking rate limit of 170 kgs of Nitrogen (N) from livestock manure per hectare per year (the equivalent of two dairy cows/ha). Over 6,800 farmers applied for the derogation in 2016, an 8% increase on 2015 figures, allowing them to farm at a higher stocking rate, up to 250 kgs N/ Ha subject to additional conditions. The application system is now 100% on-line.

Objective Three Promoting Sustainable Farming

Nitrogen and Phosphorus (N&P) Data

DAFM provide farmers with detailed N&P statements reflecting stocking rates on the holding. The frequency of N&P statements increased in 2016, with statements now available online for end June, August, October, November and December periods. Farmers receive these statements by text. Written statements were also sent to certain highly stocked farmers in November 2016 who are not registered for text messages. In addition advisors can also receive nitrogen and phosphorus data for their clients at intervals during the year.

2016 Agricultural Catchment Programme

The Agricultural Catchments Programme (ACP) is a joint research and advisory programme operated by Teagasc in six agricultural catchments across the country. It was established to evaluate the effectiveness and impact of the Good Agricultural Practice measures that Irish farmers are required to implement under the Nitrates Directive.

Phase 3 of the ACP commenced in January 2016 and runs to 2019 and builds on the gains and experiences from earlier phases of the programme.

New scientific knowledge coming from the ACP to date is indicating a positive response to Ireland's Nitrates Regulations, i.e. reduced nutrient inputs, increased nutrient management and some evidence of reduced nutrient losses from agricultural land to water.

The findings support key agri-environmental policies and strategies, including the review of Ireland's Nitrates Regulations in 2017 and the 2nd cycle of River Basin District Planning under the Water Framework Directive.

Furthermore, the ACP has developed sustainability indicators for tracking the environmental and economic performance of agriculture within the regulatory environment. The findings from the ACP verify that Irish farmers are producing milk, meat and crops in an environmentally sustainable manner. This scientific verification, in turn, bolsters Ireland's green credentials in the context of anticipated pressures under Food Wise 2025.

Forestry

Forests cover 10.5% of the land area of the country. While this is one of the lowest levels in Europe, as the European (EU28) average is about 33%, forest cover in Ireland increased by some 320,000 hectares between 1985 and 2012, one of the highest levels of increase in forest cover among developed countries. The level of

afforestation (new planting) over the period 2008-2016 is shown below.

Afforestation levels 2008-2016 (hectares)

2008	2009	2010	2011	2012	2013	2014	2015	2016
6,249	6,648	8,314	6,653	6,652	6,252	6,156	6,293	6,500

The planting and growing sectors have been supported by grant and premium schemes to the value of €1.018 billion during the period 2007 to 2016. Forestry activity enhances the rural environment and provides employment in areas where there can be few alternatives while visits to forests generate an estimated €268 million annually in local communities.

The National Forest Inventory

The third NFI cycle commenced during 2015. Field-work progressed well during 2016 and is due for completion in the summer of 2017. Data analysis will then commence and will be finalised in early 2018. The third NFI will facilitate the on-going monitoring of the national forest estate, including the assessment of change over time. In particular the evaluation of volume increment and harvesting volume will facilitate the monitoring of Sustainable Forest Management (SFM).

All Ireland Roundwood Production Forest 2016-2035

In 2016, COFORD published a new *All Ireland Roundwood Production Forecast 2016-2035* in 2016. It outlines the potential to expand roundwood harvest from the current 3.2 million cubic metres per annum to over 6 million cubic metres by 2030. Most of the additional harvest is forecast to come from the private sector, on foot of afforestation over the past three decades (see www.coford.ie). It is accompanied by an online spatial analysis tool which will generate bespoke roundwood production forecasts, for both Coillte and the private sector for any area of the country, for a range of wood size assortments, including forest-based biomass.

Objective Three Promoting Sustainable Farming

COFORD

The COFORD research and development advisory council 2016-2018 has established working groups in the following areas:

- Forest Policy Review
- Forest genetic resources
- Land availability and the promotion of afforestation
- The forest sector and the bioeconomy
- Wood mobilisation and roundwood production forecasting
- The management of mixed forests
- Long term forest research issues

Further information on the council and the objectives and work being undertaken in the working groups is available at www.coford.ie. COFORD publications and working group reports are available at www.coford.ie.

Mobilising the existing resource

The “All Ireland Roundwood Production Forecast 2016 - 2035” was published in October 2016. The tables included in this document provide the forest and wood energy sector with an accurate forecast of roundwood and wood fibre availability. It also underpins future investment in the timber processing and wood energy sectors. Data used in the forecast has been “plugged” into an innovative mapping tool or GIS portal that allows timber processors to forecast timber volumes in user defined areas over time, broken down by species and harvesting type.

Further down the supply chain, in 2016 the Department supported the timber haulage business through its participation in the Forest Industry Transport Group (FITG). Work with the FITG resulted in a new scheme being introduced by the Department to support the installation of central tyre inflation systems on timber lorries. Funding from the Department has also been agreed to publish guidelines on safe timber haulage.

Consolidating the private forest estate

The Department’s forest certification initiative, commenced in November 2016, will help consolidate the private forest estate through the creation of certification groups and facilitating access to the timber market. Sawmills and timber processors are limited in the amount of uncertified timber they may process if they wish to retain their own certification status which is required for access to the UK market. The creation of these certification groups organised around existing Forestry Groups will help develop forest management plans for these forests according to best forest practice.

Organic Farming

While showing a steady growth over the past number of years, there was a sharp increase in the area under organic production in 2016 due to the introduction of a new Organic Farming Scheme, which encouraged a large number of farmers to convert to organic farming methods. The land area under organic production methods equated to 1.4 % of agricultural land. The trend continued in 2016 with a 17.79% increase of land area farmed organically.

Organic Farming Operators and Hectareage

2013	2014	2015	2016
1,668 (56,297ha)	1,587 (48,143ha)	2,084 (61,435ha)	2,127 (72,364ha)

A range of organic events took place in 2016 to raise awareness on organic farming. In February 2016 Bord Bia and BIM co-ordinated Ireland’s participation at Biofach, which is a most important international trade event for organic food industry professionals and companies. Those attending the event, both from Europe and further afield, are predominantly purchasing decision-makers from the retail, food service and distribution sectors.

Other events in 2016 included the demonstration organic farms programme organised by Teagasc, which involved 12 farms covering a range of different enterprises. Organic capital grant schemes under the RDP continued to provide grant aid for investments by farmers and processors in facilities and equipment. Grant aid of 40% of the cost up to a maximum of €60,000 in the case of on-farm investments and €0.5m for investments off-farm is available. Grant aid amounting to just over €430,000 was awarded in 2016.

Genetic Resources

An annual call for proposals in relation to the conservation of plant, animal, forestry, microorganisms and invertebrates and aquatic genetic resources is made under the Genetic Resources Grant Aid Scheme. This scheme is overseen by an Advisory Committee comprising of experts from a broad spectrum of backgrounds in DAFM, Teagasc, research and third level institutions, NGO’s and farm bodies and allocates funding to successful projects from a budget provided by this Department. In 2016, 8 projects on conservation of plant, animal, aquatic and invertebrate genetic resources were awarded a total of €87,187 (one project was funded over a 3 year period beginning in 2016).

Objective Three Climate Change

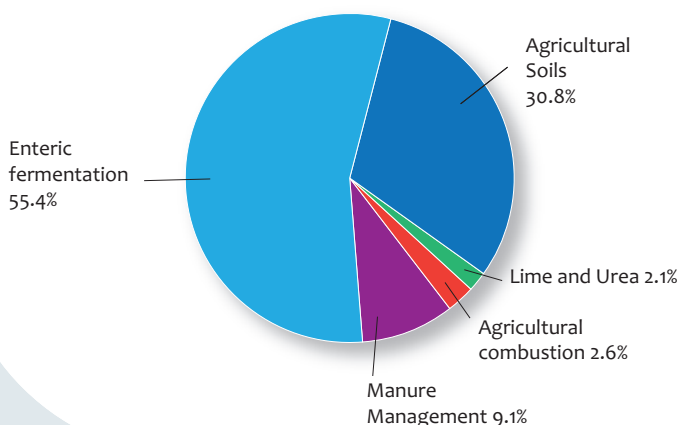
In Ireland, agriculture remains the single largest contributor to overall emissions at 33% of the total. This proportionate level of agricultural emissions is uniquely high in a European context where the average is 10%.

Irish agriculture emissions for 2015 were approximately 5.5% below their 1990 levels but have increased for three out of the last four years reflecting the huge importance of agriculture to the Irish economy and the significance of the livestock industry. The impacts of increasing temperatures on water, ecosystems, food supply and coastal regions will become more severe if emissions continue to increase. On the other hand the forest sector, through afforestation, the use of forest-based biomass and wood products offers considerable scope for climate change mitigation and has a role to play in adaptation measures such as reducing can help to reduce localised flooding.

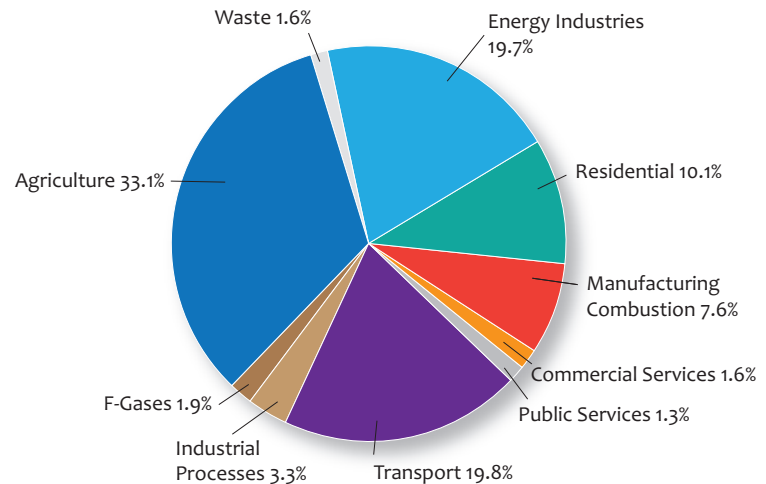
During 2016 a public consultation process was launched on a draft adaptation plan for the agriculture and forest sector. An open policy debate on adaptation in the agriculture and forest sector was also held. Work continued on the agriculture and forest sector contribution to the National Mitigation Plan, which is being developed under the Climate Change and Low Carbon Development Act.

The Climate Change Advisory Council produced their first report towards the year end. It suggested the agriculture and land use sector needed to outline a pathway to achieve its contribution to the 2050 national mitigation objective. This should include elements such as sustainable forestry, improved land management and the use of lower emissions fertilisers. The Council recognised that more research and development is needed; however, a timeline for expected delivery of solutions from such investment should be provided in the National Mitigation Plan.

Distribution of Irish agriculture emissions



Greenhouse gas emissions in Ireland 2015



Ammonia Emissions: Clean Air Package

In December 2016, following negotiations, the European Parliament and the Council signed into European law the new National Emissions Ceilings (NEC) Directive. In relation to ammonia where the EU average reduction is minus 18% below 2005 levels from 2030, Ireland has been assigned a target of minus 5% which will be a challenge in the context of FW2025 growth trends.

Engagement at EU and International level

In 2016, DAFM continued to actively engage in the whole of government approach to negotiations with the Commission and other Member States on climate policy.

The Department has also actively participated in meetings and conferences of the United Nations Framework Convention on Climate Change (UNFCCC) through the EU Agriculture, Forests and Other Land Uses (AFOLU) group.

Ireland attended the Convention's Subsidiary Body for Scientific and Technological Advice (SBSTA) Bonn session in May 2016 and at COP 22 in November 2016. DAFM will continue to support discussions on agriculture under the SBSTA to help raise the profile of issues related to agriculture and to ensure coherence between food and nutrition security objectives and climate change objectives.

Objective Three Bio Energy

The main contribution of the agriculture sector is in the supply of bioenergy feedstock, whether from biomass in the form of wood products such as forest thinnings and wood fuel, Animal By Products (ABP) or other agri-food by-products such as straw, slurries and processing waste, e.g. whey from cheese-making.

Up to one third of the annual forest harvest (about 1 million cubic metres of roundwood) is used for energy generation in one form or another, but mainly as process heat in board manufacture and for kiln-drying softwood timber. Firewood has become a significant market (ca. 300,000 cubic metres of the total). Forest-based biomass production has the potential to increase to 2.2 million cubic metres by 2020.

The *All Ireland Roundwood Production Forecast 2016-2035* foresees that wood available for bioenergy use will more than double over the forecast period, from 1.8 million cubic metres in 2016 to 4.2 million cubic metres in 2035. The bulk of this material is likely to come from privately-owned farm forests. Depending on market conditions there is potential to augment these supplies through increased recovery of harvesting residues on

suitable sites, higher intensities of thinning, and through the planting of fast growing tree species.

The Department continued to support the development of the Wood Fuel Quality Assurance scheme and the provision of advice on forest-based biomass supply chains and fuels. See www.woodenergy.ie

The SEAI also updated their biomass supply curves for the period to 2035 where a number of agricultural materials are considered - <https://www.seai.ie/Renewables/Bioenergy/Sources/Bioenergy-Supply-Curves-2015-2035/Bioenergy-Supply-Curves-2015-20351.html>

The Department was represented on the Bioenergy Steering Group (BSG) established by the Department of Communications, Energy and Natural Resources to oversee the finalisation and implementation of the draft Bioenergy Plan. It also provided input to the four working groups established under the BSG including the Biomethane cost benefit analysis steering group; the report is expected to be completed in early 2017.



Objective Three Sea Food



Overview

The Irish seafood industry comprises of the commercial sea fishing industry, the aquaculture industry and the seafood processing industry. The seafood industry is based on the utilisation of a high quality, indigenous natural resource, which has excellent potential for added value and makes a significant contribution to the national economy in terms of output, employment and exports.

Seafood exports

The seafood sector offers huge potential for expansion as global demand for seafood as a healthy premium protein increases. Over the next decade, consumption is projected to grow by 42 million tonnes per annum according to the FAO as the world population is set to reach 8 billion by 2025. It is clear that a huge expansion in food production, including seafood, will be required world-wide to meet this need.

Over the last 6 years, the performance of the Irish seafood industry in export markets has been very positive. Total seafood exports have increased in value terms by 51% between 2010-2016. This is against a backdrop of a decrease in export volumes of 10% over this same period. These figures reflect a jump of 67% in average unit export prices reflecting the strength of demand for Irish seafood in export markets.

Looking at the export performance of the sector in 2016, Irish seafood exports decreased by around 2% in value terms to reach €563 million. This reflects a decrease of

22% in export volumes while unit prices increased by almost 25% demonstrating the strength of demand in most key markets. However poor volumes for some key export species had an overall negative impact on the value of exports. The main EU markets, namely France, Spain, UK, Italy and Germany continue to dominate seafood exports, accounting for around 65% of total exports by value.

The continued recovery of the key markets within the EU was evidenced by some very positive figures recorded during 2016. France, our largest export market grew by 9% in value to account for 26% of total seafood exports. Exports to Spain recorded an increase of 14% to represent some 14% of total sales. Similarly, higher demand drove exports to Italy and the UK with increases of 33% and 12% respectively in value terms. Trade to Germany grew by a modest 3% in value terms on the back of a rise in volume and improved market positioning.

Seafood exports to International markets decreased to an estimated €152 million in 2016 representing some 27% of total seafood exports. Ireland's four main African markets – Nigeria, Cameroon, Egypt and Ghana accounted for just 9% of total seafood export value significantly down on 2015. Exports to Nigeria were 54% lower in value terms due mainly to lower volumes. Export values to this market were just €32.5m in 2016 compared to €71m in 2015. Exports to Cameroon also recorded a significant decline, down 94% in value terms while seafood exports to Egypt and Ghana showed strong growth at +34% and 70% respectively.

Objective Three Sea Food

Exports to the main Asian markets - China, South Korea and Japan - together increased by an estimated 12% in value terms in 2016. Strong export growth to Japan (+55%) and China (+32%) offset an 8% decrease in the value of trade to South Korea. Seafood exports to Hong Kong also performed strongly increasing in value terms by 13% during this period.

Main product trends

The **pelagic** sector experienced a challenging 2016 due to depressed demand globally. Ongoing restrictions in trade to Russia and a currency crisis in West Africa, where there is a lack of foreign reserves to pay for fish imports have significantly impacted demand. In addition, the Irish pelagic sector has been impacted by increased competition from the Faroe Islands and Iceland, particularly for mackerel. Volumes of pelagic fish exported from Ireland were running 33% lower in 2016 compared to 2015 figures.

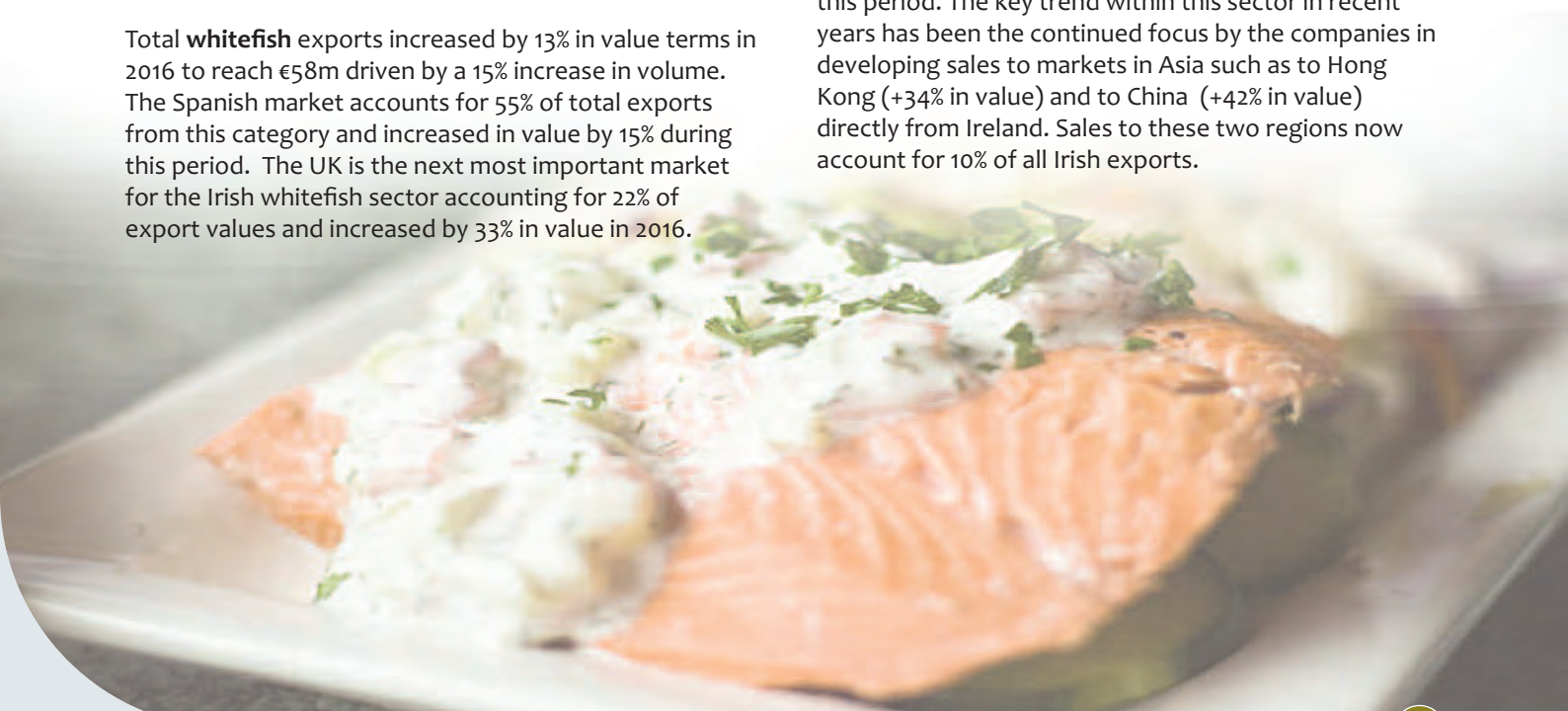
The pelagic sector accounted for 29% of total seafood export values and 61% of volumes in 2016 significantly down on 2015 levels. Export values for this category reached €167m in 2016 down some 24% on same period 2015. Decreases in the boarfish and mackerel quota were the main reasons for the decline in pelagic exports. The increased cost of raw material particularly herring and mackerel has also impacted the competitiveness of pelagic processors packing value added product for export. Currency fluctuations and the impact of Brexit have resulted in a loss of returns for companies selling into the UK.

Total **whitefish** exports increased by 13% in value terms in 2016 to reach €58m driven by a 15% increase in volume. The Spanish market accounts for 55% of total exports from this category and increased in value by 15% during this period. The UK is the next most important market for the Irish whitefish sector accounting for 22% of export values and increased by 33% in value in 2016.

Similarly, total **shellfish** exports progressed by 19% in value in 2016 to reach a total value of €233m largely driven by a 12% increase in average unit prices. France, the largest export market for Irish shellfish, accounting for 35% of value, increased export values by 17% during this period. Trade to Italy and Spain also increased strongly by 47% and 24% respectively. Shellfish exports to China and Japan showed strong growth (up 55% and 198% respectively) despite the closure of the Chinese market to Irish live crab for the majority of 2016. Promotional activities with key customers and trade show participation boosted trade to China in particular.

Salmon exports decreased by just over 5% in value driven principally by an 8% decline in volume in 2016. Export values stood at €71m in 2016. The French market continues to dominate Irish salmon exports, accounting for over 54% of total value. The German market demonstrated strong growth increasing by 10% in value and 4% in volume. The UK market recorded a very strong performance increasing by 11% in value while the US also demonstrated continued growth in the value of Irish salmon sales. Salmon prices have been firm due to production problems in Chile and a good international demand which outpaced supply especially in the first quarter of the year.

Oyster exports stood at almost €34 million, up 27% on the same period in 2015 despite an increase in volumes of just over 8%. The French market continues to dominate Irish oyster exports accounting for 76% of total sales with the value of trade increasing by 28% during this period. The key trend within this sector in recent years has been the continued focus by the companies in developing sales to markets in Asia such as to Hong Kong (+34% in value) and to China (+42% in value) directly from Ireland. Sales to these two regions now account for 10% of all Irish exports.



Objective Three Sea Food

Total **mussel** export values were static in 2016 (reaching a value of €15m) against a drop of a 3% decrease in volumes exported. France, Ireland's largest export market for mussels, was 13% ahead in value accounting for 43% of total sales. In response to a competitive market in mainland Europe Irish exporters have looked at other destinations. Sales have increased both in the domestic market and in the UK (+76% in value). Promotional campaigns such as the Bord Bia 'Flex your mussels' campaign was reported by producers to have had an extremely beneficial effect on the domestic market.

Common Fisheries Policy

The seas around Ireland (ICES Sub Areas VII and VI) contain some of the most productive and biologically sensitive areas in EU waters. Most of the fisheries stocks within these areas come under the remit of the Common Fisheries Policy (CFP).

The current Common Fisheries Policy has been in force since the 1st January 2014 and will remain in place until the next review scheduled for completion by 2022. The overarching goal of the Common Fisheries Policy is to end overfishing and to make fishing sustainable, environmentally, economically and socially thus resulting in a competitive and viable seafood sector for all. It provides the framework for the long term sustainability of fish stocks around our shores and involves significant changes to the long term approach to fisheries management and sustainability.

➤ **Phased ending of discards** – The discard ban is being phased in over a number of years. It was extended to demersal fisheries in 2016, and is will be fully implemented across all TAC species by 2019.

➤ **Hague Preferences** - The Hague Preferences have been maintained and were again invoked at the December 2016 Annual TAC & Quota negotiations. The Hague Preferences have traditionally given Ireland an increased share of traditional whitefish stocks such as cod, haddock and whiting in the waters off our coast when stock levels are decreasing.

The introduction of the landing obligation for whitefish stocks commenced on a phased basis on the 1st January 2016. Under the regional approach to decision making set out in the CFP, Ireland has worked with fellow Member States (UK, France, Spain, Belgium and the Netherlands) within the North Western Waters Group on developing appropriate measures for fisheries in the North Western Waters and further changes have been agreed for 2017 which are minimal and support the gradual phasing in of the landing obligation year on year so as to avoid a 'big bang' in 2019.



Objective Three

Fisheries Management and Conservation



Fish Quota Management 2016

In 2016 the Department was responsible for managing over 216,222 tonnes of fish quotas. As part of this management process, under the Sea-Fisheries and Maritime Jurisdiction Act 2006, 2,280 authorisations and amendments were issued. In addition, 68 Fisheries Management Notices and 8 Statutory Instruments were brought into effect by the Minister to support the management of Ireland's fisheries.

Also in 2016, 40 separate Demersal (whitefish) fish stocks were managed in consultation with the Quota Management Advisory Committee. The periodic, usually monthly, catch limits set out in the Fisheries Management Notice are then displayed on the Departments web-site and circulated to industry representative organisations.

2017 Total Allowable Catches & Quotas

In the context of preparing for the annual EU negotiations, a Sustainability Impact Assessment on Total Allowable Catches (TACs) and quotas for 2017 was presented to the Dáil by the Minister in December, 2016. The Sustainability Impact assessment was developed following input from the marine agencies including the SFPA, BIM and MI and a meeting involving all relevant stakeholders which took place in December 2016.

The EU Fisheries Council in December 2016 agreed TACs and quotas for 2017. The Minister secured 233,500 tonnes of quotas worth €280 million for Irish fishermen for 2017. This represents an increase of 17,390 tonnes over 2016.

SeaFest 2016- Harnessing Our Ocean Wealth – Developing Ireland's Blue Economy

SeaFest 2016, Ireland's national maritime festival, was attended by an estimated 70,000 people and held over a 4 day period from 30 June to 3 July, in Galway. This represented the largest ever attendance in the 3 year history of the event which has been previously been hosted by Dublin (2014) and Cork (2015). The increasingly diverse programme of events, which are organised by the Marine Institute on behalf of the Marine Coordination Group, chaired by the Minister for Agriculture, Food and the Marine, featured a range of public access, business, academic and innovation related events. As part of SeaFest, the third annual 'Ocean Wealth Conference' (attended by over 600 national and international delegates) took place at NUI Galway campus on July 1st. The theme of the 2016 conference was 'Into the Blue – Innovating for Our Marine Future'. The conference investigated how Ireland can innovate in each of the three goal areas of Ireland's Integrated Marine Plan – Harnessing Our Ocean Wealth, namely: a thriving maritime economy, healthy ecosystems and engagement with the sea. Other key events which took place in the City during SeaFest included the Bord Iascaigh Mhara (BIM) National Seafood Conference, 'A Digital Ocean' forum, 'Sea Change' Researcher Workshop (at the Marine Institute) and the second annual Marine Industry Awards (MIAs) ceremony (at Radisson Hotel), all of which took place on June 30th. SeaFest continued with a range of public and promotional marine related events centered in and around Galway city, in the weekend following the various conferences. The festival supports the Goals of Harnessing Our Wealth – An Integrated Marine Plan for Ireland to expand Ireland's marine economy, seafood sector and increasing the level of public engagement with the Seas, Oceans and the marine generally.

Objective Three

Fisheries Management and Conservation

Aquaculture Licensing

Significant progress was made in 2016 in a number of key areas which will enable the continued sustainable growth of the industry. The Department continued to work to address the backlog in the processing of aquaculture licence applications in 2016. The background to the backlog is that in 2007 the European Court of Justice issued a negative judgement against Ireland for breaches of the EU Birds and Habitats Directives. A large element of the judgment concerned a failure by the State to put in place adequate assessment of aquaculture licence applications in 'Natura 2000' areas. In the negotiations to address this judgment, a process was agreed in 2009 with the EU Commission (DG Environment) and this is being implemented. The process includes data collection, the setting of conservation objectives, carrying out of appropriate assessments and appropriate licensing, taking account of, among other things, Natura requirements. The process is ongoing and considerable progress has been made.

The position at the end of December 2016 was that appropriate assessments had been received by the Department in respect of twenty one bays – Bannow Bay, Ballycotton Bay, Castlemaine Harbour, Clew Bay, Donegal Bay, Drumcliff Bay/Cummeen Harbour, Dundalk Bay, Dungarvan Harbour, Galway Bay, Gweedore Bay, Kenmare Bay, Kilkieran Bay, Lough Swilly, River Barrow & River Nore, Roaringwater Bay, Sheephaven Bay, Slyne Head Bay, Trawbreaga Bay, Valentia Harbour/Portmagee Channel, West of Ardara / Maas Road and Wexford Harbour.

In 2016 the Minister made 122 licence determinations. The enhanced licence application templates, which were developed in recent years, are being implemented as existing licences fall to be renewed. Key features of the licence templates include:

- enhanced provisions on environmental monitoring
- greater clarity on the requirements for operators in relation to operational conduct and monitoring
- the possibility of group-marking of sites for navigational purposes
- specific provisions covering company registration/dissolution, tax certificates, payment of fees etc.
- species specific licence templates

National Strategic Plan for Sustainable Aquaculture Development

Following its 2015 publication, implementation of the National Strategic Plan for Sustainable Aquaculture Development was underway in 2016, with 11 of the 24 actions proposed in the Plan commenced in 2016.

One of the key actions to be commenced in 2016 was the Independent Review of the Aquaculture Licensing Process and its Associated Legal Framework. An Independent Review Group was appointed in December 2016 and its Terms of Reference were published. The Review Group is chaired by Ms Mary Moylan and also comprises Dr Ken Whelan and Mr Lorcan Ó Cinneide. The Terms of Reference require the Group to identify changes required to the aquaculture licence process and its associated legal framework that will deliver licence determinations in a timely manner, having regard to international best practice, will support achievement of the actions and priorities of Food Wise 2025. The National Strategic Plan for Sustainable Aquaculture Development, will facilitate enhanced transparency in the licensing process for all stakeholders and will ensure legally robust licence determinations having regard to EU and national law. The review will encompass all applications for a licence under existing legislation.

Aquaculture Licensing Review

The Minister launched a review of the aquaculture licensing process in December 2016 with the appointment of an independent three-person Aquaculture Licensing Review Group. The Group was asked to identify changes that would improve the aquaculture licence process and its associated legal framework, in line with actions identified in Food Wise 2025 and Ireland's National Strategic Plan for Sustainable Aquaculture Development. The Group is expected to provide the Minister with a concise report in 2017 setting out recommended actions.

Developing Sustainable Inshore Fisheries

The National Inshore Fisheries Forum (NIFF) met on four occasions during 2016 to discuss and develop proposals concerning inshore fisheries and their interactions with Natura 2000 sites. The NIFF was established by the Government in 2014 and facilitates engagement between the Minister and stakeholders in fisheries within six nautical miles of the coast. The NIFF is supported by a network of six Regional Inshore Fisheries Forums (RIFFs), which involve representation from inshore fisheries and other marine stakeholders.

Objective Three

Fisheries Management and Conservation

A dedicated website now provides information on the work of the Forums: www.inshoreforums.ie.

Following a public consultation on non-commercial pot fishing in 2015, the results of the consultation were discussed with the NIFF, and a set of measures regulating this activity was introduced by the Minister in early 2016. The Minister also extended transitional measures for lobster fishing, which were due to expire at the start of 2017, for one year. Consultation was held with local operators through the Northwest RIFF regarding the management of a small-scale razor clam fishery off the Inishkea Islands, Co. Mayo; by the end of the year agreement had been reached allowing it to be managed locally. On foot of representations from NIFF members seeking to introduce management measures for velvet crab, a consultation was undertaken in 2016 to allow all interested stakeholders to express their views on the matter. The results of the consultation will be considered in 2017 in consultation with the NIFF.

Management of the all-island mussel seed fishery continued in 2016, with the autumn fishing season commencing in September. A third surveillance audit of the fishery was carried out in November 2016 as part of the fishery's conditional MSC (Marine Stewardship Council) certification. The audit, completed by SAI Global Assurance Services, found that the fishery continues to operate in a well-managed and sustainable way and provided for its continued conditional certification.

Implementation of Natura 2000 Directives

Natura 2000 is an EU network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. The Marine Institute (the state agency responsible for marine research, technology development and innovation in Ireland) previously prepared a risk assessment of sea-fisheries interactions with Natura 2000 protected species and habitats along

the South and West coasts of Ireland. It expects to complete a similar assessment for protected bird species in 2017. These assessments are being made under Article 6.2 of the European Union's Habitats Directive. A similar risk assessment was completed by the Institute in 2013 for fishing activities in Natura 2000 sites in the Irish Sea (East coast). The Institute also prepared a schedule for addressing the risks identified based on the type of fishery and the nature of the risk posed. Working with the National and Regional Inshore Fisheries Forums, the Government has commenced actions to address risks posed by sea-fisheries activities on a priority basis.

Appropriate assessment of planned fishing activities was undertaken in 2016 for Dundalk Bay and mitigation measures were applied through a Fisheries Natura Declaration to manage potential risks posed to the features of Natura 2000 sites there by mechanical dredging and hand gathering activities. Appropriate assessment of the mussel seed fishery in Castlemaine Harbour also was commenced and is expected to conclude in early 2017. A public consultation was held regarding measures contained in a draft Mitigation Response Plan for the scallop fishery off Wexford. The draft plan, developed in consultation with the industry, aims to mitigate the impact of towed fishing gears – particularly in the scallop fishery – on Natura 2000 sites off the south east Wexford coast and ensure compliance with the Birds & Habitats Directives. A Fisheries Natura Declaration is being drafted to implement mitigation measures for the fishery.

The Climate Action and Low Carbon Development Act 2015, building on the National Climate Change Adaptation Framework, provides for the preparation of Sectoral Adaptation Plans. The Marine Sector plan was progressed significantly in 2016 with the assistance of the Marine Institute and BIM, as well as expert advice from UCC. It is anticipated that a draft plan will be published for public consultation in 2017 in advance of a final draft plan being presented to the Minister.



Objective Three Fishery Harbour and Coastal Infrastructure Capital Development Programme



The strategic objective of this programme is to ensure the future viability of the fishing industry, to bring the Fishery Harbour Centres (FHCs) up to international practice, to reduce congestion at the harbours and to improve safety for the fisheries sector. The Department also has responsibility for North Harbour at Cape Clear Island and for maintaining a range of piers, lights and beacons around the coast in accordance with the 1902 Ex-congested Districts Board Piers, Lights and Beacons Act.

In 2016, the total voted expenditure on this programme was €16 million, of which €11.1m was spent on the FHCs, with a further €1.1m spent on Cape Clear Island and for maintaining a range of piers, lights and beacons around the coast. The significant investment on these works is project managed by the Department's Engineering Division which also provides technical support and advisory and inspectorial services on all fishery harbour developments.

The Department has also, in the past, provided funding under this programme for small scale developments and repair of Local Authority owned harbours, piers and slipways. In 2016 all coastal Local Authorities were invited to submit applications in respect of projects for inclusion in the Fishery Harbour and Coastal Infrastructure Capital Development Programme and also the Marine Leisure and Marine Tourism Programme. Funding was approved for qualifying projects that had been identified as priorities by the Local Authorities. The overall expenditure on these projects was €3.77 million in 2016.

Key Projects in Fishery Harbour Centres in 2016

Castletownbere

Phase 1 of the Dinish Wharf expansion project in Castletownbere Fishery Harbour Centre was completed in 2016. This forms part of a multi phased Harbour Integration Development project which will almost double the level of pier space on Dinish Island. The

project is a direct response to the increased fishing activity in Castletownbere in recent years and expenditure on the project totalled €543,467 in 2016.

Killybegs

The final phase of the small craft harbour project was completed in August 2016, with €837,223 spent on the project over the course of the year. The harbour is mixed use, accommodating both fishing vessels and marine leisure vessels, and can accommodate approximately 50 vessels at any time.

Dunmore East

The upgrade of the Harbour Offices in Dunmore East was a key project for the FHC in 2016, at a cost of €866,980. The project involved upgrading the ground floor facilities of the Harbour Offices, providing WC facilities for public use, changing rooms including showers for harbour users, and offices and canteen facilities for harbour staff. This project was close to completion in 2016 and will be fully complete by April 2017.

Key Projects in other Department-owned Marine Infrastructures 2016

Cape Clear

The finalisation of remedial works to Duffy's Pier, Cape Clear was completed in 2016. The project commenced in August 2015 and involved the widening of the Western End of Duffy's Pier, as well as remedial works to the Pier on the south and north sides. Expenditure on the project in 2016 totalled €562,485.

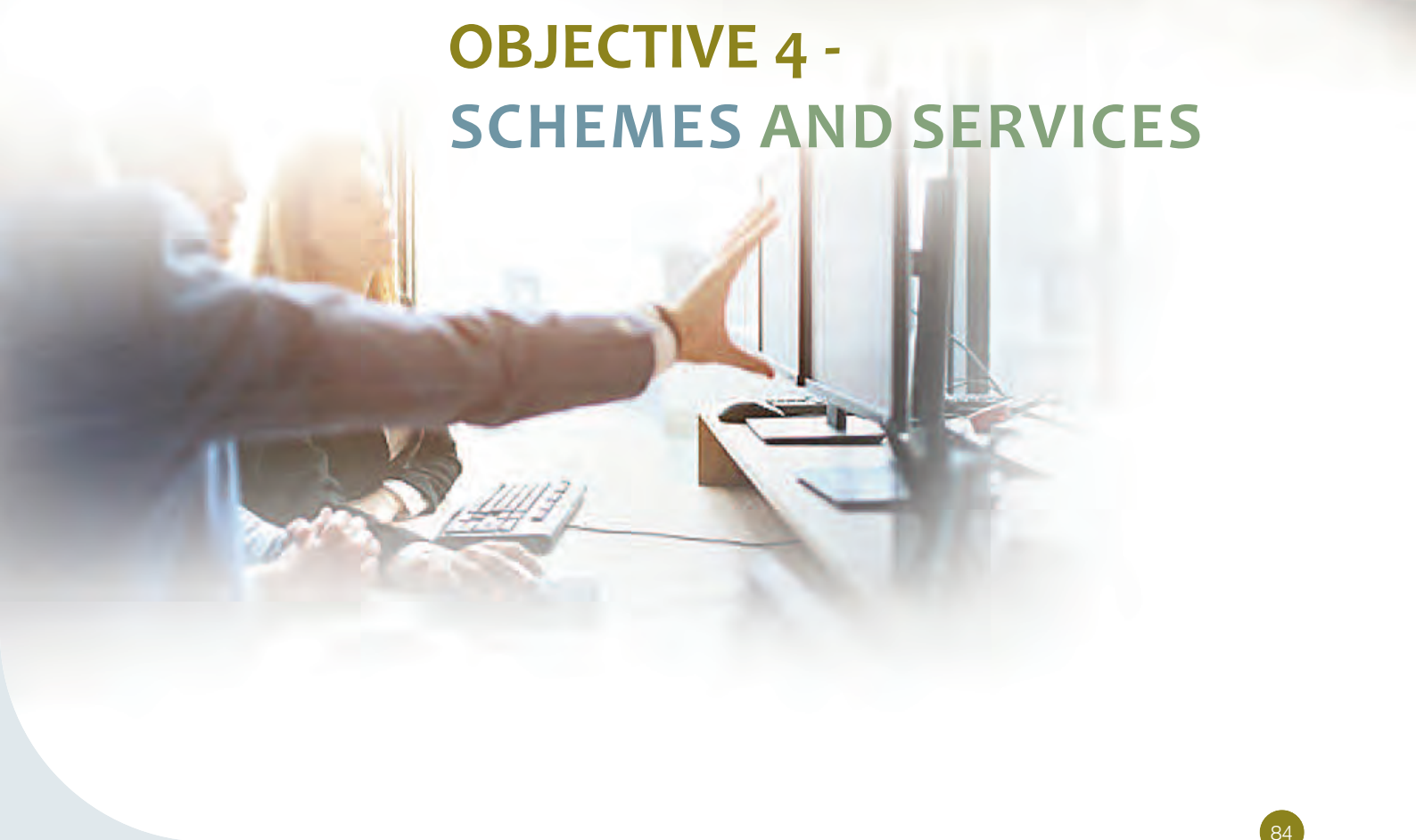
Local Authority Harbour Infrastructure

In 2016 a total of €3.77 million was spent on works at Local Authority owned harbours, piers and slipways under the Fishery Harbour & Coastal Infrastructure Capital Development Programme and the Marine Leisure & Marine Tourism Programme. A total of 85 projects from coastal Local Authorities around the country benefited from the funding.

Objective Four



OBJECTIVE 4 - SCHEMES AND SERVICES



Objective Four

Performance Budgeting for Objective Four

High Level Objective: “Deliver schemes and services effectively and efficiently, provide a quality service to all our clients and adhere to the highest standards of good corporate governance.”

INPUTS – FINANCIAL & HUMAN RESOURCES

	S/R 2016 Estimate*			2016 Outturn		
	Current	Capital	Total	Current	Capital	Total
	€000	€000	€000	€000	€000	€000
D.1 ADMINISTRATION PAY	21,420	-	21,420	21,388	-	21,388
D.2 ADMINISTRATION NON PAY	8,495	182	8,677	7,888	90	7,978
D. 3 INCOME AND MARKETPORT	9,351	-	9,351	8,230	-	8,230
D.4 INCOME SUPPORT IN DISAVANTAGED AREAS	202,000	-	202,000	206,467	-	206,467
D.5 OTHER SERVICES	97	-	97	70	-	70
D.6 AGRI CASHFLOW SUPPORT LOAN	13,915	-	13,915	13,915	-	13,915
Programme Total:	255,278	182	255,460	257,958	90	258,048

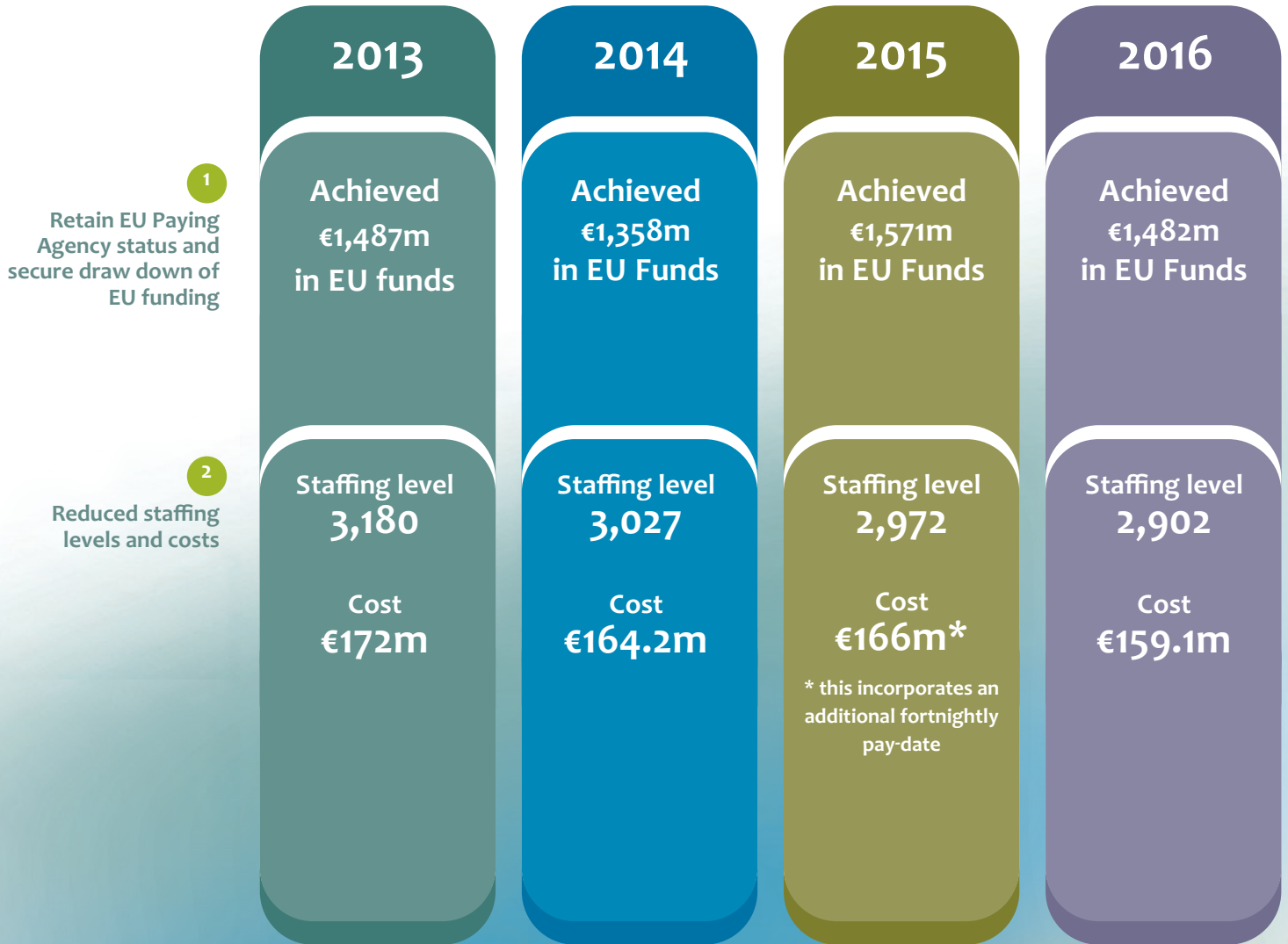
*2016 Estimate as amended by Supplementary Estimate

Staff Numbers	2016 Estimate	2016 Actual
DAFM	708	515

Objective Four

Performance Budgeting for Objective Four

Programme D: Context Indicators



Objective Four

Scheme Operations

Table below gives operational details on the main schemes operated by the Department in 2016.

Scheme	Applications received in 2016	Applications processed in 2016	Payments made* € M
Basic Payment Scheme/Greening	123,901	122,189	1,160
Areas of Natural Constraints	100,306	94,101	201.38
Rural Environmental Protection	0	80	1.8
AEOS	8,600	5,985	32.8
Farm Waste Management	0	0	0
Afforestation Grant	1,905	2,045	25.7
Forestry Premium	22,112	21,977	72.94
Early Retirement	0	0	4.40
Farm Improvement	0	2	.027
TB and Brucellosis Compensation	3,958	3,938	13.99
BSE Compensation	17	17	.019
Scrapie Compensation	8	8	.068
Beef Genomics Scheme	0	207	.138
Beef Data and Genomics Programme (BDGP)	0	24,500	50.88
Investment Aid for Commercial Horticulture	137	137	3.87
Organic Farming Scheme	322	249	8.05
Scheme of Organic Grant Aid	0	13	.25
TAMS (exc. Bioenergy)	10,583	6,061	7.84

*This column refers to all payments made in 2016 which can involve commitments over and above applications processed in that year.

Objective Four Scheme Operations



€1,160 billion
payment to 122,189 farmers

Direct Payments

Annual expenditure of almost €1.4 billion, on the Basic Payment, Areas of Natural Constraints and Rural Environment Protection and Agri-Environment Options Schemes, was made by this Department to help achieve the objective of protecting farmers' incomes and of maintaining the optimal number of family farms. Over €1,160 billion was paid to over 122,189 farmers under the 2016 Basic Payment Scheme and €201 million was paid to over 94,000 applicants under the Areas of Natural Constraints Scheme. These direct payments to farmers in 2016 were paid within the service delivery targets of the Farmers Charter and Action Plan.

Beef Data and Genomics Programme (BDGP)

24,500 farmers continued to participate in the BDGP during 2016. Payments amounting to €36.3m issued to almost 20,000 participants in December 2016 in respect of 2016 scheme year and a further €14.6m was paid in respect of the 2015 scheme year. Payments will continue as herds become eligible.

24,174 scheme participants attended the mandatory training course by 31 October 2016 and a payment of €166 was made to each attendee on the day. 23,411 farmers completed the mandatory carbon navigator in conjunction with an approved advisor by the extended deadline of 30 November 2016.

Licensing and Export Refunds

Import licence applications for 2016 increased by 11.67% over 2015 figures to 23,015. This was mainly due to new companies applying for poultry import tariff quota licences and new poultry products requiring licences.

Green Low-carbon Agri-Environment Scheme Roll out of the scheme involved the development by the Department of a dedicated online application system which identifies and profiles environmental assets at individual farm level.

During 2016 the third tranche of GLAS opened with just under 14,000 applications received, increasing the overall GLAS participation level for all three tranches to in excess of 50,000.

Objective Four Customer Service

Table below indicates the progress achieved on the targets specified in the Customer Service Action Plan. Achievement of service delivery targets is predicated on correct scheme requirements and documentation being available.

2016 Performance on Customer Service Delivery Targets

SERVICE	TARGET DELIVERY TIME	2016 PERFORMANCE
Basic Payment Scheme	EU Regulations provide that payments shall be made once a year within the period 1 December to 30 June of the following year. However, EU regulations also allowed for 70% advance payments from 17th October 2016. Balancing payments commenced on 1st December 2016.	Advance payments commenced on 17th October 2016. with balancing payments commencing on 1 December. By end 2016 €1.160 billion had been paid to over 98% of applicants.
Areas of Natural Constraints	While there is no regulatory payment date, it is generally accepted that mid/late September is the earliest date by which payments can start issuing; this is acknowledged in the Farmers' Charter.	Payments commenced on 20 September 2016 and approx €195.9m was paid to 91% of all valid applicants under ANC by 31 December 2016
Beef Data and Genomics	Payments for a scheme year to commence in December of the scheme year.	Payments amounting to €36.3m issued to almost 20,000 participants in December 2016
TAMS	Issue of approval following receipt of valid application within 3 months. Approval for payment following receipt of notice of completion of works and valid supporting documents within 3 months. Issue of payment following approval for payment within 6 weeks.	100%
Forest Service Grant Schemes Forestry Premium Scheme	Annual forestry premium payments were paid from 1st January to applicants who used the Department online system. The Annual bulk payment run for paper based applications was carried out in April and payments in respect of both types of applications continued throughout the year.	The vast majority of valid applications for approval and payments are made within the targets as set out in the Farmers' Charter €21m paid in January 2016 bulk premium run in respect of 5,500 online applications. €19.76m paid in April 2016 bulk premium run (paper forms). The total value of Premium Payments paid in 2016 amounted to €72.9m of which: €37.5m was paid in respect of applications made online and €35.4m in respect of paper based applications.

Objective Four Customer Service

SERVICE	TARGET DELIVERY TIME	2016 PERFORMANCE
Compensation – Bovine TB Eradication and Brucellosis Monitoring Schemes	TB and Brucellosis compensation to be paid within 3 weeks of the date of receipt of the required correct documentation or of eligibility as per terms and conditions.	95.3% of Reactor Grant Valuation compensation payments were made within 3 weeks of receipt of all the required documentation and over 99% were made within 8 weeks. 96.3% of Income Supplement, Depopulation and Hardship Grant payments were made within 3 weeks of receipt of the required documentation and over 99% were made within 8 weeks.
BSE Scrapie	BSE Compensation - 100% paid within 21 days of receipt of completed documentation Scrapie Compensation - 100% paid within 21 days of receipt of final documents	All applicants paid within the required time-frame All applicants paid within the required time-frame
Cereals - Import licenses	24 hours	100%
Milk & Milk Products - Export licences - Import licences	24 hours	100% 100%
Tariff quota for unspecified countries of origin	5 working days	100%
Non-quota preferential licence	5 working days	100%
Tariff quota licence for specified countries	5 working days	100%
General import licences	1 working day	100%

Objective Four Customer Service

Data Protection

A total of 25 Subject Access Requests were received under Section 4 of the Data Protection Acts in 2016, an increase of over 30% on the previous year.

Press and Information Office

The Press and Information Office is responsible for issuing press releases on behalf of the Department, dealing with queries received from the media as well as general information queries.

In 2016, 205 Press Releases and 26 Department Statements were issued by the Press Office and replies were issued to over 1,100 different media queries. The Department also processed over 5,000 general queries received via the Departments' info@agriculture.gov.ie mailbox. The Press Office led a number of nationwide communication campaigns utilising press, radio and social media to promote the various schemes and services the Department administers.

Public interaction with the Department's Twitter account continued to increase in 2016 with an average of 5 new followers every day, or 150 each month. Social media was also increasingly used to publicise new and existing schemes, staff contributions at Agriculture related events and to issue Press Releases.

Public Sector Duty

Under the Irish Human Rights and Equality Commission Act, 2014, all public bodies are statutorily obliged to have regard to human rights and equality issues in the performance of their functions.

In this regard the Department of Agriculture, Food and the Marine has incorporated the following values in its Statement of Strategy 2016 – 2019:

- A strong commitment to diversity, gender equality and the fair and equal treatment of all,
- a deep-rooted public service ethos of independence, integrity and impartiality.

The Department has established a Working Group at senior level which commenced work on an assessment of human rights and equality issues relevant to its functions.

Protected Disclosures Act 2014

Three protected disclosures were made in 2016. One was submitted to the Workplace Relations Commission and the other two directly to the Department. All three were/are being considered under the Protected Disclosures Act 2014.

Inheritance Enquiry Unit

The Inheritance Enquiry Unit continues to advise and assist the families and legal representatives of deceased farmers in the process of transferring agricultural schemes and the issuing of outstanding payments. In 2016, it responded to requests for assistance from over 2,265 families and released a total of €11.6m in payments to the estates of deceased farmers.

Service to Assist Bereaved Farm Families

The Department's Quality Service Unit provides a service to assist bereaved farm families who have suffered a sudden loss and who may not have experience in dealing with the type of day-to-day issues that might bring them into contact with the Department in relation to schemes and services. Three calls were received in 2016.

Complaints Procedure

60 complaints were received in 2016 and were examined and responded to in line with Department customer complaints procedures.

Office of the Ombudsman

The Department responded to a total of 66 complaints from the Office of the Ombudsman.

Freedom of Information (FOI)

A total of 347 FOI applications were received during 2016. This represents a 9% increase from 2015.

Farmers' Charter of Rights

The **Farmers' Charter of Rights 2015-2020** sets out specific delivery targets to our farmer customers and covers the various schemes operated by the Department. The Farmers' Charter continues our commitment to the principles of Quality Customer Service set out in our Customer Charter and Customer Action Plan 2015 - 2020.

Progress under the Charter is monitored by a monitoring committee under an independent chairman. The committee is comprised of representatives of farm organisations and Department of Agriculture, Food and the Marine staff. The monitoring committee met on four occasions in 2016.

Objective Four Customer Service

The Agriculture Appeals Office

The Agriculture Appeals Office provides a free, independent, statutory appeals service to farmers who are dissatisfied with decisions in relation to their entitlements under the schemes set out in the Schedule to the Agriculture Appeals Act 2001. The Office's Annual Reports are on the website: www.agriappeals.gov.ie

In addition to statutory functions, the office examined appeals in relation to the Land Parcel Identification System (LPIS) of the Single Payment Scheme. The LPIS Appeals Committee, with an independent Chairman, issued recommendations to the Department in relation to 55 cases.

In 2016, the Office received 598 appeals, a decrease of 2.5% on 2015. 615 cases were closed in 2016 which included appeals outstanding from the previous years. A summary of the outcome of cases received and decided in 2016 is as follows:

Outcome of appeals received in 2016

Appeals Allowed, Partially Allowed or Revised by the Department	39%
Appeals Withdrawn, Invalid and Out of Time	19%
Disallowed	42%

Agriculture, Food and the Marine
Talmhaíochta, Bia agus Mara

Young Farmers Scheme
Animal Traceability
BDGP Crops and Horticulture
Green Low-Carbon Agri-Environment Scheme
Market Support Measures
Basic Payment Scheme
Schemes and Services 2014-2020
Beef Data and Genomics Programme
Animal Production/Products
Animal Health and Welfare
State Bodies and Agencies
Plant Health and Trade
Structural Improvements

[agriculture_ie](https://twitter.com/agriculture_ie)
www.agriculture.gov.ie



Objective Four Financial Management

Overall Expenditure

The Department was responsible for Voted expenditure of over €1.257 billion in 2016. In addition to voted expenditure, the Department spent €1.249 billion in EU EAGF funded schemes, bringing total expenditure to €2.5 billion (see table below for details).

Expenditure on Irish Agriculture, 2016		€m
EAGF Guarantee Direct Expenditure		1,249.0
Basic Payment/ Direct Payment Scheme	1,300	
Intervention/Aid to Private Storage (1)	3	
Other Market Supports	7	
Other	-61	
Voted Expenditure (excluding Administration)		1,040.8
*Programme A – Agri Food Policy Development & Trade	432.8	
*Programme B – Food Safety, Animal Health, Plant Welfare	77.6	
*Programme C – Rural Economy and Environment	301.7	
*Programme D – Delivery of client focussed Schemes & Services	228.7	
Administration		216.2
Total Voted Expenditure		1,257
Total Expenditure		2,506

EU Receipts

The Department claimed and received funding from the EU in 2016 in respect of measures financed from the following EU Funds:

- EAGF (European Agriculture Guarantee Fund)
- Veterinary Fund and
- Fisheries Funds.

Objective Four Financial Management

Summary of EU Receipts in 2015 and 2016

	2015 €m	2016 €m
EAGF Guarantee – Agriculture	1,216	1,100
EAFRD Rural Development 2014-2020*	364	383
Veterinary Fund	13	11
Fisheries - FIGG, EFF, EAGF fish markets and Conservation and Management	3	3
Other	3	4
Total	1,599	1,501

EAGF receipts for the calendar year are received in arrears in respect of claims in EAGF year (16 October to 15 October)

EAFRD receipts are the total calendar year receipts for Ireland including amounts paid over to the Department of the Environment, Community and Local Government.

*Under the 2007-2013 EAFRD programme, 5% of receipts are retained until programme closure per EU Regulation 1290/2005 Article 24.4. Following the final clearance by the EU of the last Certified Annual Account, the 5% retained was reimbursed in 2016.

Financial Controls

The Department operates a comprehensive range of financial management, control and accounting systems to comply with EU, national accounting and governance requirements.

In accordance with stringent EU accreditation requirements, the Department submitted its independently certified annual accounts of expenditure to the EU Commission. The Department's performance as a national Paying Agency continued to be monitored during 2016 by the Accreditation Review Group (ARG). The Secretary General chaired this group which includes representatives from the Department of Public Expenditure & Reform and the Revenue Commissioners. It met on four occasions during 2016. One of the Group's key duties is to ensure that the recommendations of the Certification Body for the previous year are implemented and that all EU audit findings are followed up appropriately.

Audit Committee

The membership of the Department's Audit Committee at the end of 2016 was Leo Martin (Chairman), former Chief Operating Officer of Grafton Group, Dairine Walsh, formerly of Beauchamp Solicitors, Aidan Dunning, former Secretary General of the Department of Communications, Energy and Natural Resources, Jim O'Brien, retired civil servant, having last served at Second Secretary General level in the Department of

Finance and Brendan Gleeson, Department of Agriculture, Food and the Marine.

The Audit Committee provides independent and objective advice to the Secretary General on the internal audit policies and the management of risk appropriate to the functioning of the Department.

The Committee met four times in 2016 and the Chairman met regularly with the Secretary General. The Annual Report for 2016, expressed satisfaction with the controls operated by the Department and the Chairman cited the valuable contribution which the Internal Audit Unit makes to the overall governance environment in its evaluation and improvement of controls in the Department.

Internal Audit Unit

The Internal Audit Unit (IAU) completed a substantial body of internal and scrutiny audit work during 2016 to help maintain the highest standards of corporate and financial management and accountability.

Seventeen internal audit reports were completed and issued during the year. All regulatory requirements on audit and control were completed in accordance with the prescribed timescales of the EU Scrutiny and European Fishery Fund Regulations. The IT audit group, assisted by specialist external consultants, completed a significant amount of audit coverage.

Objective Four Financial Management

The IAU is represented in a number of different audit networks, including the Heads of Internal Audit Forum, the EU network of audit bodies and the UK Interdepartmental Internal Audit Group. The Director of Internal Audit attends the Department's Accreditation Review Group, Investigations Steering Group and Risk Management Team meetings and acts as a recipient of Protected Disclosures. Staff from the unit also undertook a significant amount of training during the year as part of their continuous programme of skills development.

Risk Management

A revised assessment of strategic risk was undertaken by the Management Board members under the five business areas identified in the Departments Statement of Strategy.

Potential high impact, far-reaching, high level risks which carry potentially very serious consequences for the Department, the agri-food sector and, in the wider context, for the public and national interests were identified for each business area. These revised strategic risks were integrated into the Risk Management system operating in the Department and form the platform within the system on which all business and operational risks are built.

CAP Beneficiaries Website

In accordance with EU Regulation 1306/2013 Member States must ensure annual ex-post publication of the beneficiaries of CAP funding both legal and non-legal persons. Material must be published no later than 31

May each year. The Department published the following information in 2016:-

- The name of the beneficiary, unless the amount of payment under CAP funds was less than €1,250 in which case the individual was identified by a code
- The municipality where the beneficiary is resident
- The amount of payment corresponding to each measure (scheme) received by a beneficiary
- The nature and description of each measure

The above requirements are directly applicable and binding in their entirety and the Department does not have any discretion as to how or what might be published.

Prompt Payment

During 2016 a total of 113 invoices were paid outside the 30 day period provided for in regulations made under the Prompt Payment of Accounts Act, 1997 and incurred late interest penalties. The total interest plus penalties paid amounted to €6,108. The value of all invoices that were paid late amounted to €164,382 which represents 0.10% of the €168.223m total payments falling within the terms of the Regulations. The average delay in excess of the 15 day payment period was 21.34 days. There is also a requirement since 2009 for Government Departments to pay Irish suppliers within 15 days. Details of this Department's compliance with this requirement are set out in the following table:

Prompt Payment Jan -Dec 2016			
Payments made	Number	Value €	Percentage
Within 15 days	20,913	144,884,332	81.63%
Within 16 to 30 days	4,473	22,922,158	17.46%
In excess of 30 days*	234	416,956	0.91%
Total	25,620	€168,223,446	100%

* This figure is considerably inflated by invoices where suppliers delayed submitting valid tax clearance certificates in accordance with Revenue requirements. Late interest does not apply to these cases.

EveryOne

One Vision, One Department, Every One

Business Process Improvement

The Department's change management programme has been a key enabler in reducing both running costs and staffing levels over the past decade. Increased use of digital services and processes, changes in the Department's various schemes and reductions in disease levels together with improved business processes and greater operational efficiency enabled the Department to reduce its staffing levels from 4,800 in 2005 to just over 2,900 at the end of 2016, a reduction of 40%.

Organisation Review (OR)

DAFM launched an internal Organisation Review (OR) of the Department in January 2016. It examined the Department under the three broad headings: People, Strategy and Delivery. Having considered the feedback from extensive staff consultations and also having taken on board the opinions of DAFM staff in the 2015 Civil Service Employee Engagement Survey (CSEES), the Management Board published the findings of the review and an Action Plan in early July in advance of a formal launch by the Secretary General. The OR process was highly inclusive from the outset to ensure maximum buy in from staff. Web based technology was used to launch the Action Plan in as transparent and inclusive a manner as possible.

The 13 point DAFM Management Board Action Plan, sets out a series of actions and sub-actions, sponsored by designated Management Board members who have responsibility for their implementation. These actions are aimed at addressing, within the context of the Civil Service Renewal Plan, the main issues emanating from both the Organisation Review and the CSEES:

- implementation of the new HR Strategy;
- review of internal promotion policy;
- improvement of internal communications;
- revision of internal business planning;
- establishment of cross cutting groups;
- strengthening of external communications;
- addressing of customer service issues;
- review of ICT Strategy;
- embedding Project Management across DAFM;

- development of data analytic capabilities;
- review of risk management;
- establishment of networks to promote innovative thinking;
- exploration of Pillar 1 and Pillar 2 synergies.

Statement of Strategy 2016-2019:

The Organisation Review process identified the need for greater alignment between the Statement of Strategy (SOS) and a more effective Business Planning process. On foot of the extensive consultation with staff and stakeholders the Department adopted a different approach to the content, composition, layout and design of the SOS.

The annual Business Planning (BP) process was also revised to provide greater focus on prioritisation of business objectives, and to improve coherence/alignment between the DAFM's high level strategies as articulated in the SOS and the Secretary General / Minister's priorities for 2017, the five Business Area Plans and the Divisional BPs; In addition a new quarterly reporting mechanism was introduced enhancing transparency regarding the achievement of the priorities of the Minister/SG/ASG/ and HODs in the business planning process.

Action 17 of the Civil Service Renewal Plan aims to "Improve Project Management Capacity" in the Civil Service. Under the co sponsorship of the Secretary General and the Chairman of OPW, the Project Management Leaders/Advisory Service (PMLAS) launched a number of initiatives including: the Project Managers Network and Portal – to contribute to shared experience and bring together project sponsors, managers and team members across the Civil Service; a Project Management Handbook for the Civil Service – an easy reference guide to project management core principles and methodologies which promotes a standardised and consistent approach to project management and methodologies across the Civil Service; and the introduction of project management training as part of induction and ongoing Continuous Professional Development.

Objective Four Staff and Organisational Management



Civil Service Awards: Two DAFM projects made it to the 14 final nominees for Civil Service Excellence and Innovation Awards, with DAFM's Basic Payments IT systems team winning the Civil Service wide Digital Excellence Category. While the other nomination, the achievement by DAFM of ISO 27001 accreditation in relation to Information Security Management Systems, did not win a final award, it was hugely significant in terms of accreditation as an EU paying Agency. A total of 11 nominations were submitted within DAFM for the Civil Service Excellence Awards and this number alone may be seen as a testament to the excellent work carried out on a daily basis by people at all levels across DAFM. The SG held a separate Departmental award ceremony for all staff involved.

Training and Development

The Department provided a wide range of Learning and Development opportunities in 2016 in areas such as leadership, management, interpersonal and communication skills, finance, IT, and health and safety.

In addition the Department delivered a range of specialised training for technical, veterinary, engineering, scientific and laboratory staff.

In 2016 the Department also drafted a new Learning and Development Policy document which outlined how Learning and Development needs would be identified, delivered and evaluated over the following three years.

Performance Management & Development (PMDS)

In line with "One Vision" the Civil Service Renewal Plan - the Department is committed to strengthening the performance management process and supports the use of PMDS as a key tool in monitoring and assessing individual performances. In that regard, the following enhancements to PMDS have been agreed and introduced:

- A new 2-point rating format for PMDS which identifies satisfactory and unsatisfactory performance was introduced in 2016. It provides an opportunity to review and develop high performance and to address underperformance where it occurs.
- An enhanced performance review process for Assistant Secretaries, including 360 degree feedback, was fully rolled out in 2016.

Equality and Diversity

The Department actively supports and promotes equality in all aspects of its activities. The statutory employment target for people with disabilities is 3% and in 2016 the Department was well in excess of that target at 4.3%. Following on from success in previous years the Department participated again in the Job Shadow Initiative, facilitating twelve work placements and also a placement under the Willing, Able and Mentoring (WAM) programme. In 2016 the DLO attended talks in Dublin Castle, Theme: Establishing a Monitoring Framework in Ireland for the United Nations Convention, on "the Rights of people with disabilities".

HR Strategy

In 2016, the Department published its HR Strategy in line with Civil Service Renewal and 'One Vision'. The strategy sets out the Department's overarching core values and culture and other HR principles such as Workforce Planning, Performance Management, Staff Development, Communication etc. The HR Strategy will provide the basis for a broad range of HR functions including staff mobility, absence management, underperformance, promotion and recruitment, and learning and development.

Recruitment and Competitions

The year 2016 witnessed a significant increase in the number of open recruitment campaigns and internal promotion competitions undertaken by the Department with a view to filling outstanding vacancies. Recruitment competitions involving specialised or localised roles are now administered by the Department's Competitions & Recruitment Unit while the Department continues to avail of the services of the Public Appointments Service for competitions involving larger numbers.

Objective Four Staff and Organisational Management

Several major competitions, both open and internal, were initiated or brought to a conclusion throughout 2016 including Technical Agricultural Officer, Supervisory Agricultural Officer, Higher Executive Officer, Veterinary Inspector and Assistant Agricultural Inspector. In total the Department undertook over thirty competitions throughout the year.

The Department continued the process of reviewing its competition policy and procedures with a view to making the competitive process more comprehensive and transparent while a significant number of staff underwent assessment/interviewer training.

Health and Safety

During 2016, work continued on embedding the Health and Safety Risk Management System (HSRMS), which is designed to control and mitigate against risks and to continually improve health and safety performance whilst also ensuring the Department meets its legislative requirements.

Over 870 staff attended health and safety training covering 70 different course types. The courses covered such topics as first aid, risk assessment and forklift training. The Health and Safety Section worked with Divisions in designing bespoke training for particular Department tasks and activities e.g. farm safety training and emergency first aid training. All training was evaluated and recorded on Human Resource Management System. Display Screen Assessments were also conducted by staff in the Section. Health and safety risk management was also progressed in the Department but in particular in DAFM farms and laboratories.

2016 Farm Safety

Farm safety is one of the most important issues facing farming today. Statistics show that accidents on farms cause more workplace deaths than all other occupations combined. 2014 proved to be the worst year for fatal farm accidents since 1992 with 30 deaths on Irish farms. In 2016 there were 21 fatal farm accidents.

While the Health and Safety Authority (HSA) is the organisation with primary responsibility for securing health and safety at work, the Department has taken a number of steps over recent years, in tandem with some of the other State and industry organisations, to raise awareness of the problem and educate farmers and their families on the dangers of working in this industry.

Farm safety also forms an integral part of all building specifications drawn up by the Department, and additional safety elements were included during the revision of a number of specifications in 2016. These specifications set out the minimum standard to which all work must be completed and include safety related requirements such as all slurry agitation points being external and guidelines on the safe agitation of slurry. These specifications are freely available to all farmers.

In addition, a mandatory Health and Safety element is included in all Knowledge Transfer Groups under the 2014-2020 Rural Development Programme. These groups will directly engage in the region of 20,000 farmers with farm safety

ISO 9001:2008

The Department's commitment to independent quality assurance verification and enhancement of customer service delivery was demonstrated in 2016 with continued certification to the ISO 9001 quality management systems standard in several areas of the Department.

During 2016 certification to the standard was retained following audits by the National Standards Authority of Ireland (NSAI) in:

- Veterinary Medicines Section, Backweston
- Livestock Breeding, Production and Trade, Cavan
- Input Section, Cash Office and Payments Section of Accounts Division, Cavan
- Training and Development Unit, Dublin and Portlaoise
- Inheritance Enquiry Unit, Portlaoise

Accommodation

The Department continued its participation in the OPW lead Steering Group on Property Asset Management established to drive forward initiatives under the Public Sector Reform Plan. The Group set out an Action Plan and a progress report on the Action Plan was published in 2015 with an update provided in 2016. The Department continued to give effect to the range of measures set out in the plan and coordinates the responses of State Bodies under its aegis. The measures include population of data on the State Property Register and participation in Property Managers Network workshops. The Department continued to consolidate its property portfolio seeking out opportunities for shared facilities and services with other Public Sector Bodies and identifying areas for additional savings in the accommodation area.

Objective Four Staff and Organisational Management

The Division also focussed on realising savings through the continued use of the Office of Government Procurement contracts and retendering for other contracts. In addition, improved business processes made possible by leveraging the managed print solution and new postal equipment resulted in additional savings.

Asset Management

During 2016, asset management focus was largely concentrated on updating the Asset Register and preparation for the transfer of the functions to Cavan.

Energy

The Department has been participating in the OPW Energy Efficiency Programme for public sector bodies – “Optimising Power at Work” for the last number of years. This programme is generating savings and environmental benefits from greater energy efficiency through staff awareness programmes. The Department is committed to energy efficiency and established an energy team in 2015 to drive forward initiatives in this area. This team participated in the SEAI Energy MAP Training Programme in 2015. The team is working closely with OPW to increase energy efficiency across the Department and significant savings have been made through staff awareness and minor works. However, further progress towards reaching the government targets by 2020, is dependent on the availability of funding, through OPW, for a capital investment programme in our portfolio. Increased operational activity will also make the target more challenging to achieve and further supports the case for capital investment.

Public Procurement

The Central Procurement Unit (CPU) was established in October 2011 to develop, disseminate, monitor and enforce the Department's procurement policy in accordance with national and EU regulations and guidelines, including the provision of advice to Divisions and ensuring that best practice for effective value for money in procurement is achieved. The Unit was established from existing resources within the Department and reports to the Head of Finance Division.

Throughout 2016, the CPU provided on-going advice and support to the Department on all aspects of the procurement cycle. This included assisting in the preparation of 86 tenders, processing numerous procurement related queries and enforcing compliance where necessary. A training programme was delivered throughout 2016 by CPU staff to a broad range of Divisions.

The CPU has facilitated the implementation of category management strategies across the Department. These, and other initiatives, seek to ensure that the Department delivers optimum value for money and savings in procurement expenditure.

In 2016, the CPU continued to roll-out new public sector reform requirements in procurement and is fully committed to participate in the Office of Government Procurement initiatives to the greatest extent possible.



Objective Four Developing IT Capability



Major ICT Developments in 2016

The Department is critically dependent on information and communication technology (ICT) for the delivery of its schemes and services. The major ICT developments in 2016 included the following:

Information Security

The Department was mandated by the EU to achieve ISO 27001:2013 Information Security certification by 16th October 2016. All DAFM Information Systems which are linked to the EU delegated regulation (No. 907/2014 of 11 March 2014) were included in the scope for the ISO/IEC 27001:2013 Information Security standard.

The ISO27001 standard provides a framework for people, process and technology to ensure information is protected.

The Department successfully received certification in August 2016 in advance of the EU deadline of October 2016.

The Department is subject to bi-annual audits to ensure continued compliance with ISO27001:2013 Information Security. The first of these audits is planned for January 2017 across a number of sites (Cavan, Backweston and Agriculture House).

ICT Shared Services

In line with the Public Service ICT Strategy, the Department further expanded its provision of ICT infrastructure shared services during 2016 which includes:

- **Department of Communications, Climate Action and Environment (DCCAE):** Full ICT infrastructure support is provided in DCCAE, including hosting of various DCCAE and GSI websites.

Since the service commenced in June 2011 over 13,000 Help Desk calls have been successfully managed in that period with a monthly average of approximately 199 calls managed by DAFM staff in 2016.

- **Department of the Taoiseach (DoT):** This Department continued to provide a network support to Department of the Taoiseach. The bulk of phone services in DoT are now provided via a DAFM-hosted Voice over Internet Protocol (VoIP) phone system, which is managed internally by our ICT staff.

- **Payroll Shared Service (Department of Public Expenditure and Reform):** This Department continues to provide ongoing support, including server maintenance and security for the Government's central payroll facility implemented in 2014. By the end of 2016 this environment paid circa 120,000 current and former civil servants.

Objective Four Developing IT Capability

Shared services are provided for the Department's Non-Commercial State Sponsored Bodies (NCSSBs) at various levels, such as:

- Full ICT email, DFS and network support for the Sea Fisheries Protection Authority (SFPA) and provision of software development and maintenance of catch and inspection software systems.
- Data centre hosting for Teagasc
- Network support and sharing of telecommunication links with Bord Iascaigh Mhara (BIM) and the sharing of content management facilities and technical infrastructure to host and update their redeveloped website.
- Redesign of several internet web sub-sites including the FHCs (Dingle, Killybegs, etc.) maintenance of Woodspec, Woodenergy, FAWAC, and Fishingnet. Assistance and use of the Departments content management system (CMS) is provided to BIM.

Basic Payment Scheme (BPS)

The Department continued to enhance its online facilities with the introduction of new functionality whereby a number of validations of submitted applications were carried out at an early date. This 'Preliminary Check' facility advised farmers of certain errors which could be corrected without penalty. The number of BPS applications filed online, through BPS iNet, in 2016 increased by 7,717 to over 101,000 cases. This represents approximately 77% of all applications.

Advance payments began on 16th October with balancing payments made in the first week in December. The total amount issued in respect of 2016 BPS claims is now (May 2017) over €1.184bn to 124,011 farmers.

RDP 2014-2020

A considerable amount of analysis and development work continued in 2016 in regards to systems support for the new RDP Schemes under CAP 2014-2020. The Department provided IT support to the large number of schemes launched in 2015. This was a massive undertaking by the Department and once again demonstrated the role that IT has to play in underpinning its activities.

Areas of Natural Constraint (ANC)

New facilities delivered for this scheme with first payments for 2016 issuing on schedule, in September.

Green, Low-Carbon, Agri-Environment Scheme (GLAS)

In January 2016, functionality was delivered which enabled approvals for the second tranche of GLAS to issue to farmers. Facilities were also developed during the year which enabled Tranche 3 of the scheme to be opened for online applications in November 2016 (mandatory online). In December validation and payments functionality was delivered which enabled in excess of €98 million to be issued to approved GLAS applicants.

Targeted Agricultural Modernisation Schemes (TAMS II)

Functionality was developed which enabled approvals for the schemes to start to issue in May 2016. Facilities were implemented in July which enabled payment claims for the six schemes to be submitted online. Payments functionality was also provided which enabled payments to commence in October 2016.

Organic Farming Scheme (OFS)

Online facilities were provided to enable applications to be submitted for the second tranche of this scheme with the tranche opening in April 2016.

Knowledge Transfer Schemes (KT)

Functionality was provided to enable the six KT schemes to open online for group applications in March/April 2016:

Online functionality was also provided during the year to enable KT facilitators to advise the Department of proposed meetings and the attendees at such meetings.

Beef Data and Genomics Programme (BDGP)

Functionality was developed to validate BDGP applications and to commence issuing payments in respect of 2016 in December.

Agri-Environment Options Scheme (AEOS)

Functionality to deliver AEOS I, II & III payments was provided.

Objective Four Developing IT Capability

De Minimis Schemes

Facilities for payment of the following schemes were developed and implemented:

- Bovine Viral Diarrhoea (BVD)
- Beef Technology Adoption Programme (BTAP)
- Sheep Technology Adoption Programme (STAP)
- Emergency Flood Relief
- Fodder Aid

REPS

Functionality to deliver REPS payments was provided.

Other Payment Systems

IT functionality was also provided for payments to issue under the following schemes:

- Collaborative Farming Grant
- Dairy Support Package
- Mart Modernisation
- Temporary Aid for Pig Meat

Inspections

The Department's generic Agriculture Field and Inspection Testing (AFIT) was further developed in 2016 to support the Inspections aspect of the Department role as follows:

Basic Payment Scheme (BPS/Cross Compliance)

- The roll-out continued of ruggedised laptops to Inspectors to facilitate recording of inspection results in the field and the reduction in duplication and paper recording.
- Training continued in the use of new enhanced data capture technology and the roll-out of GPS devices continued for ground inspections.
- A number of new enhancements in relation to Supervisor Checks and balances were introduced.
- A new Control Report process was developed and introduced
- New Remote Sensing Inspection checks were introduced

Veterinary Public Health Inspection Service (VPHIS)

- The Animal Welfare module was developed and completed. Training and Roll-out of system commenced.
- New functionality was developed to support ante-mortem checks in relation to a Clean Livestock Policy and Food Chain Information.
- New Legal Notice functionality developed.

District Veterinary Office (DVO)

- Addition of new inspections particularly in relation to Animal Welfare.
- Cross Divisional Reporting module introduced.
- A review of existing functionality and screen management was carried out with a view to enhancing existing system
- New Multi Annual National Control Plan (MANCP) reporting functionality was developed and introduced.

Rural Environmental Protection Scheme (REPS)

- Re-development of OFS functionality including Penalty appeals.
- Introduced a new EIA Inspection

Dairy Certification

- Enhancements in relation to planned inspections.
- New inspection types developed and released to production

Rural Development Programme (RDP)

- AEOS I, II & III – new facilities delivered for data capture of inspection results.
- TAMS II: Dairy Equipment & Sheep Handling– functionality provided.
- GLAS – new facilities delivered for data capture of inspection results. GLAS 1 2015 and GLAS 2 2016 Inspections developed.
- KT – management of KT meetings inspections introduced

National Residues Program

- Analysis and Information gathering process commenced around development of a new residues system.

Remote Data Capture (RDC) Project

- The Remote Data Capture (RDC) Project is an innovative project which enables Department inspectors to record and capture information in the field. Utilisation of the latest technology, coupled with ruggedised laptops, is key to the success of this project. A total of 120 Pillar I and 35 Pillar II Inspectors are now fully trained and using the RDC technology. Functionality added to RDC in 2016 included Bar-code readers, validation of inspection data entry in the field reducing data entry errors and access to AFIT remotely for key Inspectors where broadband is available.

Objective Four Developing IT Capability

A new electronic signature by farmer at end of inspection feature was also developed. GPS and new ground inspection features have been added improving accuracy of Inspections. The elimination need of paper files for both BPS and AEOS/GLAS Inspections is now nearer to becoming a reality.

Geographical Information Systems (GIS)

Improvements were made in 2016 to the software used to access the GIS system including the introduction of technology that provides a more efficient mapping interface for farmers and agents accessing the Department's spatial data. The Department's spatial data continues to underpin all area-based schemes.

Forestry Systems

A Timber Forecasting System was developed and is available on the Department website. This allows the industry to forecast the availability of timber over the next 20 years.

New functionality was added to the iForis system which facilitates online submission of Form 2 and Form 3 (part of payment claims process).

52% of all Forestry premiums approved in 2016 were submitted online, an increase of 2% on 2015.

Agfood.ie

In 2016 the number of Farmers registered to use online services (agfood.ie) either as individuals or through their Agents was approximately 117,000 which represents in excess of 86% of farmers.

Bulk SMS

In continuing the use of the SMS as a cost effective and efficient means of communication over 1.2 million text messages issued to customers in 2016 on a wide range of issues.

At end of 2016 almost 126,000 customers have provided mobile phone numbers and permit their use for DAFM messages and alerts.

Corporate Customer System (CCS)

To support the ongoing operation of the RDP schemes in 2016, additional services were implemented for BPS, GLAS, TAMS II, Organic Farming Scheme and to enable Agricultural Agencies to handle Knowledge Transfer payments on behalf of their Agents. Significant work was also completed to support the new Inheritance Entitlements System.

A new Direct Payments Dashboard was developed to support helpdesk staff in handling farmer queries. This provides central access to Customer Summary information across a number of Department systems on a single screen.

Websites

The continued maintenance and development of the Departments Website www.agriculture.gov.ie in 2016 included a streamlining of the homepage and the introduction of many new areas and alerts on issues of major concern to the user community.

As part of our continued commitment to accessibility, work is underway to improve the standard of webpage and document creation to ensure availability to a wider audience. The deployment of Browsealoud on all our websites is designed to facilitate improved access for those customers with visual impairments.

Financial System – SAP

During 2016, a number of key system enhancements and business process improvements were delivered to meet evolving business requirements.

- Collections Management facility available to cater for Accounts Payable and Accounts Receivables debts.
- New billing solutions implemented for the collection of -
 - Export levies at the Export Assembly Points for Bovine and Ovine species
 - Land Commission Annuities.
- Intervention management facilities reactivated for intervention sales processing.
- Enhanced scanning and automated storage of invoice documents on SAP.
- The Vendor and Customer master data module was enhanced to facilitate the introduction of electronic Tax Clearance Certification (E-TCC).
- Transition of staff Payroll and Travel & Expense functions to the Payroll Shared Service Centre (PSSC). The usage of the Financial Self-Services application continues to grow and some 38,000 farmers accessed the service in 2016. This online service enables farmer clients to:
 - View their accounting data, including open invoices/overpayments and historical invoices and payments.
 - Pay invoices/overpayments electronically with Debit/Credit Card.
 - View/Download & Print Payment Remittances.
 - View/Download & Print Account Statements (including annual Farmer Statements).

Objective Four Developing IT Capability

During 2016, the SAP system processed over 860,000 payments to farmers/vendors with a gross value of circa €2.23bn. In excess of 15,000 purchase orders were created for goods/services received and some 33,000 sales invoices were issued for services provided.

Fisheries Systems

DAFM develops and maintains a number of IT systems to support the implementation of the Common Fisheries Policy. Analysis and development works commenced in 2014/2015 as part of a project under the European Maritime and Fisheries Fund (EMFF) that will extend over the lifetime of the EMFF Operational Programme to 2020. Activities implemented in 2016 include:

- Enhancements to vessel tracker, the Integrated Vessel Monitoring Systems (VMS) and vessel catch detail.
- Implemented the technical architecture to support the UN/CEFACT standard for the exchange of fisheries data using the European Commission provided transport layer known as FLUX (Fisheries Language for Universal exchange).
- Implemented the required changes to the Aggregated Catch Report and transmission of this report to the European Commission over FLUX.
- Completed the analysis of the changes required to meet the requirements of the landing obligation for fishing activities and fish sales.
- Development work commenced on changes to the vessel software for the capture of fishing activity, ieCatch, to support the requirements of the landing obligation. This will also include a re-platform of the application to enable support for mobile use.
- Updated services within the Integrated Fisheries Information System (IFIS) to support the management of the national fish quota.
- Implementation of Eircodes.



APPENDICES



Appendix A - State Bodies

Aquaculture Licences Appeals Board

Kilminchey Court
Dublin Road
Portlaoise
Co. Laois
R32 DTW5
Tel: 057 863 1912
Email: info@alab.ie

This is an independent board which handles the appeals process for aquaculture licensing. All Board members are engaged on a part-time basis. A person aggrieved by a decision of the Minister on an application for an aquaculture licence or by the revocation or amendment of an aquaculture licence may, make an appeal to the Board in writing within one month of the publication or notification of such a decision, revocation or amendment.

Bord Bia

Clanwilliam Court
Lower Mount Street
Dublin 2
D02 A344
Tel: 01 668 5155
Website: www.bordbia.ie

Bord Bia promotes, assists and develops the marketing of Irish food including drink, seafood and livestock and the production, marketing and consumption of horticultural produce.

It operates quality assurance schemes for beef, pork and bacon, horticultural and egg products. In response to growing demand from international customers for quality assured, sustainable food and drink products, Bord Bia developed Origin Green – a world-first, nationwide sustainability programme for the entire Irish food and drink industry, introduced in 2012. By the end of 2016, Ireland aims to have all Irish food and drink producers on the journey to sustainability.

With its headquarters in Dublin, Bord Bia has a network of overseas offices in Amsterdam, Madrid, Paris, Dubai, Milan, Shanghai (Asia Office), Dusseldorf, Moscow, London, New York and Stockholm. Two new offices opened in 2016, Singapore and Warsaw.

Bord Iascaigh Mhara

Crofton Road
Dun Laoghaire
Co. Dublin
A96 E5AO
Tel: 01 214 4100
Website: www.bim.ie

Bord Iascaigh Mhara (BIM), the Irish Sea Fisheries Board, is the Irish State agency with responsibility for developing sustainable Irish Sea Fishing and Aquaculture industries. BIM was established under the Sea Fisheries Act 1952. BIM provides a range of services including advisory, financial, technical, marketing and training supports to all sectors of the Irish seafood industry. BIM's primary objective is to expand the volume, quality and value of output from the seafish and aquaculture sectors by focusing on the opportunities for growth in these sectors.

Appendix A - State Bodies

Bord na gCon

Green Park
Dock Road
Limerick
V94 Y17X
Tel: 061 448000
Website: www.igb.ie

Bord na gCon is a commercial state body, established under the Greyhound Industry Act, 1958, chiefly to control greyhound racing and to improve and develop the greyhound industry. Bord na gCon regulates all aspects of greyhound racing in Ireland including the licensing of the different tracks, the issuing of permits to officials, bookmakers, trainers and the implementation of the rules of racing.

Coillte CGA

The Irish Forestry Board
Newtownmountkennedy
Co Wicklow
A63 DN25
Tel: 01 201 1111
Website: www.coillte.ie

Coillte CGA is a private limited company, which operates in forestry and related activities on a commercial basis. The company is co-owned by the Minister for Public Expenditure and Reform and the Minister for Agriculture, Food and the Marine. The company was established under the Forestry Act, 1988 which sets out its objectives and duties.

Horse Racing Ireland

Ballymany
The Curragh
Co Kildare
R56 XE37
Tel: 045 455455
Website: www.goracing.ie

Horse Racing Ireland (HRI) is a commercial state body, established under the Horse and Greyhound Racing Act 2001. Horse Racing Ireland is the national authority for horse racing in Ireland and is responsible for the overall administration, promotion and development of the industry.

Irish National Stud Company Ltd

Tully
Kildare
R51 DD56
Tel: 045 521251
Website: www.irish-national-stud.ie

The Irish National Stud Co. Ltd keeps a range of top class stallions with a view to making quality bloodlines available to the thoroughbred horse industry in Ireland. The Japanese Gardens and St. Fiachra's Garden, both of which are located on the grounds of the Stud, plus the opportunity for visitors to view the horses standing at the Stud have proven to be a major tourist attraction throughout the years. The Stud also engages in farming activities and trains people for employment in the bloodstock sector.

Marine Institute

Rinville
Oranmore
Co. Galway
H91 R673
Tel: 091 387200
Website: www.marine.ie

The Marine Institute (MI) is the national agency with responsibility for Marine Research, Technology Development and Innovation (RTDI). The Institute was established under the 1991 Marine Institute Act. The role of the MI is to promote the sustainable development of marine industry through strategic funding programmes and essential scientific services that safeguard the marine environment through research and environmental monitoring. The Institute undertakes and co-ordinates marine research and development that has the potential to promote economic development create employment and protect the marine environment.

Appendix A - State Bodies

National Milk Agency

IPC House
Shelbourne Road
Dublin 4
D04 A4E0
Tel: 01 660 3396
Website: www.nationalmilkagency.ie

The National Milk Agency was established in 1994 under the Milk (Regulation of Supply) Act, 1994 and is responsible for the regulation of the supply of milk for liquid consumption throughout the State. It is funded by means of a statutory levy on milk used for liquid consumption.

The chairman of the Agency is appointed by the Minister for Agriculture, Food and the Marine. Five members of the Agency are directly elected by registered producers while the other members are appointed by the Minister following nominations from designated organisations.

Teagasc

Agriculture and Food Development Authority
Oak Park
Carlow
R93 XE12
Tel: 059 917 0200
Website: www.teagasc.ie

Teagasc was established by the Agriculture (Research, Training and Advice) Act 1988 to provide integrated research, advisory and training services to the agriculture and food industry and rural community. Its mission is to support science-based innovation in the agri-food sector and wider bio-economy so as to underpin profitability, competitiveness and sustainability. It is governed by an eleven-member authority comprising Ministerial appointments and nominees from designated organisations.

The Sea-Fisheries Protection Authority (SFPA)

National Seafood Centre
Clonakilty
Co. Cork
P85 TX47
Tel: 023 885 9300
Website: www.sfpa.ie

The SFPA is the statutory authority responsible for the enforcement of sea-fisheries protection and seafood safety legislation in the Republic of Ireland and throughout Ireland's exclusive fishing limits. It was established on 1 January 2007 under the Sea-Fisheries and Maritime Jurisdiction Act 2006. Its principal responsibilities are to enforce Sea Fisheries legislation and Seafood Safety legislation fairly and consistently and to ensure that the marine fish and shellfish resources from the waters around Ireland are exploited sustainably and may be consumed safely for the long term benefit of all.

Veterinary Council of Ireland

53 Landsdowne Road
Ballsbridge
Dublin 4
D04 NY29
Tel: 01 668 4402
Website: www.vei.ie

The Veterinary Council of Ireland which regulates the practice of veterinary medicine was established on 1 January 2006 under section 11 of the Veterinary Practice Act 2005. It has 19 members which reflects interests such as education, animal welfare, consumers and food safety and a balance as between veterinarians and others. The principal function of the Council is to regulate and manage the practice of veterinary medicine and veterinary nursing in the State in the public interest.



Appendix B - Vote 30 -2016

	€m
Administration	216.19
i Salaries, Wages and Allowances	159.15
ii Travel and Subsistence	6.89
iii Training and Development and Incidental Expenses	4.52
iv Postal and Telecommunications Services	4.20
v Office Equipment and External IT Services	24.64
vi Office Premises Expenses	5.53
vii Consultancy Services and Value for Money and Policy Reviews	0.20
viii Supplementary Measures to Protect the Financial Interests of the EU	0.63
ix Laboratory Equipment	10.43
A. Agri Food Policy Development & Trade	432.84
A.3 Research & Training	30.20
A.4 Development of Agriculture & Food (farm grants).	5.64
A.5 Teagasc Grant-in-Aid	116.28
A.6 Bord Bia Grant-in-Aid	32.57
A.7 Marine Institute Grant-in-Aid	29.09
A.8 Bord Iascaigh Mhara Grant-in-Aid	23.10
A.9 Food Aid Donations - World Food Programme.	40.00
A.10 Other	18.58
Food and Horticultural Promotion Programme	2.95
Quality Assurance Scheme	6.32
Misc. Pension Payments	1.81
International Cooperation	3.12
Non-Thorough Bred Horses	1.87
Legal	0.98
Beef efficiency/adaptation groups	0.48
Other	1.05
A.11 Horse and Greyhound Racing Fund	74.00
HRI	59.20
Bord na gCon	14.80
A.12 Beef Data & Genomics Scheme	61.90

Appendix B - Vote 30 -2016

	€m
A.13 CEDRA Rural Innovation and Development Fund	1.48
B. Food Safety, Animal Health, Plant Welfare	
B.3 Food Safety, Animal Health / Welfare, Plant Health	77.64
Temporary Veterinary Inspectors	18.41
Veterinary Testing and Research	4.83
TB & Brucellosis Eradication	30.78
National Beef Assurance	5.29
Fallen Animals Scheme	6.50
Animal Welfare	4.39
Other Animal Disease Measures	2.76
BSE Compensation & Testing	0.88
Scrapie	0.33
Other	3.47
C. Rural Economy and Environment	301.65
C.3 Rural Environment Protection Scheme	148.33
REPS	3.59
Agri Environment Options Schemes (AEOS)	32.12
Green Low-Carbon Agri-Environment Scheme (GLAS)	102.62
Organic farming Scheme	8.03
Locally Led Agri-Environment Scheme	1.97
C.4 Land Mobility (Early Retirement Scheme Installation Aid)	4.40
Early Retirement Scheme	4.40
Installation Aid/YFIS	0
C.5 Development of Agriculture & Food (farm grants).	12.72
TAMS	7.84
Development of Commercial Horticulture	3.87
Development of Organic Sector	1.01
C.6 Forestry and Biofuels	103.80
Afforestation	97.79
NDP Support Schemes	4.23
Forestry Development	0.42
Other	1.36
C.7 Fisheries	18.99
Fisheries Harbours	16.03
Seafood Development Programme	2.53
Other	0.43
C.8 Sea Fisheries Protection Authority	10.02

Appendix B - Vote 30 -2016

	€m
C.9 Other	1.13
C.10 Haulbowline Remediation Project	2.26
D. Delivery of Client Focussed Schemes and Services	228.68
D.3 Market Supports Operational Costs	8.23
D.4 Income Support in Disadvantaged Areas	206.46
D.5 Other	0.08
D.6 Agriculture Cashflow Support Loan	13.91
Total Gross Voted Expenditure	1,257.00
Receipts	
E Appropriations in Aid	453.14
E.1 Recoupment of Salaries	-0.72
E.2 Forfeited Deposits & Securities under EC intervention	-0.12
E.3 Refunds Vets Fees	-18.38
E.4 Receipts of Vet Fees for Live Exports	-0.88
E.5 Dairy Inspection Fees	-6.80
E.6 Receipts from Sale of Vaccines etc.	-0.70
E.7 Receipts from Seed Testing, certification etc.	-2.61
E.8 Receipts from bovine disease levies	-6.49
E.9 Land Commission receipts	-0.60
E.10 Other Receipts	-2.60
EU Co Funding Transfers	
E.11 Market Intervention co funding receipts	-0.87
E.12 Intervention Stock Losses	-0.72
E.13 EAFRD co funding (Rural Development)	-383.00
E.14 Veterinary Fund	-11.32
E.15 Other Guarantee Receipts (Agriculture)	-1.50
Fisheries Related Receipts	
E.16 Fines/Forfeitures for Sea Fishery Offences	-0.19
E.17 Foreshore Act / State Property Act Receipts	-0.06
E.18 EU Receipts - Conservation & Management of Fisheries	-0.00
E.19 Aquaculture Licence Fees	-0.20
E.20 EU FIG Receipt Aquaculture Development	0
E.21 EFF Receipt	-3.15
E.22 Sustainable Foods Systems Ireland	-0.09
E.23 Pension Levy	-12.14
Total Receipts	-453.14
Net Expenditure	803.86

Appendix C – EAGF/EAGGF Guarantee Expenditure 2016

The following shows the payments made in Ireland from the Guarantee section of the EAGF and EAGGF funds during the 2016 financial year

EU-funded expenditure managed by the Department of Agriculture, Food and the Marine

EAGF Guarantee (measures fully funded by the EU)	2016 €m
Basic Payment/Direct Payment Scheme	1,300
Intervention/Aid to private Storage	3
Market Supports	7
Other	(61)
Co-funded receipts (measures co-funded by EU)*	2016 €m
Agriculture	
EAFRD Rural Development Programme 2014-2020	383
Veterinary Fund	11
Other co-financing receipts	4
Fisheries**	
FIFG - aquaculture development/fisheries development	-
EFF - European Fisheries Fund 2007-2013	3
	1,650

*Only the EU co-funding on these programmes is shown in this table

** EMFF advance funding of €3m received in 2016 not receipted to A&A