



**An Roinn Talmhaíochta,
Bia agus Mara**
Department of Agriculture,
Food and the Marine

Annual Report 2019





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Bia agus Mara**
Department of Agriculture,
Food and the Marine

Mission Statement

Serving the government and people of Ireland by leading, developing and regulating the agri-food sector, protecting public health and optimising social, economic and environmental benefits.

Vision Statement

An innovative and sustainable agri-food sector operating to the highest standards.

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Review and Main Achievements of 2019



The agriculture and food sector continued to play a vital role in Ireland's economy **with agri-food exports accounting for 9.5% of total exports with a value of €14.5 billion**, marking growth of over 63% since 2010. The UK remained Ireland's largest agri-food export destination, with exports of €5.5 billion in 2019 or 38% of total exports. Exports to the EU (excluding the UK) were worth €4.7 billion, while exports to the rest of the world were worth €4.3 billion in 2019. The top three export categories in 2019 were Dairy Produce at €5.0 billion, Beef at €2.3 billion and Beverages at €1.7 billion, accounting for €9.1 billion or 63% of total worldwide agri-food exports.

The agri-food sector makes a significant contribution to employment, accounting for **7.1% of total employment or 164,400 jobs**, in rural and coastal areas. The Department was responsible for Voted expenditure of over €1.641 billion in 2019. In addition to voted expenditure, the Department spent €1.250 billion in EU EAGF funded schemes, bringing total expenditure to €2.8 billion.

In October 2019 a Revised Withdrawal Agreement and Political Declaration was agreed between the EU 27 and Prime Minister Johnson. This was subsequently ratified by both the European and UK Parliaments.

The main impact of the Brexit vote on the sector was the effect of sterling volatility on those businesses that have a significant trading relationship with the UK, and this drop in currency value continues to have a negative impact.

The Future Growth Loan Scheme developed by this Department and the Department of Enterprise, Business and Innovation in co-operation with the SBCI and the European Investment Fund (EIF), was launched by Minister Creed and his colleagues in March 2019. Delivered through participating finance providers, it provided €300 million of investment loans to eligible Irish businesses, including farmers and the agri-food & seafood sectors. Competitively priced, the loans are for terms of 8-10 years to support strategic long-term investment in a post-Brexit environment. Demand for the Scheme was high, indicating that it met the identified gap in the market, with the majority of the funds fully committed as year end approached. At the end of December 325 loans to farmers in the amount of €37.5 million had been sanctioned with 57 loans to food companies in the amount of €15.5 million sanctioned. In excess of 800 additional applications were in progress. Work has commenced on consideration of options to extend or replace the loan scheme.

Budget 2020 was delivered in the context of ongoing Brexit uncertainty, which limited capacity to introduce any new measures. However, it was agreed that the Department and the Department of Finance would engage on potential measures to assist farmers in meeting the challenges and obligations set out in the Climate Action Plan and to incentivise better Health and Safety in the sector.

The renewal for another three years of Capital Gains Tax Relief on Farm Restructuring, addressing the challenge of fragmentation on Irish farms, and the continuation of measures to promote and support entrepreneurship, as evidenced by the increase in the Earned Income Tax Credit, were important.



164,400 jobs
supported by the Agri Sector in 2019

Review and Main Achievements of 2019

The announcement regarding microbreweries, that the qualifying production threshold for relief from Alcohol Products Tax is increasing from 40,000 hectolitres to 50,000 hectolitres, will allow larger breweries to expand, particularly with a view to their export sales. Enhancements to existing tax-based measures in support of enterprise, SMEs and the agri-food sector, i.e. the Key Employee Engagement Programme (KEEP), the Employment and Investment (EII) Scheme and the Research and Development Tax Credit were also significant.

€110 million was set out in the Budget 2020 in October 2019 to provide the first tranche of supports in the event of a no deal Brexit occurring during 2020. €85 million of this was earmarked to support farmers finishing cattle for slaughter, €14 million to go towards a tie-up scheme for fishing vessels, €6 million in investment aid to improve competitiveness and increase environmental efficiency for other livestock farmers and the mushroom sector, and €5 million (with further funding provided by DBEI) to support a Food Transformation capital investment scheme for product and market innovation.

Further funding was allocated for import controls at ports and airports. In the run up to various potential Brexit deadlines during 2019, the Department, as part of a whole of Government approach to Brexit, focused on ensuring that sufficient staff, appropriate IT hardware and software solutions and inspection facilities that would be required for import controls, after Brexit were in place. This was in order to allow the Department to fulfil its legal obligations with respect to SPS controls for agri-food products as efficiently as possible, while also seeking to mitigate the worst of the inevitable disruption to trading arrangements, as a result of the UK decision to leave the single market.

Minister Creed continued his engagement with stakeholders, through meetings of the Brexit Stakeholders Consultative Committee and attendance at events organised by the Department, other Agencies and various representative bodies. These engagements afforded him the opportunity to inform and encourage business operators to take the necessary steps to allow their trading arrangements with the UK to continue as smoothly as possible. Stakeholders were encouraged to register with the Department so that they will receive relevant information directly, and to register with the Revenue Commissioners to obtain an EORI number. A Brexit Preparedness Checklist was prepared and made available at several events.

The legislative proposals for the next CAP 2021-27, continued to be discussed under the Romanian and Finnish Presidencies in 2019. The CAP Strategic Plan Regulation has proved the most problematic for Member States to consider and there are many outstanding issues that will need to be resolved before agreement can be achieved.

The Beef Environmental Efficiency pilot was launched in 2019 aimed at improving economic and environmental efficiencies on farm through gathering performance metrics facilitating more informed decision making. 16,424 farmers carried out the required weighing and recording and received payments totalling €15.3 million.

The Beef Exceptional Aid Measure (BEAM) was announced in May 2019. This provided temporary exceptional adjustment aid to farmers in the beef sector in Ireland subject to the conditions set out in EU Commission Implementing Regulation (EU) 2019/1132. BEAM was funded by a combination of EU aid and Exchequer support, provided in light of the difficult circumstances that Irish beef farmers have been facing as a result of the market volatility and uncertainty. 23,374 farmers participated in BEAM resulting in payments of almost €78 million.



BREXIT was and will remain the biggest challenge to the Irish Agri Sector

Review and Main Achievements of 2019

The Chinese market for Irish beef was further opened in 2019



The Irish Beef Sector Agreement was reached between stakeholders on 15 September 2019. As part of this agreement, the Beef Taskforce was established to monitor the implementation of the commitments entered into and as a platform for strategic engagement with key stakeholders.

There was significant achievement with further access to the Chinese market for Irish beef in 2019. A successful beef audit was conducted in September 2019 with the inspection of 14 applicant beef plants who were subsequently approved to export to China in October 2019.

2019 also saw improved access to Japan, when the 30-month age restriction for beef was removed and a revised certificate introduced which allows for the export of boneless beef derived from cattle of all ages.

In 2019, Ireland exported dairy products to approximately 140 countries with a value exceeding €5 billion. This equated to a +12% volume growth and a +10% value growth compared to 2018. Sales of Butter exceeded the €1 billion mark for the second year in a row in 2019 and sales of cheese, whey and skim milk powder also saw significant growth in both volume and value in 2019. EU-28 account for 55% of the value of Irish dairy exports in 2019 with 45% to international markets.

2019 saw continued strong investment by the sector with over €5.8 million paid under the scheme of investment for the development of the commercial horticulture sector and a further €4 million paid out through the EU Producer Organisation Scheme.

The Department hosted a very successful Sustainability Dialogue stakeholder event in summer 2018. Delegates from across the sector attended and there was a real sense of collaboration on the day. The Department continues to work at building this consensus and partnership around the need for agriculture sector to make a positive contribution to climate action.

The All-of-Government Climate Action Plan was published in June 2019. The plan contained an emissions reduction target of 10% - 15% for the primary agri-food sector, which translated to a reduction in emissions from 20.2 Mt CO₂ eq in 2017 to between 17.5 and 19 Mt CO₂ eq by 2030. There was also a requirement that the sector enhances CO₂ removals from the landscape by at least 26.8 Mt CO₂ eq. In response to the Department's initial Sustainability dialogue in June 2018 and the All-of-Government plan, the Department launched a consultation process with a view to developing a ten-year roadmap entitled 'Ag Climatise' in November 2019. The objective of 'Ag Climatise' was to take the national targets and translate them into a draft sectoral roadmap for our sector. The consultation period continued into 2020.

The Department published its first statutory Agriculture, Forest and Seafood Climate Change Sectoral Adaptation Plan during 2019. The Plan sets out the projected changes in climate focusing on those identified as most likely to impact the agriculture, forest and seafood sector and highlights real examples of where building resilience and adapting to expected climate change could be considered.

Furthermore, in response to agriculture's contribution to ammonia emissions and the need to reduce the impacts of ammonia emissions on biodiversity and human health; the Department published a 'Code of Good Practice to reduce ammonia emissions from agriculture' as required by the National Emissions Ceilings Directive. This code compliments that Nitrates Action Plan and highlights practical means to reduce ammonia emissions at farm level such as low emissions manure spreading technologies and types of fertiliser with reduced ammonia loss.

Review and Main Achievements of 2019



Innovation and investment will be the key driver for continuing growth

In 2019, as a result of a Call for Research Proposals under the Department's Competitive Research Funding Programmes, a total of 17 Irish Research Performing Organisations, including Teagasc, Universities and Institutes of Technology benefited from awards of over €20.1 million for 38 projects covering a range of topic areas. In addition to generating evidence for policy and technologies to improve agri-food practices, this investment provides direct employment for 75 contract researchers and education opportunities for 90 post graduate students in the form of PhDs (55) and Masters Degrees (35). A particularly positive aspect of the Research Awards is the all-island dimension. This is facilitated through the involvement of the Department of Agriculture, Environment and Rural Affairs in Northern Ireland (DAERA NI) who are providing funding to researchers in three N.I. institutions who are participating in eight of the successful projects.

Following the mid term review of the Forestry Programme in 2018 and subsequent introduction of new measures, a continued strong interest in broadleaf tree species planting could be observed in 2019 with 25% of broadleaf afforestation as a percentage of total planting. 310 hectares of native woodlands were planted in 2019, representing an increase of 17% compared to 2017 figures.



87% of the 376 actions of the Foodwise 2025 Strategy have been achieved in 2019

In January 2019 the Department issued a call for proposals to promote the multifunctional benefits of forestry. Fifteen proposals were accepted for funding to promote the environmental, economic and social benefits of forestry with a budget of over €830,000 in 2019 and 2020. The successful proposals include a woodland festival, open days for native woodland establishment, promotion of hardwood in the bio-economy and numerous school based initiatives to teach children about the importance of biodiversity, forests and climate change.

The fourth annual progress report of Food Wise 2025, entitled "Steps to Success 2019" (<https://www.agriculture.gov.ie/foodwise2025/foodwise2025-stepstosuccess2019/>), was launched in July 2019. The report highlights the progress achieved in year four in the implementation of the detailed Food Wise 2025 strategy. Of the 376 actions which were due to commence by 2019 or are ongoing actions, 87% have been achieved or substantial action has been undertaken; and a further 13% have commenced and are progressing well.

The process for developing the next ten-year stakeholder-led strategy for the agri-food sector, which will succeed Food Wise 2025, began with the launch of a public consultation in July, an Open Policy Debate for four hundred stakeholders at the Aviva Stadium in October and the establishment of a committee representative of the sector in November. It is anticipated that the new strategy will be published in 2020.

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) received almost €1.5 million in funding from the Department during 2019.

The Minister for Agriculture Michael Creed launched the Pearl Mussel Programme in Ardroom on 29 March 2019. The aim of this voluntary programme is to develop a results-based agri-environmental programme to ensure the long-term co-existence of freshwater pearl mussel populations and farming in the top eight freshwater pearl mussel catchments in Ireland.

Review and Main Achievements of 2019

The European Innovation Partnerships initiative funds co-operation between different stakeholders including farmers, researchers, advisors and businesses who form an Operational Group, to identify innovative solutions to particular challenges. Two separate open calls for proposals have issued under the EIP, with an overall funding package of €24 million. 21 separate Operational Groups have been approved to implement EIP projects.

The value of Irish seafood exports in 2019 was estimated to be in the region of €577 million, maintaining the value of 2018. Challenges were found in certain sectors while there was positive growth in others. The value of salmon exports increased by 25%, driven by a 20% increase in volume with positive price growth. Global demand for seafood continued to increase in 2019 and Irish exporters reported strong demand for their products in the main export markets.

SeaFest 2019 attracted over 90,000 visitors to Cork City Docklands during the three-day event from 7-9 June 2019. The festival showcased as Ireland's National Maritime Festival, aims to strengthen our maritime identity, increasing participation and engagement with Ireland's abundant marine resources, by raising awareness of the value and opportunities provided by the sea. SeaFest is a key part of Harnessing Our Ocean Wealth (Ireland's Integrated Marine Plan) and its goal of increasing participation and engagement with the sea.

The EU Council of Fisheries Ministers in December 2019 agreed TACs and quotas for 2020. The Minister secured 195,000 tonnes of quotas worth €275 million for Irish fishermen for 2020.

In 2019, Irish Whiskey exports continued to grow and reached €810 million for the first time and brought cumulative growth of the category to over 194% since 2012. Irish Cream exports were valued at €363 million. The most important export market was the United States.

The Department, in collaboration with farmers, stakeholder organizations and agencies is actively involved in a number of One Health One Welfare initiatives, which deliver substantial public good, including: Biosecurity, Campylobacter Stakeholder Group and the Animal Health Surveillance Strategy.

To increase awareness of the importance of animal health, the Department held its inaugural Animal Health Awareness day on 28 November 2019. In addition to a range of events held on the day, over 4,750 leaflets and some 280 posters were distributed for display in Department offices, Department approved slaughter plants, marts, third level education institutions and Teagasc offices.

The publication of Ireland's first *One Health Report on Antimicrobial Use and Antimicrobial Resistance* in January 2019 provided an overview for the first time into the antimicrobial use (AMU) and antimicrobial resistance (AMR) surveillance data in both humans and food-producing animals in Ireland.

The Department, in collaboration with farmers, stakeholder organizations and agencies is actively involved in a number of One Health One Welfare initiatives



Review and Main Achievements of 2019



In 2019, the Department provided funding of €2.9 million to 106 animal welfare bodies throughout the country who are directly involved in the delivery of animal care and welfare services.

Approximately 98.4% of the national herd was tested for bovine TB in 2019. There was a decrease in the number of reactors detected, 17,058 in 2019 compared to 17,491 in 2018. However, Herd incidence of TB increased from 3.51% to 3.72% in the same period.

In 2019, the Department provided funding of €2.9 million to 106 animal welfare bodies throughout the country who are directly involved in the delivery of animal care and welfare services. The funding provided is intended only as a contribution to the overall costs of the organisations. All applicants for funding must sign up to a strict set of animal welfare guidelines, be in existence for two years or more, be registered with the Charities Regulator and provide detailed supporting accounts.

In addition to paying Ireland's 2019 subscription of €1.43 million to the Food and Agriculture Organisations (FAO), further extra budgetary funding of €1.18 million was provided to the FAO in areas where FAO has a particular competence and which the Department considers to be of strategic importance.

The Department hosted an Innovation week from 9-13 December in conjunction with the inaugural Public Service Wide Innovation Week to encourage positive change in how the Department's services are provided.

During 2019, the Department facilitated three trainee placements on the Oireachtas Work Learning Programme (OWL), an applied learning, development and socialisation programme for young adults with an intellectual disability. The Programme aims to support individuals in developing the skills and confidence which will lead them to access paid employment in the open labour market.

During 2019, and as part of the Equality & Diversity strategy, work was undertaken on procurement of an eLearning course on Equality & Diversity in the Workplace. The eLearning resource, developed specifically for the Irish Public Sector with relevant Irish case studies, addresses various aspects of equality & diversity in the workplace including diversity, unconscious bias, harassment and discrimination.

Review and Main Achievements of 2019

The Annual Review and Outlook for Agriculture, Food and the Marine is produced annually to provide up-to-date information and statistical analysis from a variety of sources and is a detailed overview of Ireland's agri-food sector and an outlook for the future. The Annual Review and Outlook for 2019 can be found on the Department's website at:

<https://www.agriculture.gov.ie/agri-foodindustry/agri-foodandtheeconomy/economicpublications/aro2019/>.

A strong evidence base is essential for policy formation and implementation and the information and statistics included in the Annual Review and Outlook is intended to assist in policy analysis and debate in the sector. The Department also produces regular factsheets on topics such as Irish Agriculture, Trade and Brexit and these can also be found on the website:

<https://www.agriculture.gov.ie/agri-foodindustry/agri-foodandtheeconomy/economicpublications/>.



A large, stylized number '1' in a light purple color, positioned in the upper left quadrant of the page. The background features a purple-to-green gradient with abstract shapes and faint icons of a fork and knife, a fish, and a leaf.

Strategic Goal

Food Safety, Animal and Plant Health and Animal Welfare

To promote and safeguard public, animal and plant health and animal welfare for the benefit of consumers and producers and wider society

One Health

The 'One Health One Welfare' concept promotes a "whole of society" approach which recognises that the health and well-being of people is connected to the health and welfare of animals, biodiversity and the environment. The goal of the 'One Health One Welfare' concept is to encourage multidisciplinary collaborative efforts across different sectors such as health, agriculture and the environment to achieve the best health outcomes for people and animals.

More than 60% of human infectious diseases worldwide are caused by pathogens of zoonotic nature, transmitted to man by domestic or wild animals, either through direct contact, the environment (including through living vectors) or food. Zoonoses, together with the development of antimicrobial resistance, represent a growing global threat to human and animal health, including food safety and indeed food security. Therefore, preventing diseases at their animal source is crucial to protecting human health and well-being. Furthermore, the potential contribution of animal health to climate change mitigation measures is increasingly being recognised and quantified.

The Department, in collaboration with farmers, stakeholder organisations and agencies is actively involved in a number of One Health One Welfare initiatives, which deliver substantial 'public goods'. Some examples of these are outlined below:

Biosecurity

Veterinary led on-farm biosecurity reviews are currently available free of charge at the point of use to commercial pig and poultry farmers, through a measure in the Rural Development Programme. These reviews provide each participating farmer with a report, quantifying the strength of their biosecurity practices and recommending key areas where improvement is required. Annual repetition of the biosecurity reviews will, over time, demonstrate progress made as a result of management changes.

Ante-Mortem Post-Mortem (AMPM) Systems

Commission Implementing Regulation (EU) 2019/627 requires that relevant meat inspection findings of significance to public and animal health must be fed back to producers and private veterinary practitioners. Making this vital data available via a secure online platform to farm level decision makers will help drive herd health management improvements, with consequential benefits for animal and public health outcomes. The electronic capture of findings from ante- and post-mortem examinations is a pre-requisite to enable such feedback, and to this end the Department is planning to progressively introduce AMPM systems across a range of species. The first such system to be developed by the Department is that for pigs, with roll-out to other species expected to take place over the course of the next 3-4 years. The *Beef HealthCheck* programme, developed by Animal Health Ireland, in conjunction with the Department and Meat Industry Ireland, has already been providing feedback to beef and dairy farmers in relation to liver fluke and respiratory disease for a number of years, and has shown the value of such systems to farmers, the meat industry, veterinary practitioners and policy makers.

Campylobacter Stakeholder Group

Campylobacter is the most common cause of bacterial enteritis in Ireland and throughout the EU. The Irish broiler sector, supported by the Department, FSAI and others, participate in the Campylobacter Stakeholder Group, whose report (April 2017) sets out multiple recommendations aimed at enhancing risk reduction right across the food chain to the point of consumption. As part of the implementation of this report, the Department and the relevant stakeholders have entered into an agreement under which caecal samples are now being taken from the majority of flocks sent to slaughter, using an agreed protocol. The results of the analysis of these samples provide an excellent indicator of the prevalence of Campylobacter at farm level. Work is ongoing to further develop the database to enable farmers receive direct feedback of Campylobacter results, with benchmarking capabilities to facilitate the monitoring of progress.

One Health

The Animal Health Surveillance Strategy

The Animal Health Surveillance Strategy is an important component of the overall National Farmed Animal Health Strategy. Animal Health Surveillance allows the gathering of intelligence to detect either novel animal health related events or increases in animal health related events as early as possible to better inform risk management at all levels within the industry. Communicating the information assembled from these surveillance activities is a critical component of a well-functioning surveillance system. A key element of communication within the surveillance strategy has been the establishment of a dedicated animal health surveillance website to provide timely and accurate information to relevant stakeholders

(www.animalhealthsurveillance.agriculture.gov.ie).

It also provides animal health information to potential and existing trading partners. The website is regularly updated with topical animal health issues for the benefit of farmers, veterinary practitioners and other users. An action undertaken as part of the surveillance strategy during 2019 saw the introduction of a new abattoir surveillance programme for Cattle, designed to work with the Department's IT systems, to verify freedom from Brucellosis, Enzootic Bovine Leukosis (EBL) and Bluetongue using one set of samples by the most cost effective means possible. The new programme was very effective allowing the Department to achieve the same outcome with the 17,197 blood samples collected during 2019 compared with the 129,469 blood samples that were collected during 2018.

Animal Health Awareness Day

To increase awareness of the importance of animal health, the Department held its inaugural Animal Health Awareness day on 28 November 2019. A range of events were organised for the awareness day, with a total audience of approximately 900 people in attendance across the various events. The showcase event for the day was a seminar entitled *Animal Health- from farm to food shelf*, which was held in Corrin Mart and attended by in excess of 100 people. Other events included talks for agricultural students, veterinary practitioners and nursing students, hosted

by the Department's network of Regional Veterinary Laboratories. Over 4,750 leaflets and some 280 posters were distributed for display in Department offices, Department approved slaughter plants, marts, third level education institutions and Teagasc offices.

National Animal Welfare Strategy

The Department is advancing the finalisation and publication of a National Animal Welfare Strategy, which in line with the principles of One Welfare recognises the interconnectedness between animal welfare and human wellbeing and foresees greater engagement across stakeholders and society towards a shared objective of enhanced animal welfare in Ireland.

Rearing Pigs with Intact Tails

Rearing Pigs with Intact Tails is a national programme, intending to achieve commercial rearing of pigs without tail docking. Tail biting in pigs results from inadequate provision of living environments which facilitate normal pig behaviours. Pig farmers are moving through the first steps by undertaking risk assessments and creating action plans for tail biting. This process, funded by the Department through the Rural Development Programme, is delivered using private veterinary expertise. Regulatory visits with a specific focus on rearing pigs with intact tails are being progressed in parallel.

Antimicrobial Resistance

In 2019 all stakeholders within the iNAP Animal Health Implementation Committee have demonstrated a clear commitment to supporting Ireland's National Action Plan to tackle AMR and have continued to progress the Animal Health actions outlined in iNAP. Meanwhile the Department continues to work with all stakeholders under the auspices of the Inter-Departmental Consultative Committee, which meets twice yearly to advance the actions contained in iNAP at a One Health level. The publication of Ireland's first *One Health Report on Antimicrobial Use and Antimicrobial Resistance* in January 2019 provided an overview for the first time into the antimicrobial use (AMU) and antimicrobial resistance (AMR) surveillance data in both humans and food-producing animals in Ireland.

One Health

The European Centre for Disease Prevention and Control (ECDC) and the European Commission's Directorate General for Health and Food Safety jointly carried out a One Health AMR country visit to Ireland from the 7-11 October 2019. The visit was organised in conjunction with our colleagues in the Department of Health and the purpose of the visit was to assist Ireland in further developing and implementing its national strategies and policies against AMR based on a One Health approach. The final report from European Commission/ECDC of their findings and recommendations is a very useful assessment of our actions taken to date to tackle AMR. The findings will inform the development of Ireland's second National Action Plan on AMR which is due to commence in 2020.

The Department and Teagasc jointly organised the antimicrobial and anthelmintic resistance Conference "Awareness to Action" took place on the 27 of November 2019. The key objectives of this event were to heighten awareness of resistance to antimicrobials (AMR) and anthelmintics and to facilitate the knowledge transfer and exchange of best practice amongst farmers and veterinary professionals in relation to use, prescribing and management of veterinary medicines in animal health. This event was co-hosted by the Department of Agriculture, Food and the Marine, Teagasc, Animal Health Ireland and was supported by University College Dublin. This event embodied two key objectives of iNAP in relation to improving knowledge and awareness of AMR, and also optimising the use of antibiotics in animal health by facilitating the sharing of learning and exchange of best practice amongst farmers and veterinary professionals in relation to use of antibiotics and anthelmintics in animal health.

Two new guidance documents developed collaboratively by the farming and veterinary stakeholders involved in the iNAP Animal Health Sector Implementation Committee were launched at this event, including *A Code of Good Practice Regarding the Responsible Use of Antibiotics on Pig Farms* as well as *A Code of Good Practice Regarding the Responsible Use of Antibiotics on Dairy Farms*.

A National Antimicrobial Usage Database for pigs was introduced by the Department on 1 November 2019.

This database is designed to collect farm level data on the amount of antimicrobials used on commercial Irish pig farms on a quarterly basis. Measuring antimicrobial use is a pivotal part of the national effort to reduce overall use, and promote responsible use where necessary. It is envisaged that while usage data is gathered at farm level for pigs, data will be collected from prescribing vets in all other species.

In 2019 the Department also collaborated with the Irish Farmers Journal (IFJ) on a "One Health" campaign aimed at farmers/farm advisors and other readers of the IFJ. This initiative involved fortnightly articles both online and published in the journal, in tandem with a short video discussing each theme. The initiative started in September 2019 and continued for 26 weeks. This initiative met several strategic objectives under Ireland's National Action Plan on AMR 2017-2020 (iNAP) in terms of Strategic Objective 1, improving knowledge and awareness of AMR, Strategic Objective 3 reducing the spread of infection and disease by promoting improved animal health and biosecurity and Strategic Objective 4, optimising the use of antibiotics in animal health.

By the end of 2019, there were 54 actions contained within the action plan of the iNAP Animal Health sector implementation committee, 13 of these actions have been completed and the remainder are ongoing. There has been very positive engagement across the sectors and work continues at a steady pace to address the various strategies and objectives in line with the World Health Organisation's Action Plan to address what is first and foremost a public health threat. The current action plan expires at the end of 2020 and work has commenced on the development of its successor.

Notwithstanding the importance of the above point, in the context of food safety, food business operators (FBOs) have primary responsibility to ensure that any food they place on the market is wholesome and safe. FBOs – including farmers – therefore have an undeniable responsibility to take actions necessary to minimise known risks to public health.

Food Safety

Food Safety and Hygiene Controls

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

A new three year Service Contract effective from 2017 covers controls on:

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

In 2019, the Department co-ordinated the investigation of 82 food complaints of which 56 were for meat/meat products, 26 were for milk/dairy products, of which 18 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 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 2019, 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 2019, 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. 2,054 controls were carried out on meat establishments in 2019 to verify that the relevant legislative requirements are being fulfilled at all stages of production, processing and distribution. Supplementary technical controls included 5,031 visits to Meat FBOs.

The corresponding number of controls carried out in dairy establishments (including market support) was 1,600. Supplementary technical controls included 11,908 samples taken in 2019. The Department also issued 56,780 certificates in support of meat trade and 29,253 certificates in support of dairy trade to internal and international markets.

A total of 1,391 milk and meat notices were served on Milk and Meat FBOs, notifying them of infringements under the Hygiene Regulations and follow-up action was taken as necessary.

Animal By-Products

Ireland’s rendering industry processes approximately 500,000 tonnes of raw animal by-products (ABP) from the meat industry and fallen animals that die on farms annually. ABP also includes food waste; catering waste from restaurants and hotels and manure from farmed animals. In 2019, updated codes of good practice for poultry farmers generating poultry litter, poultry litter hauliers and end users of poultry litter were updated and issued to all parties and are available on the Department’s website.

Food Safety

Approximately 1,900 ABP operators ranging from the biogas (generating renewable energy), composing (generating mushroom growing substrate and organic fertilizers) and the rendering sector to educational institutions and research facilities are involved in the collection, transport, handling, treatment, transformation, processing, storage, placing on the market, distribution use or disposal of animal by-products and are regulated under EU and national ABP legislation by the Department.

Animal Feed Controls

The Department is the central Competent Authority responsible for the enforcement of EU legislation with regard to animal feedstuffs. A prerequisite for safe food is safe animal feed and consequently the animal feed sector is heavily regulated and controlled within the EU. The focus of the legislation is to ensure that feedstuffs do not pose a risk to animal or public health, meet the prescribed minimum standards and are accurately labelled and fully traceable.

The Department carries out a risk-based official control programme that is implemented through inspections, audits and sampling of feedstuffs at all stages of the feed chain, including importation, storage, manufacture, trade and farm level. Feed samples are subject to a broad range of analyses to verify the safety of feed and also to verify the accuracy of labelling information.

In 2019, a total of 1,219 inspections/audits were performed. The majority of non-compliances identified during official controls related to deficiencies in the Feed Business Operators' HACCP plans, comprising 43% of the total number issued. Other non-compliances identified related to general hygiene (24%), labelling (11%) and traceability (11%). Feed Business Operators were informed of the non-compliances identified, and these have all been followed up and addressed.

1,539 samples of animal feed were taken in 2019 and sent to a range of laboratories for over 10,000 analyses, including undesirable substances, processed animal protein, chemical and microbiological contaminants.

Over 80% of all tests carried out relate to Feed Safety. All feeds tested were safe and fit for purpose with 3% of analysis being outside of the tolerance for qualitative properties.

Animal Feed Exports

The robustness of Irish feed controls are reflected in the ever expanding access to export markets for Irish Agri-Food products, with the export of Irish manufactured animal feed products to 58 countries, including some of the most demanding markets such as Japan and China. In addition, there was a 10% increase in the numbers of feed export certificates issued in 2019 compared to 2018.

Year	Number of Export Certificates	Number of countries
2018	1,394	61
2019	1,546	58

Residues Surveillance in Food

The 2019 results of the Department's National Residue Plan showed a continuing trend of high rate of compliance with 99.79% of samples testing negative for any residues.

Approximately 17,500 samples were tested in 2019, taken across all eight food producing species as well as milk, eggs and honey. 99.79% tested negative for any residues and this is a continuation of the trend over a number of years of a general absence of residues in Irish food products. This high level of compliance has been consistent over the last number of years.

Just 37 samples were non-compliant and of these the majority related to residues of authorised medicines. Risk evaluations by the Food Safety Authority of Ireland were carried out in response to each positive result. In 36 cases it was found that there was no unacceptable food safety risk to consumers and a recall of products from the market was not required. In the remaining

Food Safety

case where one equine sample tested positive for dioxins, a Rapid Alert System for Food and Feed (RASFF) notification issued to all Member States. 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.

Approval, Inspection and Control of Plant Protection and Biocidal Products

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 25 active substances during 2019, with 19 substances completing the regulatory process. Detailed assessment and peer review work for 37 products was progressed in 2019, with 20 products completing the regulatory process. A further 190 plant protection products were authorised through the mutual recognition process or updated during the year. Regarding biocides regulatory work, a total of 414 biocidal products were authorised through the mutual recognition process or updated during the year.

Only plant protection and biocidal products which are included in the Official Register may be placed on the market. A total of 939 plant protection products were on the Register at the end of 2019. 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 2019, there were approximately 2,600 notified biocidal products included on the Biocidal Product Register in Ireland and 836 authorised biocidal products.

The Department carries out follow up actions in relation to breaches of Maximum Residue Levels (MRLs) and unauthorised uses identified by the Food Chemistry Division. In 2019, the National Pesticide Residues Control Programme sampled and analysed 1,466 food items. MRLs for pesticide residues in food were exceeded in 10 of the samples analysed (0.7%) but no consumer health risk was identified. Nine breaches related to produce of non-Irish origin that had been sampled as part of the surveillance programme.

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. One breach related to produce of Irish origin. The producer in question was investigated for the possible cause of the non-compliance. There were no breaches relating to import controls. In addition, occurrences of unauthorised uses of pesticides were investigated and follow-up action initiated, including targeting of produce for future sampling.

An updated version of Ireland's National Action Plan (NAP) for the Sustainable Use of Pesticides was published during 2019. The new NAP specifies that all types of pesticide application equipment, other than handheld equipment, must be tested and certified and provides greater detail on the implementation of Integrated Pest Management principles.

Food Safety and Hygiene Controls

Horticulture Produce

Horticulture and Plant Health Division in the Department is responsible for ensuring that all primary producers of horticultural produce are registered in line with food safety legislation. As part of the Department's service contract with the FSAI, the Division implements a risk-based system of official controls of primary producers of food of non-animal origin to ensure compliance with EU food safety and food hygiene legislation. This includes performing inspections, audits, sampling, labelling and traceability checks and other official controls as necessary. A total of 146 notices were served on horticultural food producers in 2019, notifying them of infringements under the Hygiene Regulations and follow-up action was taken as necessary. The Division plays a key role in dealing with food safety incidents involving Irish horticultural produce. All the required information regarding registering as a horticultural food supplier can be found on the Department website.

(<https://www.agriculture.gov.ie/farmingsectors/horticulture/registerasafoodproducerfruitveg/>)

Food Safety

Horticulture and Plant Health Division is also responsible for carrying out inspections at wholesale and retail level to ensure that potatoes, fresh fruit and vegetables comply with national and/or EU marketing standards. Over 2,000 inspections were carried out in 2019 and the major issues identified relate to labelling of country of origin and substitution of potato varieties with cheaper varieties. All of the information relating to EU marketing standards for fresh fruit and vegetables can be found on the Department website at <https://www.agriculture.gov.ie/farmingsectors/horticulture/freshfruitvegetablesmarketingstandardseu/>

Fallen Animal Testing/Disposal

In 2019, the Department provided financial support for the collection of approximately 57,000 fallen animals, in particular bovines over 48 months of age, for sampling as required under the ongoing national BSE surveillance programme.

The Department has approved 38 knackeries under the ABP regulations for the collection and disposal of fallen animals.

Import Controls on Animal Products

In 2019 there were 3,185 consignments of animal and fishery product imports presented to Border Inspection Points (BIPs) in Ireland.

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

	2019	2018	2017	2016	2015
Trade and Research samples*	104	93	233	762	782
Non-harmonised products	9	9	12	8	14
Re-imported consignments	30	53	42	58	17
Pathogenic agents	25	26	21	33	37
Autogenous Vaccines	15	5	7	4	3

*Please note in 2017 a new system for authorising Trade and Research sample licences was brought into effect, removing the requirement to apply for licences on a per consignment basis and changing to an annual licence.

Animal Identification and Movement System

The Animal Identification and Movement (AIM) system manages the identification of all cattle, sheep, pigs, goats and horses. The system manages the movement of cattle at individual level and the movements of sheep, goats and pigs at herd level for traceability purposes.

The database facilitates compliance with EU and national requirements and is used for disease control purposes and to support exports. The system operates on a 24/7 basis in marts, meat factories and export locations and an online facility enables farmers and authorised agents to submit calf birth registrations and cattle movements electronically. New rules on sheep identification were introduced on 1 June 2019 which require all sheep to be identified electronically whereby lambs aged under 12 months, moving directly to slaughter from the holding of birth must, at a minimum, be identified with a single yellow electronic tag and all other sheep must be identified with a full EID tag set / electronic bolus set. The extension of electronic identification to all sheep simplified the sheep tagging system, should protect Ireland's reputation as a source of safe and secure food and put Ireland's sheep traceability system on a par with other major competitor exporting countries in maintaining and securing new international markets for Irish sheep meat.

Food Safety and Food Authenticity Strategy

In order to further progress the Department's critically important role in the safeguarding of food safety and authenticity, the FSFA Working Group was established by the Departments Management Board in October 2016 - the objectives and proposed actions of which is to ensure that the Department has an effective and efficient harmonised and co-ordinated framework for the organisation of all activities including official controls on food safety and authenticity that supports the Department objective of excellence of policy, strategy and operations. The Food Safety and Food Authenticity Strategy (FSFA) was launched by Minister Creed in July 2018. The FSFA comprises seven Projects which will set out the roadmap of how the Department's work in this key area can be improved.

Food Safety

These projects are:

Contingency Planning (CP)

This project will deliver a report of the current CP structure in the Department with respect to FSFA, provide a guidance document outlining common themes for contingency plans, provide contingency plan templates, run a report on crisis simulation exercises within the Department and develop a central repository for information.

Risk Analysis and Assessment

This project is interrogating current Department Risk analysis and assessment systems, comparing our practices to those of domestic and internal organisations with a view to building a roadmap for a world class risk system for the Department's areas.

Strategic Communications

This project aims to improve the consistency and quality of communications in relation to FSFA. To achieve this stakeholder analysis will be performed along with a review of current methods of communication in the Department, comparison with international best practice and development of a communications strategy for FSFA.

Harmonisation of official controls

This project will improve customer engagement with the Department through standardising the interaction of Department officials with FBOs and their control bodies, simplifying and harmonising the process for registration/approval of FBOs by the Department and standardising the format of the Departments FSFA documents used in official controls.

Data Capture, Analysis and Reporting

This project will result in efficiencies of service delivery for the benefit of the consumer and the agri-food industry. The Data project is investigating how data is managed within the Department's FSFA Divisions and identifying IMT systems that provide comprehensive and harmonised work programmes, reports and metrics across FSFA activities.

Training for Food Authenticity Controls

This project will involve a systematic evaluation of the controls required under the Regulation in relation to food fraud and authenticity in order to identify the skills and training needs of staff to implement the requirements of the Regulation.

Compliance Through Cohesive Policies & Regulation

This project is examining the practices employed within and outside the Department that foster compliance by operators and will capture these best practices in the form of a compliance toolkit that can be used as a policy tool across the organisation. A stakeholder led stewardship programme that raises awareness of key compliance issues is being developed. The project is examining the benefits of centrally based coordination of policy analysis in the area of FSFA.

The projects are being individually implemented by staff teams with project sponsorship at head of Division level. In total, 70 staff are directly involved in the project planning and implementation. Some of the activities undertaken by the projects include stakeholder surveys, factfinding missions, and simulation exercises. The Strategy's implementation is overseen by a high-level Steering Committee with an internal and external membership.

Animal Health and Welfare

Notifiable Exotic Diseases

Vigilance against the introduction of exotic diseases such as Foot and Mouth disease, Avian Influenza, Bluetongue and African Swine Fever, remained a key priority during 2019. Exotic diseases are present in many other countries and previous experiences have demonstrated the absolute necessity of properly regulating trade, ensuring high levels of biosecurity, surveillance, contingency arrangements and robust legislation are in place to deal speedily and effectively with disease threats and outbreaks.

During 2019 there were a number of suspect exotic disease investigations.

Number of suspect cases of exotic disease that were investigated by Department staff during 2019:

Disease	2019	
	Suspect cases investigated	Confirmed cases
Equine Viral Arteritis*	31	0
Piroplasmosis	1	1
Foot & mouth disease	1	0
Newcastle Disease	3	0
Pigeon Paramyxovirus**	5	5
Avian Influenza (poultry)	2	0
Avian Influenza (captive birds)	1	0
Total	44	6

* Unusually high number of suspect cases due to enhanced surveillance as a result of EVA vaccine shortage in 2017/2018

** Not notifiable to EU or OIE.

The Department implements an annual surveillance programme for avian influenza in wild birds the objective of which is to identify avian influenza virus subtypes and the potential, subsequent risk to the poultry industry.

Wild Birds tested for Avian Influenza during 2019:

Year	No. of wild birds tested	No. Positive
2019	78	0

Contingency Planning

Contingency plans are in place for high priority exotic animal diseases. These plans are based on requirements set out in existing EU legislation and criteria identified during past disease outbreaks in other European countries. They aim to ensure there is a swift, co-ordinated and effective response to control an exotic disease outbreak with the aim of eradicating the disease, restoring official disease freedom where applicable and facilitating resumption of normal trading patterns. The continued focus of the Department during 2019 was on reviewing existing contingency plans and arrangements and ensuring there is a high level of awareness amongst stakeholders regarding exotic disease risk, with particular focus on African Swine Fever.

BSE

The Department is responsible for the effective co-ordination 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 positive BSE cases identified in 2019.

Scrapie

Scrapie is a compulsorily notifiable disease in Ireland. There were six new flocks identified in 2019, with all six atypical scrapie and no classical scrapie.

Under the Active Surveillance Programme, 21,978 scrapie tests were carried out in 2019, comprising: 10,995 sheep tested at slaughter plants; 10,717 fallen sheep; 104 at Local Authority; 0 depopulated sheep; and 150 fallen goats.

Animal Health and Welfare

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 its introduction in 2004 to the end of 2019, a total of 86,967 sheep have been genotyped.

Animal Health Computer System (AHCS)

The Animal Health Computer System (AHCS) is the primary computer system supporting the Department in managing the disease testing programmes for Tuberculosis (TB), Brucellosis (BR), Bovine Spongiform Encephalopathy (BSE) and Bovine Viral Disease (BVD) in cattle and Aujesky's disease in pigs. In total, this system recorded the results of almost 11.5 million tests in 2019 and has significantly contributed to administrative efficiencies in the operation of the TB programme and the attainment of Brucellosis-free status. Approximately 1,200 Department staff and 1,000 Private Veterinary Practitioners use this system daily.

Animal Disease Tests recorded on AHCS in 2019

Tests Performed	Total Number
TB/BR Herd Tests	166,593
TB – Individual Animals	8,882,901
BVD – Calves Tested	2,396,001
Salmonella – Pig Herds – 7-Month Tests	1,945
Salmonella – Pigs – Laboratory Tests	6,092

During 2019, several technical improvements were implemented, and the major system enhancements introduced included –

- Incorporation of GIF (Gamma Interferon Testing) in the TB testing programme,
- Creation of Travelling Bull Permit,
- Pig Salmonella Control Program (PSCP), incorporation of prevalence calculation and generation of letters,
- Antimicrobial Use - Data Capture system for Antimicrobial Use in Pigs.

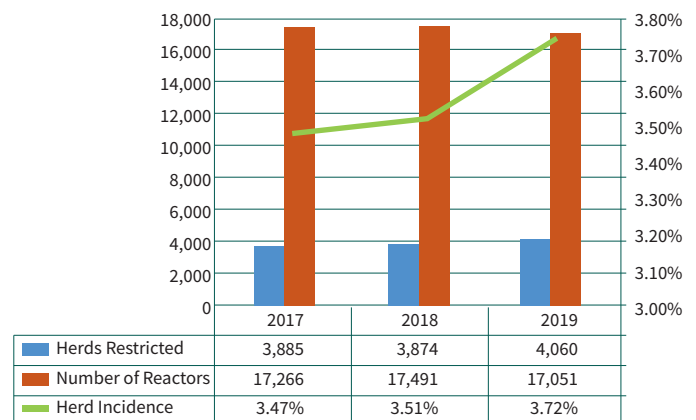
CLASS B DISEASES

Bovine Tuberculosis

Approximately 98.4% of the national herd was tested for bovine TB in 2019. There was a decrease in the number of reactors detected, 17,058 in 2019 compared to 17,491 in 2018. However, Herd incidence of TB increased from 3.51% to 3.72% in the same period.

Trends over the past three years are set out in the graph below.

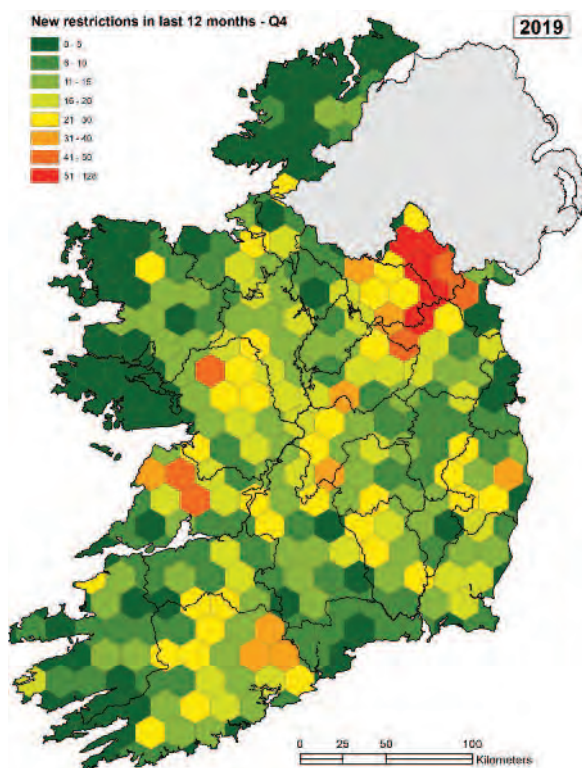
TB Statistics 2017-2019



The underlying TB risk is increasing due to a number of factors, including more dairy herds and larger individual herd sizes. Overall reactor numbers include not just skin-test positives, but also gamma-interferon (GIF) blood test positives, which make up approximately 16% of reactors. A GIF test is used in high risk TB breakdowns and can identify infected animals which may be missed by the standard skin-test. Trends in reactor numbers and herd incidence support the need for a renewed focus on the TB eradication programme.

Animal Health and Welfare

As the map below confirms, TB levels overall are at a low level but there has been a relatively high level of TB concentrated in the north-east of Ireland throughout 2019 i.e. Monaghan, Cavan, north-Meath. This map shows new restrictions in the country in 2019.

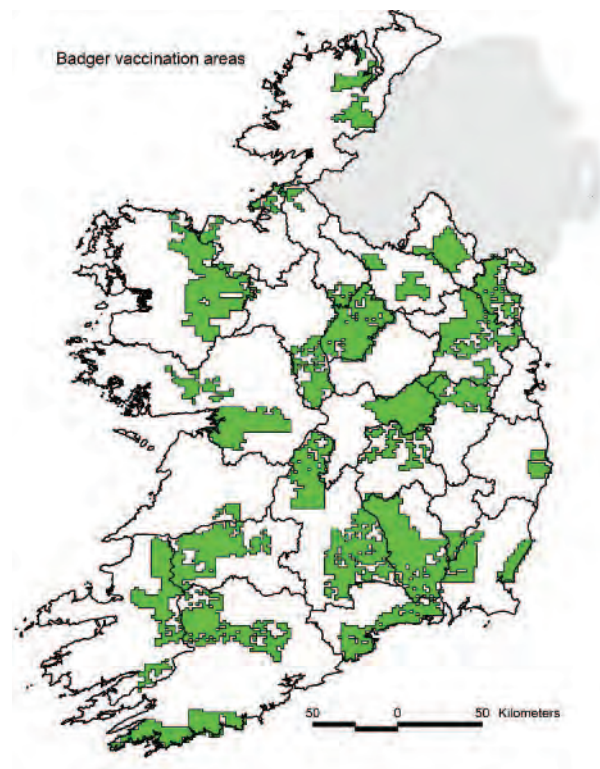


Badger Vaccination Programme

Vaccination as Policy

The vaccination of badgers against tuberculosis (TB) commenced in 2018 as an integral part of the bovine TB eradication programme. This vaccination programme would roll out incrementally to more parts of the country over time but some level of badger culling in response to severe TB episodes would still be required in places. This roll out of vaccination was progressed significantly in the second half of 2019 when the area of the country subject to vaccination was increased substantially. In these areas, badger culling continues to be carried out in response to severe cattle TB

outbreaks where epidemiologically justified. A map of the area under vaccination at the end of 2019 is shown below.



Roll Out of Vaccination in 2019

Staff training in advance of the roll-out concentrated on:

- The results of the Kilkenny Vaccination Trial
- The Non-Inferiority Trials
- Preference for Vaccination over Removal in ecological terms.
- Use of the newly developed Badger Vaccination Software
- Targets for Vaccination

Vaccination Methodology

Criteria under which culling may be carried out in response to severe cattle TB episodes in vaccination areas

Animal Health and Welfare

2019 Wildlife Unit Activity

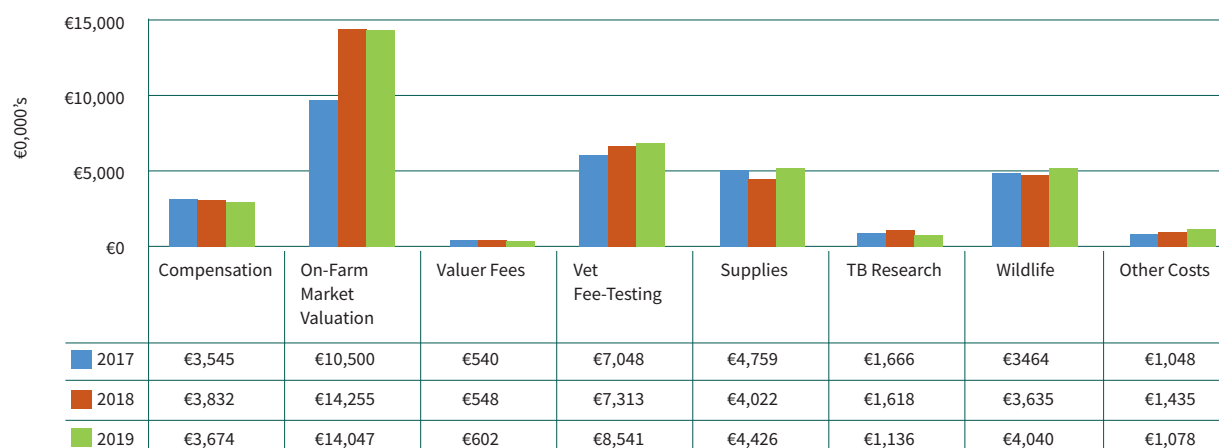
In 2019, 1,391 badgers were vaccinated in the vaccination zone and 5,310 badgers were removed in the removal capture blocks.

TB Strategy 2030

In line with the objectives of the National Farmed Animal Health Strategy, Minister Creed established the TB Stakeholder Forum in 2018. The TB Forum's Chairman, Mr Michael Cronin presented a report to the Minister in July 2019 containing a selection of proposals which could have a significant impact on the reduction of bTB in the years ahead. It is intended that a strategy will be launched mapping a 10-year plan for bTB taking account of the recommendations of the Forum report.

The Irish Government Economic and Evaluation Service completed a spending review on the bTB Programme which issued on Budget Day 2019, and this will be used to inform future policy consideration.

Expenditure 2017-2019



A Spending Review paper was published in October 2019 (<https://www.gov.ie/en/collection/5915ad-spending-review/>) to support the work of the TB forum to examine recent trends and concluded that additional measures may be warranted to achieve eradication.

Animal Health and Welfare

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 €17.7 million was spent during 2019 on all compensation elements of the TB Eradication and Brucellosis Monitoring Schemes.

EU Co-funding

EU Co-funding is paid a year in arrears. In line with co-funding programme criteria and reflecting consecutive years of deteriorating disease metrics, the EU imposed a 10% penalty on Ireland's co-funding claim for 2018. The EU paid €8.79 million towards the 2018 Irish bovine TB eradication programme in 2019. The corresponding figure for the 2017 programme was €9.85 million. As disease metrics did not improve in 2019, Ireland is expecting a further 20% funding penalty in line with co-funding programme criteria. Separately, the EU has reduced the funding available for 2020 from €7.25 million to €5.42 million with a further possible penalty of 40% if disease metrics do not improve in 2020. In line with this the co-funding level continues to be cut from 50% down to 35% for 2020 which means that Ireland may not be able to claim the full amount allocated. Consistent downward pressure is being exerted on TB programme funding available from the EU reflecting competing demands for resources across the CAP and the emergence of other diseases that require co-funding support.

Bovine Diseases Levies

Receipts from Bovine Diseases Levies decreased slightly in 2019 at €7.3 million compared to €7.5 million in 2018.

Prosecutions

During 2019, six prosecution cases were concluded at District Court level, two of which were appealed, while two litigation cases were resolved. In addition, one case was resolved before the High Court while two other High Court cases remained unresolved going into 2020. Three new prosecution cases were commenced during 2019 involving allegations of failure to test, failure to comply with a notice, failure to eartag, illegal movement without passports and document forgery.

Maintenance of Freedom from Bovine Brucellosis

Ireland has had the status of officially free of bovine brucellosis since 2009. The Department continues to carry out a comprehensive, risk-based surveillance programme to substantiate our ongoing free status. In 2019, a sophisticated statistically-based sampling system was developed by Department veterinary experts and put in place to enable the same level of confidence in our brucellosis-free status to be achieved while significantly reducing the number of samples and resources needed to attain such confidence. This was successfully implemented in late 2019, laying the foundation for a more cost-effective and risk-based surveillance system to support disease freedom in the coming years.

Animal Health Ireland (AHI)

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 Food Harvest 2020.

In 2019, the Department provided funding of €784,650 to AHI which was matched by industry stakeholders.

AHI commenced a compulsory BVD eradication programme in 2013. The programme has a legislative basis. 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

Animal Health and Welfare

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. The incidence of P.I. animals has reduced from 0.66% in 2013 to 0.04% in 2019. The savings accruing to farmers as a result of eradication are estimated at €102 million per annum.

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 published 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. They published a guideline booklet for Dairy Herd Welfare in 2019. Further information is available on the website www.fawac.ie

The Early Warning/Intervention System (EWS)

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 instances 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 GP or other health professionals.

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 uses best available scientific knowledge to advise on protecting and enhancing Ireland's animal health and welfare and to provide independent scientific support to the Minister and to the Department on animal health and welfare matters where such support is a requirement of European Union legislation. A new Committee was formed in 2017 and current topics include once a day feeding of calves, insects as food production, using Genetics to address health and welfare challenges in farm animals, Dairy Herd Welfare, Tuberculosis and African Swine Fever.

Animal Welfare Organisations

In 2019, the Department provided funding of €2.9 million to 106 animal welfare bodies throughout the country who are directly involved in the delivery of animal care and welfare services. The funding provided is intended only as a contribution to the overall costs of the organisations. All applicants for funding must sign up to a strict set of animal welfare guidelines, be in existence for two years or more, be registered with the Charities Regulator and provide detailed supporting accounts. A list of successful applicants is available on the Department's website <https://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 2019 the Department provided funding of €290,606 to local authorities towards expenses incurred by them under

Animal Health and Welfare

the Act. The Department continues to engage with local authorities on an on-going basis in an effort to achieve savings and efficiencies in the 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's Disease-free Status

Ireland achieved Aujeszky's Disease-free status in 2012. As an Aujeszky's Disease-free region, Irish herd owners can export live pigs to other AD-free regions without the high cost of compulsory isolation, herd surveillance and blood testing. Testing is conducted on an on-going basis to demonstrate this status. Ireland retained its Aujeszky Disease-free status in 2019.

National Farmed Animal Health Strategy 2017-2022

The National Farmed Animal Health Strategy 2017-2022 was launched in July 2017. The Strategy's focus is the promotion of animal health as a driver of optimised production, improved margins for producers and providing the best quality food for consumers. The Strategy contains some 70 strategic action recommendations.

An Independent Review Body was established under the Strategy to provide objective oversight and governance and is tasked with monitoring the progress and delivery of the Strategy and identifying any modifications necessary to improve outcomes.

In 2019, two meetings of the Review Body took place and the 2018 Annual Report was published.

Publication of the Equine Surveillance Disease Report

The third All Island Equine Health Survey Report for the period 2018/2019, commissioned by the Department and prepared by the Irish Equine Centre, was completed in October 2019. This was the final report in the current contract.

Legislation on the Supply and Sale of Pet Animals

New legislation on the sale and supply of pet animals was introduced in 2019 (Animal Health and Welfare (Sale and supply of pet animals) Regulations 2019; SI No. 681 of 2019). This legislation contributes to greater traceability of pet sales, requiring anyone selling more than 5 pets per year to register with the Department. Anyone advertising a pet for sale or supply is required to include certain information in the advertisement, including the microchip number in case of dogs.

Licensing of Livestock Marts

The introduction of the Animal Health and Welfare (Livestock Marts) Regulation 2018 (SI. No. 128 of 2018) provided for the approval and licensing of all livestock marts operating in Ireland during 2019.

Live Exports of Cattle

Live exports play an important role in stimulating price competition for domestic cattle, and providing an alternative market outlet for farmers. The term 'exports' here also includes intra-community trade.

Overall live exports of cattle increased by 22%, from 246,629 head in 2018, to 301,563 in 2019. The main markets for Irish cattle are Spain, Netherlands, UK, Italy, Libya and Turkey.

Live exports to non-EU countries increased by 36%, from 19,953 to 27,098, driven mainly by an increase of exports to Libya, from 5,450 in 2018 to 13,122 in 2019, the vast majority being adult animals.

Animal Health and Welfare

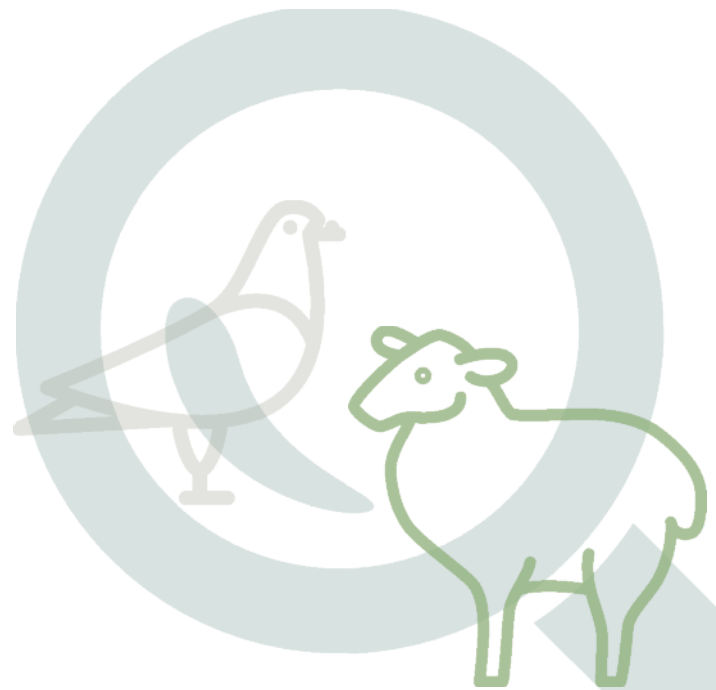
Calf exports, which had increased by 50% from 2017 to 2018, continued to grow in 2019. Exports of calves (0-6 months) rose from 169,229 in 2018 to 207,735 in 2019, an increase of 23%, driven mainly by stronger sales of animals aged 0-6 weeks to the Netherlands (increased from 46,509 to 82,178).

In summer 2019, the Department banned all transport of cattle and sheep through areas with external temperatures of 30°C or over. At the end of 2019 the Department introduced new, more stringent animal welfare rules for calf exports, including an increase in space allowance (e.g. 8% more space for a 50kg calf), banning all use of sticks on or near calves in assembly centres, and enhanced cooperation with the French veterinary authorities to control numbers of calves passing daily through the resting posts in Cherbourg.

In 2019 Minister Creed led a trade mission to the Netherlands to meet the main importers of Irish calves. All parties emphasised the importance of calf welfare during transport, and Dutch industry representatives reported that Irish calves travel and arrive in very good condition.

With regard to lairage capacity in Cherbourg, the Department worked closely with the French authorities, and in 2019, the French authorities approved an increase in the holding capacity at one of the Control Posts in Cherbourg.

The Department hosted a visit by a technical team that included officials from the Ministry of Agriculture and ESK (the Turkish Meat and Milk Board). The Department reached agreement in 2019 with the Egyptian authorities on three proposed health certificates for the export of fattening, slaughter and breeding cattle. The opening of a new market for exports to Kazakhstan accounted for exports of more than 1,000 head of cattle in 2019.



Livestock

Cattle

The Irish Cattle Breeding Federation (ICBF) continued to make excellent progress in 2019 in improving the genetic merit of our National dairy and beef herd.

The Department provided funding of €920,000 for projects aimed at improving profitability such as improving the National database, progeny testing, operation of Tully test centre, and research on genetic evaluations.

Specific highlights for ICBF in 2019 included;

- The continued operation of the Beef Data and Genomics Programme. This Programme has accelerated genetic gain in the Suckler beef herd.
- Continued high uptake of Genomically selected Dairy AI bulls, with over 60% of recorded dairy inseminations being to these bulls.
- 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.
- Operation of the new Beef Environmental Efficiency Pilot (BEEP), which generated a significant amount of weights from Suckler cows and their progeny which will help identify the most economically and environmentally efficient animals.
- 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 €850,000 in 2019 to support its general operational activities.

BEEF CARCASE CLASSIFICATION

The role of the Department is to ensure that the classification of carcasses is carried out by slaughter plants in accordance with the relevant EU Regulations.

Inspections of meat plants are carried out by Department staff from the Beef Carcase Classification Section. These inspections are bound by EU legislative requirements. Officials check the overall performance of the carcass grading machine and the standard of trim applied. The Department does not adjudicate on the grading of the individual carcasses.

Official checks must be conducted at least twice every three months in all slaughterhouses which slaughter 150 or more bovine animals aged eight months or more per week as an annual average. Currently, the Department conducts on-the-spot inspections on average every 2 weeks. As part of each check, officials classify a minimum of 100 carcasses where mechanical classification is installed or 50 carcasses where only manual classification takes place.

Inspections

Under the legislation, each on-the-spot check shall relate to at least 40 carcasses selected at random. The Department check is therefore inspecting far more than is required by the regulations.

The on-the-spot checks shall verify in particular:

- (a) the category of the beef carcass,
- (b) the classification, weighing and marking of the carcasses,
- (c) the accuracy of the beef automated grading methods by using a system of points and limits that determines the ongoing accuracy of the grading method,

Un-announced inspections are carried out by authorised officers according to an inspection schedule in an Annual Control Plan, where infringements may have been noted during a previous inspection visit or

Livestock

where a complaint to the Department warrants an immediate inspection.

In 2019, classification officers checked approximately 40,000 carcasses against the mechanical classification system.

During the course of such an inspection the following duties are performed by an authorised officer:

1. Examination and evaluation of classification performance.
2. Evaluation of standard of dressing (trim) during the production process in real time when possible and on cold carcasses.
3. Scales check using 260 Kg weights on the kill floor scales (secondary to NSAI checks) Examination of records concerning use of check weights.
4. Comparison of hot and cold weights.
5. Scrutiny of labelling particulars.
6. Examination of relevant records or processes, as appropriate.

Sheep

The National Sheep Breed Improvement Programme is operated by Sheep Ireland, working in conjunction with stakeholders. The Department 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 2019 including;

- Continued growth in the number of pedigree ram breeders participating in LambPlus, resulting in over 40% of the rams sold in 2019 having Eurostar figures available.
- Continued growth in the proportion of performance recorded breeding rams presented for sale in 2019.
- 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 €200,000 to Sheep Ireland in general funding support during 2019.

Horse and Greyhound Racing Industries

In 2019, Horse Racing Ireland received €67.2 million and Bord na gCon received €16.8 million 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 2019 the recommendations made in a report by Indecon International Consultants which had carried out a review of Horse Sport Ireland were finalized and the new Board for the organization spearheads future change.

Under the Rural Development Programme (RDP) provision has been made for improving efficiency and profitability in the equine sector through the Knowledge Transfer measure which had a budget of €100 million.

Over 300 breeders participated in the final year of the Knowledge Transfer Equine Programme which concluded end of July 2019. These participants attended meetings as well as producing a Farm Improvement Plan with their approved facilitator. They also completed Animal Health Measures with an approved veterinary practitioner.

In 2019, the Department provided €2.996 million 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.

Additionally, in 2019, a total of €850,000 was provided by the Department towards equine related measures.

Plant Health

Plant Health Strategy

The Plant Health and Biosecurity Strategy 2020-2025 was launched in 2019. The objective of the Strategy is to minimise the threat posed to plants by the potential introduction and establishment of plant pests and diseases. The Strategy is underpinned by three key strategic principles: risk anticipation, surveillance and awareness. These principles will allow for the delivery of specific, achievable, targeted actions, which will be achieved through wide collaboration and an agreed implementation plan.

Awareness Raising

The Department ran a “Don’t Risk it!” awareness raising campaign at Bloom and the Ploughing Championships in 2019. This campaign was targeted at international travellers, tourists and commercial businesses that are bringing plants, plant products and other high risk items made of plant material into Ireland from abroad. This campaign was fully endorsed by the European Plant Protection Organisation (EPPO) and the European Commission via revised plant health legislation. The objective of the campaign was to highlight the social, environmental and economic impact of bringing in infected plant material or quarantine pests and diseases into Ireland.

New Plant Health Regulation

A new Plant Health Regulation came into operation on 14th of December 2019. This Regulation focuses on reducing the risk of introducing quarantine pests to the EU by: focusing on high risk plants, developing a list of EU priority pests, expanding the range of plant operators to be registered with the competent authority, applying stricter Protected Zone requirements and requiring all plant for planting to be accompanied with a Plant Passport. The Department participated in a number of EU Working Groups on Delegated and Implementing Acts for this Regulation throughout 2019. Horticulture and Plant Health Division delivered a number of information sessions on these new Regulations at the end of 2019. These seminars were aimed mainly at anyone dealing with plants/plant products.

Under the New Regulation plant health will, for the first time, be subject to the Official Controls Regulation. This introduces the possibility for co-funding of the annual surveys for priority pests. In 2019, the Department carried out plant health surveys for certain quarantine pests under the EU co-funded plant health survey programme.

All Island Approach to Plant Health

Under the North South Ministerial Council (NSMC), HPHD has very close collaboration with Northern Ireland in implementing an agreed plant health work programme and achieving an all-island approach to plant health. In 2019, the Department 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.

Plant Health Surveys

The Department continued to survey for the presence of the harmful organism *Phytophthora ramorum* in 2019. 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.

Ireland has Protected Zone status for a number of harmful organisms present in other EU Member States but not present here. The Forestry Inspectorate conducts annual national forest surveys for the presence of the forestry protected zone species and in order to justify Ireland’s Protected Zone status and submits reports annually to the European Commission. No detections of any of these organisms were made in surveys conducted during 2019.

In late 2018 the UK Forestry Commission announced the first finding of the bark beetle *Ips typographus* in the wider environment in the UK at a woodland in Kent, England. This finding represents an increased threat of the introduction of this bark beetle to Ireland and has prompted additional risk based surveys and monitoring in 2019 through the extension of the Protected Zone survey monitoring plot network.

Plant Health

Xylella fastidiosa is a bacterium that infects the xylem tissues of a wide host range of plants (over 300 plant species). Ireland carried out a survey for the disease in 2019 and the disease was not found to be present. In 2019, there were further outbreaks of the disease on the Union territory and the Department continued to play an integral part in any discussions on this disease to ensure that the maximum protection against the risk of this disease entering the territory was achieved.

Other harmful organisms listed in the EU Plant Health Directive of significance which also require mandatory annual surveys and reporting include *Anoplophora chinensis* (citrus long-horn beetle), *Anoplophora glabripennis* (Asian long-horn beetle), *Bursaphelenchus xylophilus* (pine wood nematode), *Monochamus spp.* (sawyer beetle), *Phytophthora ramorum* and *Gibberella circinata* (pitch canker of pine). In 2019 Ireland also continued to survey for a number of other pests (including *Monochamus spp.*) and carried out new surveys for EU priority pests including *Agrilus planipennis* (emerald ash borer) and *A. anxius* (bronze birch borer). None of the above harmful organisms were detected in surveys in 2019.

Surveys for the presence of *Hymenoscyphus fraxineus* (Ash Dieback disease), *Phytophthora ramorum* disease outbreaks in Japanese larch, *Dothistroma septosporum* (Dothistroma Needle Blight [DNB]) and *Lecanosticta acicola* (formerly *Mycosphaerella dearnessii*), the causal agent of Brown Spot Needle Blight (BSNB) on pine species, continued in 2019. The Review of the National Response to Ash Dieback Disease also continued during 2019.

Ireland continued with its national legislation for *Epitrix*. This legislation addressed the significant risk to the indigenous potato sector arising from a possible outbreak of *Epitrix*.

Intensive inspections and sampling of seed and ware potatoes were carried out in 2019. There were no findings of potato ring rot, potato brown rot and *Epitrix* in 2019. Inspections were also undertaken on plant propagating material at several locations to ensure disease free material was available.

In addition, a comprehensive plant health action programme was implemented in 2019 to maintain Ireland's high plant health status and comply with Irish and EU legislation. Nurseries, garden centres, public parks, private gardens and the wider environment were intensively inspected for the presence of quarantine pests and, where found, eradication measures were implemented. The Department also carried out inspections on plant producers to ensure they have complied with the requirements set down in EU legislation. As well as safeguarding plant health, these inspections also facilitate trade in plants and plant products. The 2019 plant health surveys included:

- Over 400 sites inspected for *Phytophthora ramorum*
- 1,483 samples taken for Fireblight (*Erwinia amylovora*)
- Over 1,200 inspections for leaf miners (*Liriomyza sp*)
- Over 900 inspections for Tobacco Whitefly (*Bemisia tabaci*)
- 730 inspections for *Anoplophora chinensis*
- 685 inspections for *Anoplophora glabripennis*
- 664 samples taken for PCN (*Globodera sp*)
- 474 sites inspected for *Xylella fastidiosa*
- 239 samples for Beet Necrotic Yellow Vein Virus
- 467 inspections for *Aromi bungii*
- 151 inspections for Zebra Chip.

Plant Health Import Controls

In 2019 under the Department's Plant Health Import Controls Programme; 3,428 inspections were carried out on consignments of plants and plant products imported directly to Ireland through Dublin Airport and Dublin Port from third countries. This represents a 3.5% increase on the number of consignments subjected to Plant Health Import Controls on 2018. There were 57 interceptions made at Irish borders by plant health inspectors in 2019, the reasons for which include the finding of regulated and harmful organisms, incomplete or absent phytosanitary certificates and fraudulent documentation.

Plant Health

Plant Health Export Controls

- In 2019 under the Department's Plant Health Export Controls Programme; 1,000 consignments were inspected and certified by plant health inspectors, facilitating their export from Irish businesses to 36 third countries across the world. The most frequent consignments certified in 2019 included animal feed to China, India and Korea, mushroom casing to South Africa, Japan, Israel, and Canada and cut flowers to the United States of America.

Forest Health Import Controls

Import inspections of wood and wood products from Third Countries regulated under the EU Plant Health Directive were routinely conducted to ensure compliance with entry requirements as part of the Customs clearance process. In 2019, 545 third country consignments received a documentary check and if appropriate to the requirements, were physically inspected. Nine were found to be non-compliant with the import requirements. Appropriate measures were taken where non-compliances were detected, depending on the nature of the non-compliance.

Under the EU internal markets regime, goods coming from within the EU are not subject to Customs clearance but monitored to ensure Ireland's Protected Zone requirements are met. The Department operates two designated Border Inspection Posts in Dublin and Cork ports for forestry import controls from Third Countries and has an office in Waterford port. Shipments coming into the other ports and airports are covered from these locations if required.

In 2018, the special measures, introduced in 2013 by the European Commission regarding inspections of wood packaging material associated with certain commodities imported into the EU from China, were replaced by a new Commission Implementing Decision (2018/1127/EU) which expands the range of commodities to be inspected and includes goods from Belarus as well as China. In 2019, 111 containerised consignments from China were inspected, with eight non-compliances detected where appropriate phytosanitary measures were imposed. In addition, the Forestry Inspectorate carries out monitoring of Portuguese wood packaging material in relation to the

threat of pine wood nematode (as required under Commission Implementing Decision 2012/535 as amended) and wood packaging from other countries.

The Forestry Inspectorate also provides advice and deals with queries regarding import and export requirements related to wood/wood products and forest reproductive material. Phytosanitary Certificates may also be issued to accompany certain consignments leaving the free trade area of the EU.

In 2019, Brexit preparedness work dominated the work of the Forest Health Section particularly in relation to contingency planning for a no-deal exit from the EU in March and October 2019 and the impacts of such an event on imports and exports of forestry products (including wood packaging material) to and from the UK. Efforts focused on developing adequate infrastructure, IT systems and staff to cope with the eventuality of a no-deal exit, which threatened during the year.

International Standard for Phytosanitary Measures

The Forestry Inspectorate of the Department is responsible for the implementation of the FAO, IPPC, International Standard for Phytosanitary Measures (ISPM) No. 15, Guidelines for Regulating Wood Packaging Material in International Trade – for the manufacture of Wood Packaging Material (WPM) to this Standard in Ireland.

ISPM No.15 describes phytosanitary measures to address the risk of introduction and/or spread of quarantine pests associated with WPM made of raw wood, in use in international trade. WPM, used in the transport of goods of all kinds and which is being exported from Ireland to most non-EU countries around the world, is required to comply with ISPM No.15.

At the end of 2019, there were 54 companies registered to operate under the scheme in Ireland. Companies in the scheme are inspected to ensure compliance with agreed Standard Operating Procedures and that the wood packaging material is fully compliant with the standard.

Plant Health

Crop Variety Evaluation

The 2019 growing season saw a return to more typical climatic conditions resulting in sowing dates aligning with the norm for various crops. Sowing conditions for 2019 winter crops that were sown in the autumn of 2018 were extremely good and the same can be said for sowing of spring crops in early 2019 and harvesting of all crops later in the year. There were difficulties experienced in sowing 2020 winter crops at the end of 2019 due to poor weather making ground conditions unsuitable and this resulted in a significant reduction of up to 50% in winter cereal sowings compared to autumn 2018. Yields returned to normal levels in 2019 for all crops. A total of 347 varieties of grass, clover, barley, wheat, oats, forage maize, oilseed rape, beans and potatoes were evaluated in National and Recommended List trials in 2019. The varieties of each species considered most suitable for Irish producers were selected from these trials and published in Recommended Lists which are available on the Department's website.

Number of Varieties Evaluated in 2019

Crop	Number
Cereals	175
Grass	114
Forage Maize	20
Oilseed Rape	25
Clover	21
Potatoes	12
Field Beans	11

* 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 the Department's Crop Policy, Evaluation & Certification Division's Headquarters which is located at Backweston Campus, Leixlip, Co. Dublin. Trial inspections and information visits for interested groups of breeders, agents, consultants and farmers were also hosted at three Department centres and at other outside trial locations.

Seed Certification

Marketing of seeds in the EU is regulated under a number of schemes setting minimum quality standards and labelling requirements. These are implemented by Department officials through the seed certification schemes covering the main agricultural crops. Only those varieties that are listed in the National Catalogue of Ireland or on the EU Common Catalogue of Agricultural Plant Varieties may be cultivated. The National Catalogue of Agricultural Plant Varieties (NCAPV) and the Official Journal of National Plant Variety Rights (PVR) are available on the Department's website.

<https://www.agriculture.gov.ie/media/migration/publications/2019/NationalCatAgPlantVarieties200318.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 Seed Crops Certified in 2019

Area of Crops Approved under the Seed Certification Scheme in 2019 (ha)	Tonnes of Seed Certified Under the Seed Certification Scheme in 2019
Cereals	53,252
Potatoes	2,903
Oilseed Rape	808
Beans	888

In 2019, all grass seed used in Ireland was imported as certified seed and the Department oversaw the formulation and labelling of grass seed mixtures.

Plant Health

Seed Potato Laboratory

During 2019, 738 varieties (includes potato seedlings not yet named) were maintained in vitro at the Potato Laboratories, Tops, Raphoe, Co. Donegal.

Approximately 42,000 potato mini-tubers from 31 different potato varieties and 10 unnamed potato seedlings were produced in virus-proof tunnels. 7 new potato seedlings and 8 sweet potato varieties 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 648 named potato varieties was also maintained.

The Potato Laboratory was assessed by the Community Plant Variety Office (CPVO) in August 2018 as part of their adopted entrustment approach and based on quality criteria for examination offices performing DUS examinations on their behalf. The CPVO audit team was happy with the quality criteria in place at the laboratory and recommended that entrustment for both *Solanum tuberosum* (L.) (potato) and *Ipomoea batatas* (L.) (sweet potato) continue for the next 3 year period. The Potato Laboratory is the first and only entrusted office in the EU to conduct technical examinations on *Ipomoea batatis*.

Horticulture 2019

The weather in 2019 provided for more favourable growing conditions compared to the drought in 2018, with generally improved yields for all crops however the wet autumn did impact the harvesting date of some crops.

Market demand in Ireland for produce remained steady across each sub sector, with high demand for some commodities. However, commodities such as field vegetables did experience downward price pressure in 2019 following price rises negotiated in 2018.

Whilst the continued recovery in the wider economy and increasing consumer demand for produce and plant based diets has helped maintain output growth in the sector, labour availability and production cost continue to be challenges for the sector.

Horticulture Output Value at farm-gate, 2018 -2019

Product	2018 € m	2019 € m	% change 2019 v's 2018
Mushrooms	117	119.2	+1.8
Potatoes	79.6	110.9	+39.3
Field Vegetables	75.9	77.8	+2.5
Protected Crops	86.9	91.5	+5.2
Outdoor Fruit Crops	10.9	10.7	-2.0
Bulbs, outdoor flowers and foliage sector	9.3	9.44	+0.7
Hardy nursery crops, and other horticulture sectors	56.8	57.3	+0.9
Total	436.4	477.0	9.2

2019 saw continued strong investment by the sector with over €5.8 million paid in the scheme of investment for the development of the commercial horticulture sector and a further €4 million paid out through the EU Producer Organisation Scheme.

Laboratory Service

VETERINARY LABORATORIES

Virology

The Virology Division provides the Department with the capacity to identify and characterise farmed animal viral diseases. The Division delivers the technical aspects of emergency preparedness necessary to safeguard against viral diseases exotic to Ireland and those diagnostic, investigative and consultative services required to control and monitor endemic viral diseases of Irish farm animals. In 2019, it hosted ten National Reference Laboratories (NRL) ranging from Peste des Petits Ruminants to Foot-and-mouth disease.

The range of viruses handled by the Division is diverse and includes: Foot and Mouth Disease, Avian Influenza, Bluetongue, BVD, IBR, Classical Swine Fever, Rabies and PRRS.

Pig Parvovirus PCR, Vesicular Stomatitis PCR, Seneca Valley Virus PCR and Infectious Laryngotracheitis ELISA are some of the newer viral diagnostics introduced in 2019.

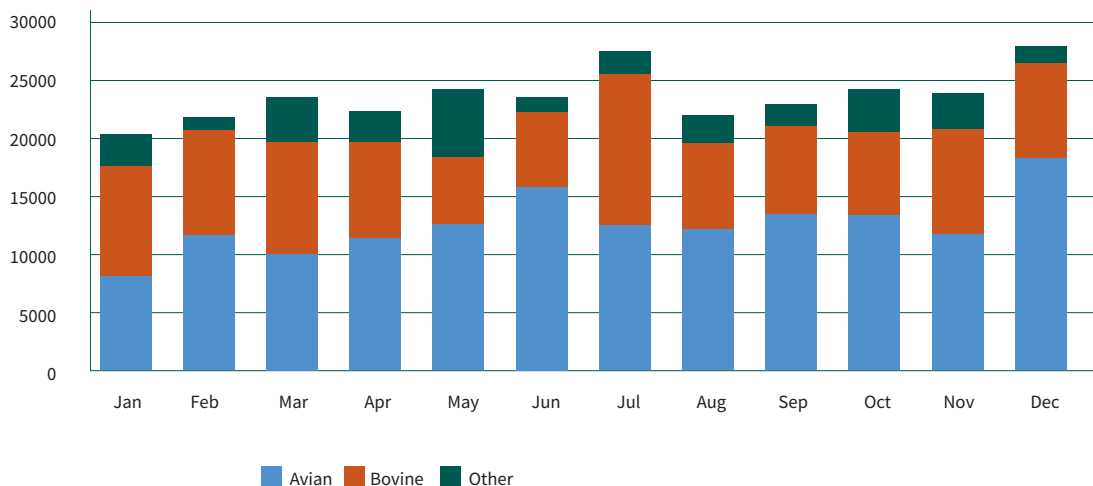
Table below shows a summary of overall 2019 testing figures in Virology Division

Species	Tests for virus	Tests for antibody	TOTAL
Bovine	63,054	77,387	140,441
Porcine	7,278	4,870	12,148
Small Ruminants	3,519	10,551	14,070
Lagomorph	1,173	0	1,173
Equine	488	2,071	2,559
Avian	9,701	91,013	100,714
TOTAL	85,213	185,892	271,105

Submission Patterns

The pattern of tests requested is relatively steady throughout the year 2019, the peaks in bovine submission relate directly to the national BVD eradication programme (graph below).

2019 Monthly Testing



Laboratory Service

Table below shows the top five tests in 2019 in Virology Division for mammalian (antibody and virus detection) and avian diseases

Rank	Pathogen (antibody)	Number Tested	Pathogen (virus)	Number Tested	Pathogen (avian)	Number Tested
1	BVD	17,853	BVD	21,161	Avian influenza	36,587
2	IBR	8,172	POX	2,920	M. gallisepticum	31,329
3	Schmallenberg	7,471	BTV	2,502	AEV	3,286
4	Bluetongue	5,632	PRRS	1,757	Chick Anemia	2,642
5	EBL	3,723	BHV1	1,387	Infectious Bursal D	2,572

In 2019, Virology Division had a range of 144 different tests which it used across 40 different matrices – the most common matrices in 2019 being serum (87.5%), swabs (5%), lung (1.3%) and semen (1.2%). Over the course of 2019, the Division completed successfully over 50 External Proficiency Tests to assist our ISO17025 accreditation status.

Bacteriology and Parasitology Division

Bacteriology and Parasitology Division provides expertise in bacteriology and parasitology to the Department and hosts National Reference Laboratories for Antimicrobial Resistance and for zoonotic pathogens of food, feed and animal origin. These include *Salmonella*, *Campylobacter*, *Escherichia coli*, *Mycobacteria*, and the zoonotic parasites *Echinococcus*, *Trichinella* and *Anisakis*. In addition, it provides a laboratory diagnostic service for parasites and for *Mycoplasma bovis*.

National Reference Laboratory (NRL) for Salmonella

The following samples were cultured for Salmonella during 2019:

- 1,651 poultry farm samples
- 565 meal or feed mill related samples
- 768 process hygiene criterion samples from poultry or pig primary processing plants
- 150 compost or related samples
- 550 processed animal protein samples
- 50 tallow and greaves samples.

In addition:

- 615 Salmonella isolates were either obtained from selective culture of official samples or received from external laboratories for serotyping
- 193 group B Salmonella isolates were subjected to Polymerase Chain Reaction to distinguish between *Salmonella* Typhimurium and monophasic *Salmonella* Typhimurium

Antibodies were detected in 4,617 (22.3%) of the 20,668 muscle juice samples from slaughtered pigs tested under the Salmonella National Control Program for pigs.

Applications of Whole Genome Sequencing technology by the Salmonella and Antimicrobial Resistance NRL continued to increase during 2019. The NRL Salmonella responded to several queries (from the EU Reference Laboratory and the HSE) in search of the source of Salmonella strains that caused outbreaks of human food-borne enteritis in Europe or in Ireland. One of these searches by WGS analysis revealed one case of *S. Typhimurium* in a person and a small egg-laying flock, which each yielded an isolate that was genetically similar. Production of eggs for sale ceased as soon as *S. Typhimurium* was detected. Searches for salmonella strains of outbreak isolates using WGS was applied in several other cases, for which absence of the specific *Salmonella* strain discounted any possible role of Irish food or primary production.

Laboratory Service

This technology was also applied to investigation of laboratory cross-contamination, in order to increase the reliability of laboratory results.

NRL for Antimicrobial Resistance

Official surveillance of AMR in commensal and zoonotic bacteria was carried out in accordance with 2013/652 EU. The contents of 300 pig caeca and 300 pork and 300 beef samples were screened for the presence of ESBL/Amp-C/carbapenamase - producing *Escherichia coli*. Antimicrobial susceptibility testing was carried out on 170 isolates of *Campylobacter coli* and 200 indicator commensal *E. coli* from pig caeca as well as Salmonella from pig carcass swabs. The results are reported to the European Food Safety Authority and included in the EU Summary Report on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals and food.

The first One Health Report on Antimicrobial usage and Antimicrobial resistance, which was a collaboration between the Department of Agriculture and the Department of Health, was published in 2019 and included detailed analysis of results generated in the NRL between 2014 and 2016.

The NRL continued to use whole genome sequencing as a tool in the investigation of unusual resistance patterns in isolates from official testing and veterinary clinical isolates from the RVLs.

The recent alignment of AMR with clinical microbiology has provided a platform for further development of the clinical isolate pipeline required for the national antimicrobial resistance action plan and improve capability across the service.

NRL for Campylobacter

In 2019, the Campylobacter NRL supported the work of the Veterinary Public Health (VPH) Division and the Campylobacter Stakeholders' group by collating Process Hygiene Criteria results for Campylobacter enumeration of neck flaps. The Special Project Unit (SPU) in VPH, organised a Memorandum of Understanding with the three main chicken processors in early 2019, to perform Campylobacter enumeration of caeca from all pre-thin batches of broilers. The NRL

assisted with standardisation of testing across the private laboratories carrying out this work and also started collating caecal enumeration data.

The Campylobacter NRL started verification testing of neck flap and caecal samples in April. Enumeration was carried out on a total of 127 neck flaps and 39 caeca in 2019.

NRL for Mycobacteria

In support of the national bovine TB eradication programme in 2019:

- Samples collected in meat plants from 6,111 bovine animals, were tested for evidence of tuberculosis. 59% of these animals were identified at post-slaughter veterinary inspection.
- 4,248 histopathological tests and 3,542 cultures were performed on these tissues.
- Cultures were completed on 833 badger tissues collected as part of badger removal following bovine TB outbreaks or badger vaccine trials.
- Cultures were performed on 113 tissue samples submitted from deer.
- Mycobacterial speciation tests were performed on 984 isolates.
- 3,518 sera were tested in TB ELISA to support bovine disease investigations.

There were 392 samples submitted for Johne's disease culture and *Mycobacterium avium* subspecies *paratuberculosis* was isolated from 73 samples.

NRL for Zoonotic Parasites

The mandatory national sampling of foxes (Regulation (EU) 2018/772) and testing undertaken by the NRL for Parasites in 2019 continued to demonstrate Ireland's freedom from *Echinococcus multilocularis*, one of the most lethal parasitic zoonoses in temperate and arctic regions of the Northern Hemisphere. For the 2019 survey, 400 intestinal contents samples from all counties were examined for the parasite using a multiplex-PCR. All samples were reported as negative.

Laboratory Service

With regard to *Trichinella* NRL activities the following events occurred in 2019:

- Two private laboratories were audited
- A workshop was organized for all laboratories on May 10th
- The annual ring trial were sent to all private laboratories on May 21st

Diagnostic Parasitology

Continue to receive samples from a wide variety of sources (e.g. Regional Veterinary Laboratories, private veterinary practitioners, abattoirs and animal shelters) including both farm and companion animals. In excess of 4,500 assays were performed using 13 different methodologies.

Mycoplasma bovis

Polymerase Chain Reaction (PCR) testing (296 samples tested) and selective culture was provided for diagnosis, surveillance and control of respiratory disease, arthritis and mastitis cases and herd outbreaks caused by *Mycoplasma bovis* in 2019.

Other Activities

The conditions for approval of private laboratories by the Department for microbiological testing for Salmonella in poultry flocks, Animal By-Products and Trichinella and STEC were revised and updated during 2019 and private laboratories re-applied for approval and an updated list of approved laboratories was published on the Department's website.

Members of the Division represented the NRLs at EU Reference Laboratory workshops. Division personnel also contribute, to various Department and industry working groups and stakeholder groups including: Food safety and authenticity Working Group, Campylobacter Stakeholders Implementation Group, Pig Industry Stakeholders Group, Eastern Region Zoonoses Committee, Animal Health Ireland's (AHI) Johnes Disease Implementation Group and Technical Working Group; AHI's Parasite Control Group; Health Products Regulatory Authority Task Force on antiparasitic medicines.

Research

Personnel in the Division collaborated with other institutes in the following research projects:

Title of Project	Collaborators
Tackling a multi-host pathogen problem - phylodynamic analyses of the epidemiology of <i>M. bovis</i> in Britain and Ireland	UCD, University of Edinburgh
Disease Profiling of Bovine Tuberculosis Skin Test Reactors in Ireland	UCD
Next generation approaches to improved diagnostics and molecular epidemiology for control of <i>Mycobacterium avium</i> subsp. <i>paratuberculosis</i>	UCD, AFBI
The foodborne emergence and epidemiology of <i>Clostridioides difficile</i> in Ireland	Teagasc, TCD, UCD, DIT

PATHOLOGY

Pathology Division provides laboratory supports for national disease eradication programs, Class A response capability and specialist investigation of infectious diseases or toxic events. It also provides specialist supports to the Departments Regional Veterinary laboratories (RVLs). The Division now hosts three National Reference Laboratories (TSE, CEM and AMR). The NRL for AMR was assigned to Pathology Division in November 2019.

National Reference Laboratory (NRL) for TSE

The TSE NRL is responsible for monitoring performance of the TSE rapid testing laboratories in Ireland, PTs involving the preparation and delivery of coded brain tissue homogenate samples to RTLs and subsequent analysis and reporting of the results. All the results were satisfactory in 2019. One RTL discontinued rapid testing services in 2019.

Laboratory Service

Figures for TSE Submissions

Ovine

NRL Result	Surveillance Category	2015	2016	2017	2018	2019
Atypical Scrapie	Active	6	1	1	9	12
Classical Scrapie	Active	1	1	11	1	0
Classical Scrapie	Passive	0	0	0	0	0
Negative	Active	1	1	1	0	0
Negative	Passive	1	0	0	0	1
Negative	SMFS	0	0	0	0	0
Total		9	3	13	10	13

Bovine

NRL Result	Surveillance Category	2015	2016	2017	2018	2019
BSE Positive	Active	1				
(Classical)	0	1				
Atypical L-type	0	0				
BSE Positive	Passive	0	0	0	0	0
Negative	Active	0	0	0	3	0
Negative	Passive	11	17*	15	19	9
Unsuitable	Passive	0	0	0	0	0

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

National Reference laboratory for CEM

The Clinical Microbiology Laboratory hosts the National Reference Laboratory for Contagious Equine Metritis (CEM) (in conjunction with Virology division) in support of the Irish Thoroughbred Breeders Association (ITBA) Codes of Practice. The NRL approves private laboratories for the culture of *Taylorella equigenitalis*, the causative agent of CEM. The CEM laboratory approval scheme consists of on-site inspection audits and an annual proficiency trial, which laboratories must pass to retain their status. Currently ten private laboratories are approved by the NRL. This laboratory worked to enhance the quality of private laboratory CEM testing through its NRL functions by provision of audit, advice and PTs to these laboratories.

Diagnostic Pathology & Surveillance

Pathology Division provides diagnostic pathology, investigative support for NDCC in response to suspect class A & high impact class B disease and also surveillance services for the animal agricultural industries with special reference to the pig and poultry industries. The division also provides first and second opinion histopathology interpretation in support of these functions. Services are also provided to other agencies as required (e.g. the NPWS raptor protocol).

During 2019 a targeted expansion of pig diagnostic post mortem submissions resulted in a significant increase in pig post mortem numbers, yielding better surveillance data and actively building the relationship between pig PVPs and Pathology Division.

Laboratory Service

Diagnostic Post Mortem Submissions

SPECIES	Carcass Submissions
Porcine	303
Avian	230
Cervine	87
Ovine	23
Bovine	21
Other*	77
Total	741

*badger, raptor, fox & hare

The Histopathology Laboratory maintained the service needs for histopathology processing and immunohistochemistry in 2019 for the Veterinary Laboratory Service and other Department divisions such as ERAD. It processed approximately 20,000 slides in 2019 with standard staining methods and special staining techniques including immunohistochemistry.

Histopathology Slide Production:

H&E prep aliquot cases	Total H&E slides	Recut H&E slides	TB H&E slides	Total H&E slides produced
4,572	14,113	959	4,408	19,480

Clinical Microbiology

The clinical microbiology laboratory provides diagnostic microbiology services for the Backweston post mortem room, support for RVLs and hosts the National Reference Laboratory for CEM. In 2019 improved range of tests and test packages were provided including improved clinical isolate pipelines for AMR surveillance. Bacterial typing and characterisation and provision of MALDI-TOF was provided in support of the RVLs.

Further supports to laboratories in 2019 have included improved testing protocols and standardisation of culture SOPs and AST.

Biochemistry & Toxicology

The Biochemistry/Toxicology laboratory undertakes the elemental profiling of animals and provides the diagnostic capability to determine element deficiencies and toxicities in animal tissue and blood, for a range of elements. One of the key functions of the laboratory is to provide diagnostic support for suspect toxicities in herds and supports to interagency investigations of public health, animal health and the environment. The laboratory has enhanced the service delivery in 2019 by equipping the laboratory with a second ICP-MS (Inductively Coupled Plasma – Mass Spectrometry). During 2019 approximately 1,438 whole blood and tissue samples were analysed for one or more of the following elements by ICPMS – As, Cd, Co, Cu, Mn, Mo, Pb, Se. In addition, the laboratory has commenced the introduction of quality procedures and records with a view to achieving ISO 17025 accreditation.

Activities:

Pig laboratory Group

This is a cross divisional group within the veterinary laboratories; areas addressed in 2019 included improving the pig pathology knowledge cohort within the Department, improved response capability including training and improved pig microbiological testing for pig pathogens.

Poultry Laboratory Group

This is a cross divisional group within the veterinary laboratories; areas addressed include improved general poultry diagnostic tests and diagnoses in the various sectors, laboratory sampling strategies for exotic viruses (e.g. Newcastle disease virus) and review of high impact class B disease investigations undertaken (ILT outbreak in August).

Examples of Disease Investigations:

Infectious Laryngotracheitis in Poultry

ILT was confirmed in a layer site in Co. Cavan in August. Pathology Division coordinated an investigation on epidemiologically linked sites to rule out spread of disease. Virology Division carried out gene sequencing, providing evidence that the outbreak had not spread and was likely due to a wild type strain.

Laboratory Service

Bovine Botulism

In 2019, Pathology Division assisted in the investigation of nine suspected Bovine Botulism outbreaks. Botulinum toxin type C/D identified by ELISA in animals from six herds that were submitted for post mortem to the Regional Veterinary laboratories. Suspect herds consisted of five dairy, three suckler and one beef enterprise. Bovine botulism, generally caused by Type C/D toxin is not considered a risk to the food chain.

Rabbit Haemorrhagic Disease (RHD2) in the Irish Hare

The division confirmed RHD2 in Irish hares in 2019 and completed a histopathology review of archived hare samples for Rabbit Haemorrhagic Disease (RHD2) in order to provide evidence that this was a relatively new disease in hares and therefore supported protective measures for the species.

Research Projects:

Abomasitis in Calves: An extensive review of laboratory wide abomasitis in calves' cases from 2017, 2018 and 2019 is currently being carried out, with the objectives to refine a case definition, characterise the gross and histological lesions and identify associated pathogens. In 2019, eight farm visits were conducted to farms where suitable cases had been submitted for post mortem examination, to collate information regarding on-farm practices and potential risk factors.

Mycobacterium bovis genomics: A study on *Mycobacterium bovis* genomics (2019) in a multi-host environment in collaboration with TB section and UCD. ARREST Project: In collaboration with UCD, NUIG and whole genome section in the Department, clinical microbiology contributed the laboratory component on the microbiological assessment of the ability of integrated constructed wetlands (ICWs) to remove antimicrobial resistant organisms from farm effluent and municipal sources:

Validation of high throughput multi-element analysis:

Two collaborative research projects commenced to expand the repertoire of elements, and develop and validate high-throughput multi-element methods in whole blood (Al, As, Cd, Cr, Co, Cu, Pb, Mn, Mo, Ni, Se, Sn and I) and serum/ocular fluid (Ca, P, Na, K, Fe, Zn, Mg) by ICP-MS and ICP-OES (Inductively Coupled Plasma – Optical Emission Spectroscopy), respectively.

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 six groups of residues (Antithyroid agents, Beta-agonists, Chloramphenicol Antibacterial substances including sulphonamides and quinolones, Carbadox and Chemical Elements) and also for *E. coli* and *Trichinella*.

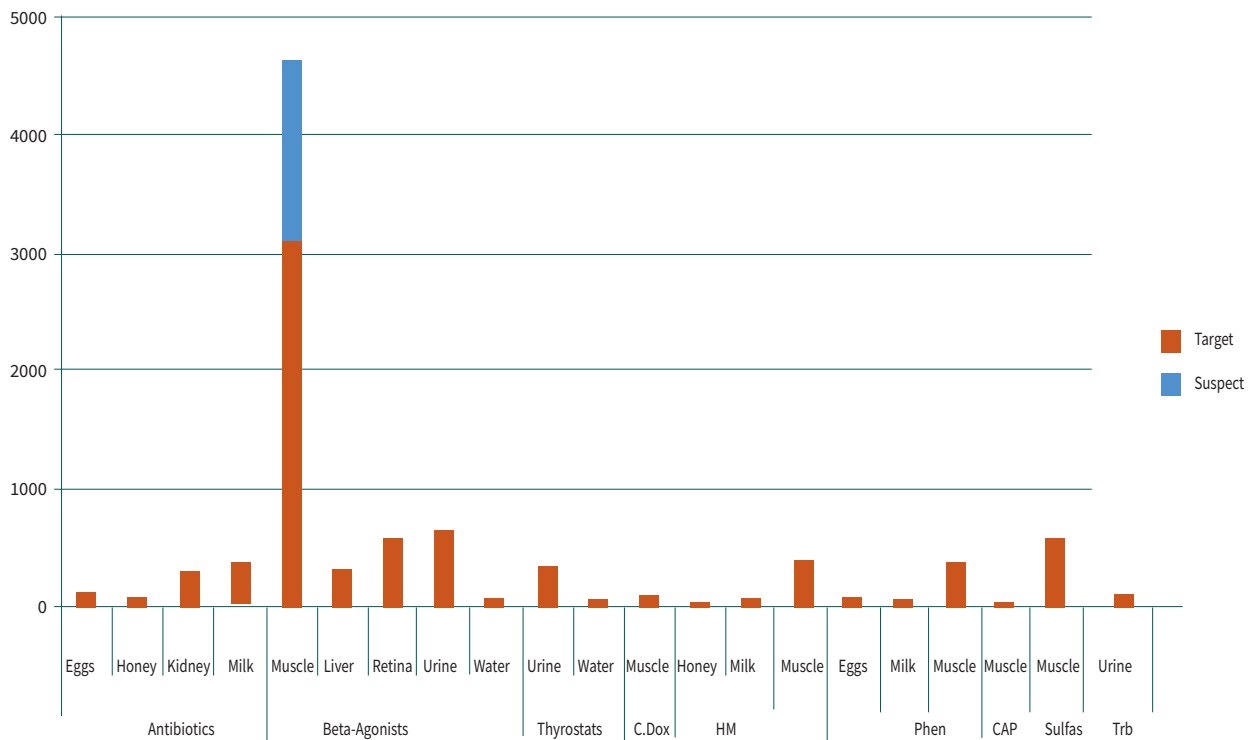
Ireland's National Residue Plan (NRP) for 2019 was approved by the relevant European Commission. The testing under the NRL covers 18 distinct residue groups which fall into three broad categories:

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

During 2019, more than 9,000 samples from food of animal origin were tested under the NRP at the VPHRL.

Laboratory Service

No. samples tested for the NRP 2019 broken down by substance, matrix and whether suspect or target.
C.Dox: Carbadox, HM: Chemical elements, CAP: Chloramphenicol, Phen: Phenicol, Sulfas: Sulphonamides, Trb: Trenbolone



No. samples tested for the NRP 2019 broken down by substance and animal species

Laboratory Service

53,386 individual results were obtained from 9,170 NRP samples analysed. There were the following results:

- Thyrostats in urine: 13 bovine, 2 ovine and 1 porcine. Possibly diet related.
- Antibiotics in bovine muscle: Eight non-compliances among suspect animals: 2 Amoxicillin at 82 and 67 ppb, 1 Marbofloxacin at >300 ppb, 1 Penicillin G at >100 ppb, and 4 Oxytetracycline: 2 at levels of 217 and 184 ppb and 2 at levels >400 ppb.
- Antibiotics in milk: One target sample found to contain 510 ppb of Sulphamethazine. One target sample found to contain 430 ppb of Cloxacillin. Lead in muscle: 2 wild deer and 1 wild pheasant with high levels related to the lead bullets

Microbiology

VPHRL provides laboratory support for import controls and the Inspectorate based at meat plants, ensuring compliance with national and international standards of food safety and hygiene. In 2019, approximately 1,900 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. Of these samples, 10 were positive for *Salmonella* (2 were in imported poultry) and 4 for *Listeria monocytogenes*.

In 2019, VPHRL continued the testing of beef carcasses and meat trimmings for Shiga-toxin producing *E.coli* bacteria to support the exporting of Irish beef to the US and Canadian markets with a total of 792 carcass swabs, 41 composite meat samples and 3 burger/minced/ground beef samples analysed. None of the samples analysed were positive.

VPHRL carries out the microbiological analysis of water from Food Business Operators under Department Regulation that require the use of potable water in their operations. A total of 339 official samples were tested in 2019 for a range of physico-chemical and microbiological properties. Of these 13 samples were found to contain microbiological contamination of *E. coli*, Coliforms, Faecal *Enterococci* and/or *Clostridium perfringens*.

In addition, VPHRL supports the certification of animal by-products (ABP). During 2019, a total of 690 official samples of ABP products (Petfood, Processed Animal Protein, Tallow, Greaves) were enumerated for levels of *Enterobacteriaceae* while 165 samples of compost/digestate from composting plants were enumerated for levels of *E. coli*. Results showed that 7 batches had exceeding levels.

Trichinella

Testing on 3,294 samples of porcine and 240 horse muscle samples was carried out in 2019 as part of the official monitoring programme, and *Trichinella* larvae were not detected in all of them.

Department Laboratories Cork

The Department Laboratories Cork, located on the Model Farm Road in Cork, provides a range of analytical services in support of the Agri-food sector. The main areas of testing include animal health (cattle and pig diseases), food safety and plant health. This work is undertaken in cooperation with relevant control Divisions, and the Departments central laboratory divisions at Backweston. Sample throughput for 2019 is incorporated into the total for each area (see section DSLs, Plant Health, Veterinary Laboratories). Furthermore, the Laboratory Cork is providing analytical support to Animal Health Ireland as part of their ongoing programmes (BVD, IBR and JDS). The Laboratory has successfully developed a biobank facility supported by a comprehensive database which will allow stored samples to be used for further studies and investigations if required.

Laboratory Service

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 primarily 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. Ready to eat fresh horticulture produce and water is also analysed.

Official control samples – Microbiology

In 2019, the Dairy Science Laboratory service carried out approximately 18,000 microbiological analyses on 11,167 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:

- 20 Food Safety hazard notifications
- 59 Process Hygiene criteria non-conformances
- 1 Phosphatase/peroxidase criteria non-conformances
- 49 non-conformance reports in relation to water samples
- 2 non-conformances reports in relation to animal-by-products samples
- 4 non-conformance reports in relation to samples from the processing environment

The three laboratories have Quality Management Systems in place based on the ISO17025 standard to meet the requirements of the National Accreditation Board (INAB). In 2019, the laboratories continued to maintain and extend their scopes of accreditation.

Backweston received accreditation for two additional test methods and one extension to scope. Collectively the three laboratories have 70 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 2019, 647 samples were analysed to confirm compliance with the requirements of the EU legislation detailed above. 14 non-conformance reports in relation to compositional analysis were reported.

National Reference Laboratory (NRL)

In 2019, the Backweston Dairy Science Laboratory continued to operate as the National Reference Laboratory (NRL) for *Listeria monocytogenes*, Coagulase-positive staphylococci and viruses in food.

The NRL offers a molecular typing and characterisation service for *Listeria monocytogenes* isolates from other laboratories in Ireland by PCR and whole genome sequencing analysis (WGS). In 2019, the NRL expanded the use of WGS and obtained ISO 17025 accreditation for this method. WGS was carried out on *Listeria monocytogenes* and Shiga-toxin *E. coli* (STEC). PCR analysis was carried out on 2,950 *L. monocytogenes* isolates and 249 were characterised using WGS. 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. It is also used to inform EFSA in cases of international foodborne outbreaks.

The NRL also carries out analysis for the detection of Staphylococcal enterotoxins in food, and is the only laboratory in the country to provide this service,

Laboratory Service

Molecular typing is also carried out to determine if CPS isolates carry the genes necessary for enterotoxin production and in 2019 this analysis was carried out on 21 isolates.

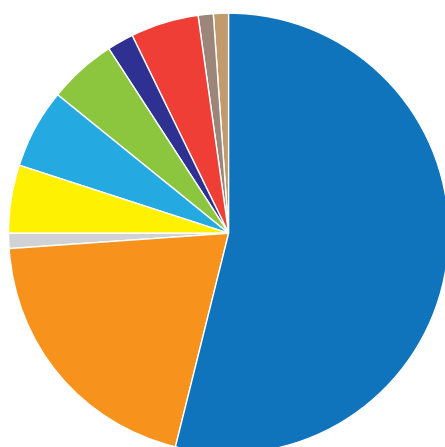
Pesticides, Plant Health, Feedingstuffs and Seed Testing Laboratories

Pesticide Residues Laboratory

The Pesticide Residue Laboratory is National Reference Laboratory for detection of pesticide residues in fruit and vegetables, cereals, food with high fat content and single residue methods.

In 2019, 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. The percentage of each matrix or sample type (of the 1,601 samples received for testing in 2019) is illustrated in the following pie-chart.

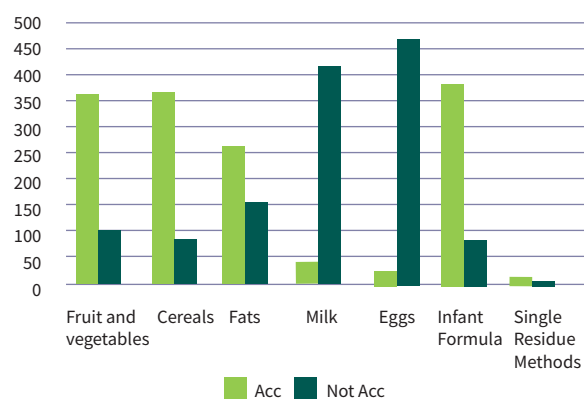
Pesticide Residue Lab samples



FRUIT AND VEGETABLES	54%
FATS	20%
OILS	1%
CEREALS	5%
FEED	6%
MILK	5%
EGGS	2%
BABYFOOD	5%
HONEY	1%
WATER	1%

To maximise efficiency the laboratory uses a combination of multi-residue methods and single-residue methods. The number of pesticides each commodity is analyzed for is given below. Most of these test method and matrix combinations are accredited to ISO 17025 (green bars) but some are not yet fully included within the scope of accreditation (yellow bars).

Number of analytes per method



The following is a summary of the samples analysed:

	Samples	> MRL	% > MRL
Fruit and Vegetables	867	7	0.8
Fats	325	0	0.0
Oils	10	0	0.0
Cereals	83	8	9.6 ²
Feed	99 ¹	0	0.0
Milk	74	0	0.0
Eggs	30	0	0.0
Babyfood	72	0	0.0
Honey	19	0	0.0
Water	22	0	0.0
Total =	1,601	15	0.9

1 - 70 feed samples were analyzed for PCB's only as a screening method for the presence of dioxins

2 - 5 maize samples analysed as part of an investigation were found to be above the MRL.

The Maximum Residues Level (MRLs) for pesticide residues in food were exceeded in 15 samples received during 2019.

Laboratory Service

Pesticide Formulations Laboratory

The Pesticide Formulation Laboratory (PFL) provides the analytical support necessary to assure the quality of plant protection products on the Irish market. In 2019, 49 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, none were out of specification.

Samples	Active Ingredient	Out of Spec	Phys/ Chem tests	Out of spec
49	72	0	33	1

Plant Health

Backweston:

The Plant Health Laboratory (PHL) works closely with the Control Divisions in the area of plant health providing an analytical service and expertise for regulated plant pests and diseases under Regulation (EU) 2016/2031 and Regulation (EU) 2017/625.

In 2019, the laboratory analysed the following number of samples:

Sample category	Number of samples analysed	Number of positives for quarantine organisms
Plant pathology samples	848	185
Entomology samples	247*	29

*30 samples were referred to another laboratory for confirmation

Over 30 quarantine organisms were tested for within these sample numbers.

The PHL is the National Reference Laboratory (NRL) for the following 6 corresponding European Reference Laboratories (EURL's):

Insect and mites

**Bacteria,
Fungi and Oomycetes,
Viruses, viroids and phytoplasmas,
Nematodes,
Honeybee Health,**

The PHL obtained its first accreditation under ISO 17025 in 2019, as is now required because the new Official Control Regulation incorporates plant health within its scope.

Cork:

The Cork laboratory tested 1,507 plant samples for *Erwinia amylovora* (cause of Fireblight disease of Rosaceae) and 434 potato samples for *Clavibacter michiganensis sepedonicus* and *Ralstonia solanacearum* (cause of Ring Rot and Brown Rot of potato). In addition, the Cork laboratory subsampled *Hymenoscyphus fraxineus* (cause of Chalara/Ash Dieback) samples.

Feedingstuffs Laboratory

The Feedingstuffs Laboratory (FSL) provides expertise and laboratory analysis of animal feedingstuffs for contamination by meat and bone meal and other prohibited materials. The FSL is the designated National Reference Laboratory (NRL) for the detection of animal protein in feedingstuffs (NRL-AP).

Laboratory Service

In 2019, the laboratory analysed the following samples:

Type of analysis	Number of samples analysed	Number of samples over the limit of detection
Presence of processed animal protein (PAP). (Commission Regulation (EC) No 51/2013).	326	*1
Presence of Prohibited material (Commission Regulation (EC) No 767/2009).	37	08
NRL interlab and proficiency in compliance with Article 12 and Article 33 of Regulation (EC) No. 882/2004	63	N/A

*Not declared as pet food

The laboratory also received 13 samples of wheat and barley destined for animal feed which were further tested for botanical impurities by the seed testing laboratory according to Regulation 2002/32/EC.

Continued participation in inter-laboratory trials organised by European Union Reference Laboratories (EURL) were also undertaken. These comprised of microscopy and molecular trials for routine feedingstuffs matrices but also for the first time, fish feed containing commercial insect feed. The laboratory was also involved in the review and drafting of the revised Commission Regulation (EC) No 51/2013 ANNEX II in collaboration with the EURL-AP and NRL network.

The feedingstuffs laboratory is a member of IAG - International Association for Feedingstuffs Analysis and in 2019 the attention of the group moved to microplastics in feed.

Projects & Special Investigations:

“Investigation into the impact that milk-based ingredients have on the detection of prohibited animal proteins in feed. The research was based upon the reliability of the quantitative PCR method to examine feed for the presence of animal DNA.”
Investigation of muscle fragments of insects.

Seed Testing

The Seed Testing Laboratory (STL) provides a seed testing service to Control 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 7,874 seed tests, on cereals, grasses, forage crops, oilseeds, pulses, vegetables, trees, etc were completed during 2019. The % breakdown of the type of tests completed is:

Laboratory Service

Test type	% of total seed tests
Germination	60%
Analytical purity	22%
Seed Health	5%
Seed viability (tetrazolium)	6%
Advisory	7%

The quality of the winter cereal seed harvested in Ireland during 2019 was of good quality while the seed crop from spring cereals was more variable in quality with higher levels of reduced viability showing in analysis.

The Seed Testing Laboratory also curates the National Genebank in conjunction with the Crop Policy Evaluation and Certification Division. In 2019, the STL contributed to a regeneration and characterisation programme of heritage cereal and crop wild relative species. Further regeneration was completed on heritage cereals in the STL glasshouse over the winter months.

Crop Policy, Evaluation and Certification Division in conjunction with the Seed Testing Laboratory continued a regeneration programme of various commercial crop species and of their crop wild relatives. The Laboratory maintains the National Cereal Seed and Crop Wild Relative Genebank. Regeneration of seed of “heritage” barley varieties continued in 2019 with a view to commercialisation in tandem with a characterization programme for these heritage cereals.

Regional Veterinary Laboratories (RVLs)

The Regional Veterinary Laboratories are a network of small multidisciplinary veterinary diagnostic laboratories located at Athlone, Backweston, Cork, Kilkenny, Limerick, and Sligo. The network was established over 50 years ago and is about to embark on a refurbishment and redevelopment of the facilities established at that time. These laboratories provide a referral diagnostic and field investigation service including post mortem examination to Irish food animal keepers through their veterinary practitioners. Vets refer carcasses for post mortem examination or

samples for laboratory testing in order to confirm or determine a diagnosis, especially in cases where a diagnosis has not been possible on clinical grounds, or particularly where there is a suspicion of a novel, emerging or exotic disease or a suspicion of a zoonosis or a threat to the food chain. Veterinary practitioners also contact the RVLs to discuss difficult cases with the duty veterinary research officers who can help determine a diagnostic plan, which might include the referral of material for post mortem or laboratory examination, or the performance of a field investigation by the RVL.

As well as providing assistance in reaching a diagnosis and appropriate treatment to enhance animal welfare and production efficiency, this service also provides an early warning system for the detection of threats to the food chain, exotic or novel disease and enables a timely and effective response to them. The results and data generated by the post mortem, laboratory testing and field investigation work undertaken by the Department’s Regional Veterinary Laboratories provides animal disease surveillance data, which are combined with similar data generated by a similar service in Northern Ireland as an annual All-Island Animal Disease Surveillance Report. Between the annual reports, an illustrated digest of the highlights & notable findings is published in the Veterinary Ireland Journal as a monthly report, and a quarterly review of RVL data and trends is published on the Department’s Animal Disease Surveillance website at <http://www.animalhealthsurveillance.agriculture.gov.ie/>

Other data, findings and alerts are issued through scientific reports and papers, website posts and articles in the veterinary and farming press. The RVLs provide further support services in relevant related areas such as the Department and Animal Health Ireland’s disease eradication programmes, wildlife surveillance, participation in regional zoonosis committees. RVLs also provide expert input into AHI’s Technical Working Groups, the Department’s own species and discipline Expert Groups.

Laboratory Service

RVL workload -	2019
Post mortems: Carcasses	5,456
Post mortems: Foetuses	2,244
Clinical pathology submissions*	11,540

* Submissions are a count of the submission of batches of samples from a farm or incident and could comprise a single sample or several hundred

The Strategic Development of the Laboratory Service

A Strategic Review of the Department's Laboratories was undertaken in 2016 as part of the Department's ongoing commitment to ensuring that our Laboratories are capable of meeting the current and future needs of the organisation and its external stakeholders, the farming community, the food industry and wider society. This report put forward a number of recommendations on organisational restructuring, operational management and strategic development. This complex programme for change has been divided up into a series of projects across the various laboratory divisions focusing on:

- Food Chemistry
- Food Microbiology
- Plant Science
- Animal Health
- Quality Management
- Regional Laboratories
- LIMS
- Sample Reception
- Procurement and Stores
- Workspace Planning

These projects are aimed at facilitating the Laboratories in achieving greater operational efficiency and scientific excellence while exploring opportunities for greater synergies and more effective management of its various activities.

In 2019, RSM Ireland completed its cost-benefit analysis (CBA) report on proposed options for future development of the Regional Veterinary Laboratories (RVLs) and presented this to the Department. The conclusions and recommendations in the CBA have been carefully considered along with the feedback

received from stakeholders and this has informed a proposal on how best to redevelop the RVLs over the coming years. Subsequently the Department announced details of a ten year-plan that was approved by Government for development of its regional laboratories in early September.

The plan will involve a phased redevelopment and a projected overall investment of €33.5 million over the decade to the end of 2028. New laboratories will be built in Kilkenny, Sligo, Munster (at a site between Cork and Limerick that is yet to be selected) and Athlone. The envisioned Munster facilities will be developed as a centre of excellence for investigation and surveillance of disease in dairy cattle by the end of 2026. Some of the other significant project milestones achieved in 2019 include:

The appointment of two new Heads of Division for the Food Chemistry and Food Microbiology divisions. This is the first transitional step towards two new multidisciplinary Divisional teams for food safety related work. Work is now continuing to draft proposals on the configuration of work areas, roles, responsibilities and reporting lines of staff within these new Divisions.

A project team was established to design, procure and develop a new Laboratory Information Management System (LIMS 2.0). A Request for Information (RFI) to LIMS providers was published on eTenders as the first stage in a rigorous procurement exercise.

As part of an ongoing commitment to ensure that all laboratory-based staff are fully aware of the range of projects and other related activities currently on-going within the Department's Laboratories, the Project Management Office organised a very successful and informative "Open Day" Session.

2

Strategic Goal Farm/Sector Supports and Control

*Provide income and
market supports
to underpin the rural economy
and the environment*

Promoting Sustainable Farming

Rural Development Programme 2014 -2020 (RDP)

The Programme is part of the Common Agricultural Policy (CAP) and is co-funded by the EU's European Agricultural Fund for Rural Development (EAFRD) and the national exchequer. Ireland's 2014-2020 RDP was formally adopted by the EU Commission in May 2015 and contains a suite of extensive measures that support the farming sectors and support community led local development.

EU support for the RDP through the EAFRD amounts to €2.19 billion over the 7-year Programme lifespan. This EU funding is supplemented by exchequer funding to bring the total support available under the RDP to €4.146 billion. The RDP measures are designed to meet the three overriding objectives for RDP funding set out in EU legislation:

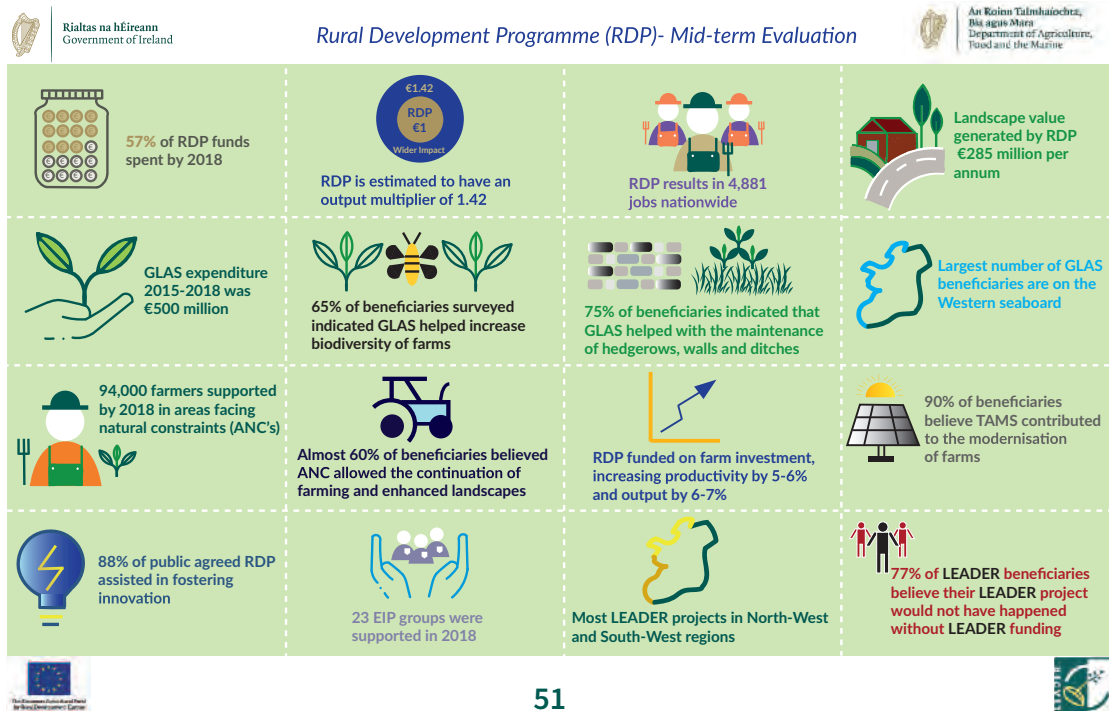
Enhancing the competitiveness of the agri-food sector;
Achieving more sustainable management of natural resources; and,

Ensuring more balanced development of rural areas and economies.

All the RDP schemes are fully operational. In 2018, a number of amendments were made to the programme. Specifically, an additional €25 million for the Areas of Natural Constraint (ANC) Scheme was approved. Changes to GLAS (agri-environment scheme) actions to address the fodder shortage due to adverse weather conditions. The Organic Farming Scheme welcomed 60 new applicants into the Scheme in 2019.

Ireland has performed very well in terms of implementation of the Rural Development Programme. Ireland's drawdown of EU Funds represented 79% in the 2014-2019 period, the second highest in the EU and compares well to an EU average of 58%. The Programme is fully operational with most measures/schemes running at optimum level; based on current projections, the programme is expected to drawdown all EU funding by the end of the Programme.

A mid-term evaluation of the programme was conducted by Indecon International Economic Consultants in 2019, and the full report is available on the Department website. The report noted the positive impact of the Programme on the rural economy, acknowledging its role in supporting rural employment, enhancing competitiveness, maintaining the rural landscape, and supporting positive actions for the climate and environment.



Promoting Sustainable Farming

National Rural Network (NRN)

The establishment of a NRN is an EU legislative requirement as part of Ireland's Rural Development Programme and is funded through the technical assistance budget. Irish Rural Link, in partnership with the Wheel, NUI Galway and Philip Farrelly and Co., is the Network Support Unit which operates the NRN. The role of the NRN is to:

- Increase the involvement of stakeholders in the implementation of the Rural Development Programme;
- Improve the quality of implementation of the Rural Development Programme;
- Inform the broader public and potential beneficiaries on rural development policy and funding opportunities;
- Foster innovation in agriculture, food production, forestry and rural areas.



National Rural Network

The NRN cooperates with the European Network for Rural Development by participating at meetings and exchanges at EU level, providing examples of projects, good practices and information for network statistics, amongst numerous other engagements. The European dimension of the network is seen as providing key opportunities and best practice examples of rural development and innovation that could be examined and replicated within the Irish context. Further details on the work of both networks, including case studies, research, networks, newsletters, are available on the NRN and ENRD websites.

Green Low-Carbon Agri-Environment Scheme

Over 50,000 participants were approved into GLAS under GLAS 1, 2 and 3. The target level of participation set in the Rural Development Programme (RDP) was exceeded well ahead of schedule. GLAS provides support to farmers aimed at encouraging actions that promote biodiversity, protect water quality and combat climate change. GLAS has a range of over 30 actions available for selection by participants in consultation with their Advisor. The maximum annual payment available to participants in this five year scheme is €5,000 under the general scheme, with provision for payment of up to €7,000 (known as GLAS+) where the participant is required to give exceptional environmental commitments in a limited number of cases. Over €797 million has been issued to GLAS participants to date.

Targeted Agricultural Modernisation Schemes (TAMS)

The TAMS II suite of measures under the RDP opened in 2015 and remains open on a tranche by tranche basis. Payments were made throughout 2019 as approved works were completed and payment claims submitted to the online system. The measures available under TAMS include: -

- 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
- A Tillage Capital Investment Scheme opened in March 2017.

Payments of €76.5 million issued in 2019.

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.

Promoting Sustainable Farming

The Burren Programme is an established five-year agri-environment scheme which currently has 328 participants. The Burren Programme is widely seen as a benchmark for environmentally focused farming in Europe. It encompasses both results-based habitat management and complementary non-productive capital investment site works.

The primary objectives of the Programme are:

- To ensure the sustainable agricultural management of high nature value farmland in the Burren;
- To contribute to the positive management of the Burren landscape and its cultural heritage;
- To contribute to improvements in water quality and water usage efficiency.

In 2019, approximately €1.36 million of payments were issued to farmers.

The Hen Harrier Programme was launched in 2017 and will run for five years. Its main area of focus are the farmers managing the habitats in the six Hen Harrier SPAs. The project currently has 1,524 farmers accepted into the Programme.

2019 was a very successful year for hen harriers - the 56 confirmed pairs in the SPAs reared at least 81 chicks. This was the highest number for 14 years. The gains were most pronounced in Kerry where one pair raised an almost unprecedented 5 chicks.

The program developed a Nest Protection Method Statement to ensure activities follow all legal, welfare and wildlife guidance and adhere to best practice. The Nest Protection Officers contracted to the Programme operate under licence from National Parks & Wildlife Service and in accordance with an approved Nest Protection Method Statement.

A number of Innovation schemes were also developed by the programme these include:

Tackling Nutritional Deficits in Upland Cattle Grazing

The Hen Harrier Project partnered with Dawn Meats and Devenish Nutrition to develop and demonstrate new techniques for tackling nutritional deficits in cattle grazing in the uplands and to give farmers tools for influencing animal behaviour and forage utilisation patterns.

Wildfire Resilience

Following the severe fires in the Slieve Bloom Mountains in 2018, the Hen Harrier Project liaised with local fire services to develop a plan for fire-fighting operations in the SPA areas. Overall Hen Harrier productivity in the Slieve Blooms was down considerably compared to the previous year. In 2018, 16 chicks were fledged, this fell to 5 in 2019. This represented a serious fall in what had previously been one of the most productive areas within the SPA network. A repeat of this type of fire would pose a serious risk to the Hen Harriers Projects objectives. The Project Manager attended the Wildfire Lessons Learned Seminar.

Local Actions

This fund provides support for actions which are neither admin payments to the team or farmer payments and could not be delivered through an individual farm plan. It includes nest protection officers who are employed for the summer months usually, bird monitoring staff who check on the health of the nests after the breeding season, field trials and pilots that are used to test possible actions.

This fund also includes Local Action Grants which are micro grants open to farmers, schools, clubs, community groups and others. This funding is part of a hearts and minds approach, that serves to demonstrate that the Hen Harrier is a local resource, the value of which is shared by the entire community.

Up to the end of December 2019 over €4.6 million was issued to farmers with a further €223,000 paid in local actions.

The Pearl Mussel Project signed a contract with the Department in 2018 will run until December 2023. The Minister for Agriculture Michael Creed officially launched the Programme in Ardroom on March 29th 2019. The total area of farmland under contract in the Programme is 21,405ha, which is 53% of farmland across all catchments.

The aim of this voluntary programme is to develop a results-based agri-environmental programme to ensure the long-term co-existence of freshwater pearl mussel populations and farming in the top eight freshwater pearl mussel catchments in Ireland. As the project was being designed, consultation with landowners in each catchment area was a key aspect.

Promoting Sustainable Farming

This encouraged stakeholder buy-in and ensured that the expertise, advice, and concerns of farmers in the target catchment areas were incorporated into the Programme at an early stage.

During the development of the project programme some fundamental features were adopted to overcome the challenges presented by the aquatic target species and to ensure that participating farmers are adequately incentivised:

- Quality of terrestrial habitats is used as a result indicator subject to adjustment following a 'whole-farm assessment'.
- The 'whole-farm assessment' focuses on watercourse condition and nutrient and farmyard management. The assessment result influences final payment thereby creating a major incentive to improve watercourse and farmyard and nutrient management.
- Lower scoring plots are paid at the highest payment rates. This approach incentivises farmers to improve the management of their lowest scoring plots.
- Floodplain payment is incorporated to reflect the importance of these features to the conservation of freshwater pearl-mussel.
- Farmyard management. The assessment result influences final payment thereby creating a major incentive to improve watercourse and farmyard and nutrient management.
- Lower scoring plots are paid at the highest payment rates. This approach incentivises farmers to improve the management of their lowest scoring plots.
- Floodplain payment is incorporated to reflect the importance of these features to the conservation of freshwater pearl-mussel.

Environmental monitoring during the first year of the Programme focussed on developing a robust baseline dataset of farm habitats and watercourses. The PMP team surveyed a large proportion of farms during the 2019 field season with a view to developing a baseline and inform score verification on the advisor submitted data. The PMP provided a detailed mapping and characterisation of all watercourses on participating farms.

The PMP team have produced an extensive list of publications, all of which can be viewed and downloaded on the project website.

In 2019, 342 farmers were accepted into the project with further contract offers expected to be made in 2020. Up to the end of December 2019 over €664,000 was issued to farmers.

The European Innovation Partnership (EIP) initiative funds co-operation between different stakeholders including farmers, researchers, advisors and businesses who form an Operational Group, to identify innovative solutions to particular challenges.

It was developed to respond to challenges at a local level by stimulating and developing innovative approaches in dealing with environmental issues.

One of the important aspects of the whole EIP initiative is its place in the local community and to encourage innovation at a local level. The farmers are an integral part of the process and with researchers, scientists and advisors come together in Operational Groups to address a specific local environmental issue.

The benefit of all these EIPs will not just be confined to their regions – the EIPs will essentially road-test ideas and practices that can be disseminated to other farmers and thereby enable improved productivity, enhanced resource efficiency and more sustainable farming practices.

A fund of €24 million was set aside for the EIP projects which were selected from two competitive open calls. The Department received over 170 project proposals of which 12 projects were selected for implementation from the first call and a further 9 from the second call. These projects cover a wide range of topics including organic production, pollinators, water quality, flood management, biodiversity, soils, and farming in an archaeological landscape and targeting un-utilised agricultural biomass.

Through the selected 21 projects, the EIP Initiative has generated great interest throughout Ireland in the possibilities it affords. The variety of projects demonstrates commitment of people from all parts of

Promoting Sustainable Farming

the country to address the challenges in the agri-food sector, to refocus on biodiversity and deal with climate change.

In 2019, in conjunction with the National Rural Network, the EIP-AGRI booklet, posters and interactive database were designed and produced. This booklet sets out the activities and background of each of the successful EIP-AGRI projects.

Up to the end of December 2019, over €207,000 worth of payments was issued to farmers.

Traditional Farm Buildings Scheme

The Heritage Council administers the GLAS Traditional Farm Buildings Grant Scheme for the conservation and repair of traditional farm buildings and other related structures on behalf of the Department of Agriculture, Food and the Marine. The principal objective of this scheme is to ensure those traditional farm buildings and other related structures that contribute to the character of the landscape, and are of significant heritage value, are conserved for agricultural use. In 2019, payments of €1.136 million were issued to 76 applicants to carry out works on these structures.

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:

- Environment, climate change and good agricultural condition of land
- Public, animal and plant health
- Animal welfare
- Good agricultural and environmental conditions.

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 2019, a total of 1,410 Full Cross Compliance and 4,915 Animal Identification and

Registration inspections were carried out in respect of the 1%-3% requirement for Cross Compliance inspections.

Direct Payments

In 2019, over €1,162 million was paid to almost 122,000 farmers under the 2019 Basic Payment Scheme and over €241 million was paid to 96,600 applicants under the 2019 Areas of Natural Constraints scheme. These direct payments to farmers in 2019 were paid within the service delivery targets of the Farmers Charter and Action Plan. 2019 Scheme year payments continued in 2020.

Beef Data and Genomics Programme (BDGP)

The Beef Data and Genomics Programme (BDGP) was approved as an agri environment scheme under the Rural Development Programme. It was launched in April 2015. Funding of €300m was allocated for the programme which runs for 6 years from 2015. In 2017 BDGP II was launched to cover the period 2017 – 2022.

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.

For 2019, 24,011 farmers continued to participate in BDGP I and II. Payments amounting to €38.2m issued to 21,361 participants in December 2019 in respect of the 2019 scheme year. Payments will continue as herds become eligible.

A Spending Review on the BDGP was also published in July 2019 (<https://www.gov.ie/en/collection/5915ad-spending-review/>), finding that early indications across productivity and environmental performance were positive, and the collection of data would greatly enhance the ability of the sector to improve the longer term.

Promoting Sustainable Farming

Knowledge Transfer Programme

Ireland's Rural Development Programme includes a provision for a Knowledge Transfer programme which is informed by experience with previous discussion groups including the Beef Technology Adoption Programme (BTAP). The three year Programme which commenced in 2016 and concluded in 2019 moved away from the task-based approach of previous schemes and focused on key policy priorities including profitability, environmental sustainability, breeding and herd health. One to one engagement between the KT Facilitator and farmer was complemented by group discussion and the sharing of experience and information between participants.

Approx 18,000 farmers participated in Year Three of the Programme attending meetings and producing a Farm Improvement plan with their approved Knowledge Transfer Facilitator. This Farm Improvement Plan included animal health measures completed with an approved private veterinary practitioner. Year Three of the Scheme concluded end of July 2019. Payments are ongoing approx. €12.7 million issued to participants across all 6 Knowledge Transfer sectors and a further €9.5 million issued to Facilitators in 2019.



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.

2019 Performance on Customer Service Delivery Targets

SERVICE	TARGET DELIVERY TIME	2019 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 16.10.19. Balancing payments commenced on 1.12.19	Advance payments commenced on 16.10.2019 with balancing payments commencing on December. By end 2019 €1.162 billion had been paid to over 99% of applicants.
Areas of Natural Constraints	In 2019, advance payments under the Scheme were due to commence in mid September, with balancing payments commencing at the start of December.	Advance payments under the 2019 ANC scheme commenced, on schedule, during the week commencing 16 September 2019 with 79,000 farmers being paid €168.5 million. Balancing payments commenced at the start of December. As at 31 December 2019 €241 million had been paid to 96,600 applicants.
Beef Data and Genomics Programme	Payments for a scheme year to commence in December of the scheme year.	Payments amounting to €38.2 million issued to 21,361 participants in December 2019
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%

Customer Service

SERVICE	TARGET DELIVERY TIME	2019 PERFORMANCE
<p>Forest Service Grant Schemes</p> <p>Forestry Premium Scheme</p>	<p>Annual bulk payment for premium schemes run in April but payments continue throughout the year.</p>	<p>€25.9m million paid in January 2019 as part of the first bulk premium run in respect of 6,850 online applications.</p> <p>€15.3 million paid in April 2019 bulk premium run (paper forms) in respect of 5,117 applications.</p> <p>The total value of the 18,831 annual forest premiums paid in 2019 amounted to €64.4 million.</p> <p>55% of premium applications were made on-line.</p>
<p>Compensation – Bovine TB Eradication and Brucellosis Monitoring Schemes</p>	<p>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.</p>	<p>96.7% 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.</p> <p>96.8% 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.</p>
<p>BSE Scrapie</p>	<p>BSE Compensation - 100% paid within 21 days of receipt of completed documentation.</p> <p>Scrapie Compensation - 100% paid within 21 days of receipt of final documents.</p>	<p>All applicants paid within the required time-frame.</p> <p>No applications</p>
<p>Rice Import licenses</p>	<p>24 hours</p>	<p>100%</p>
<p>Milk & Milk Products Export licence Import licences</p>	<p>24 hours</p>	<p>100% 100%</p>
<p>Tariff quota for unspecified countries of origin</p>	<p>5 working days</p>	<p>100%</p>
<p>Non-quota preferential licence</p>	<p>5 working days</p>	<p>100%</p>
<p>Tariff quota licence for specified countries</p>	<p>5 working days</p>	<p>100%</p>
<p>General import licences</p>	<p>1 working day</p>	<p>100%</p>

Scheme Operations

Tables below give operational details on the main schemes operated by the Department in 2019.

Scheme	Applications received in 2019	Applications processed in 2019	Payments made* € M
Basic Payment Scheme/Greening	122,558	121,575	1,162
Areas of Natural Constraints	104,474	96,600	241
Afforestation Grant	1,464	1,485	16.13
Forestry Premium (Afforestation Scheme)	21,946	21,600	64.35
Early Retirement	0	0	0.184
TB and Brucellosis Compensation	4,692	4,471	17.7
BSE Compensation	9	8	0.008
Scrapie Compensation	0	0	0
Beef Data and Genomics Programme (BDGP)	0	21,361	38.2
Investment Aid for Commercial Horticulture	167	167	5,834
Organic Farming Scheme	0	1,558	9,388
Scheme of Organic Grant Aid	4	5	0.133
TAMS (exc. Bioenergy)	11,001	6,187	76.5
Sheep Welfare Scheme (represents advance payment at 85%)	19,735	18,489	14.9

3

Strategic Goal Policy and Strategy

*Provide the optimum
policy framework
for the sustainable development
of the agri-food sector.*



EU Interactions

EU Interactions

Romania and Finland shared the role of the President of the Council of the European Union in 2019 – Romania from January to June, and, Finland from July to December. The key issue discussed by Member States, including Ireland, throughout 2019 was the ongoing negotiation of the Common Agricultural Policy post 2020.

Other key issues discussed during 2019 included the Bioeconomy Strategy; international trade issues in particular the EU-Mercosur Free Trade Agreement and the consequences of the Airbus-Boeing WTO dispute for the EU agri-food sector; EU-African Union co-operation; forestry related matters such as the European Commission's Communication on Stepping up EU action to protect and restore the world's forests, and the EU Forest Strategy post 2020. In addition, the new President of the European Commission launched the European Green Deal in December, which is a cross-cutting sectoral policy initiative with the aim of achieving a climate neutral economy by 2050.

In late 2019, the Commission proposed two CAP Transitional Regulations with the aim to provide legal certainty for farmers and Member States on the continuity of Direct Payments and payments under the Rural Development Programme beyond 2020.

In addition, the Commission approved a seventh amendment to Ireland's 2014-2020 Rural Development Programme approving two alterations to current LEADER arrangements.

The Commission published its proposals for an EU Green Deal which aims to strengthen EU ambitions for climate action through a climate law and aims for several new complementing strategies such as farm to fork, biodiversity and circular economy.

EU Institutional Changes

European Parliamentary Elections

The European Parliamentary Elections took place between 23 - 26 May. The newly elected MEP's, including 11 Irish MEP's, took up their seats in the European Parliament on 2 July 2019. As a result of the UK's withdrawal from the EU, Member States gained additional MEP's. Ireland gained two extra MEP's, however, they will not take their seats in the European Parliament until 1 February 2020 i.e. after the UK's withdrawal from the EU on 31 January 2020.

One of the first tasks of the new European Parliament was to elect a new President of the European Commission. The successful candidate was Ursula von der Leyen who took over from Jean Claude Juncker.

New European Commission

The new European Commission came into effect on 1 December 2019. President von der Leyen appointed three Executive Vice Presidents, all charged with responsibility for a broad thematic area of the Commission's work programme. These three thematic areas are also identified as the President's key priorities:-

- Frans Timmermans, Executive Vice-President for the European Green Deal – with responsibility for climate related issues, including the strategy for sustainable food, the circular economy and the introduction of climate related tax policies;
- Margrethe Vestager, Executive Vice-President to make the European Union fit for the digital age;
- Valdis Dombrovskis, Executive Vice-President for economic and financial affairs, with a focus on inclusivity.

The new College of Commissioners also came into effect on 1 December 2019, following approval by the European Parliament. Each Commissioner was assigned responsibility for specific policy areas by the President of the European Commission. The new Commissioner for Agriculture is Polish Commissioner, Janusz Wojciechowski.

EU Interactions

Also in 2019, there have been leadership changes to the other EU Institutions, the European Council and the European Parliament:-

- Charles Michel has taken over from Donald Tusk as President of the European Council;
- David Sassoli replaced Antonio Tajani as President of the European Parliament.

Brexit

Work continued in 2019 to respond to the UK's decision to leave the European Union. The main impact of the Brexit vote on the sector was the effect of sterling volatility on those businesses that have a significant trading relationship with the UK, and this drop in currency value continues to have a negative impact. The medium to longer term threats from Brexit include the possible introduction of tariffs on trade between the EU and UK, potential divergences in regulations and standards between both countries post-Brexit and the introduction of regulatory controls on trade between the EU and the UK.

The Withdrawal Agreement and Political Declaration were agreed between the EU27 and Prime Minister May in June 2018. This was subject to ratification by the European Parliament and the UK Parliament. However, the original Withdrawal Agreement was not ratified by the UK Parliament. Therefore, in October 2019 a Revised Withdrawal Agreement and Political Declaration was agreed between the EU 27 and Prime Minister Johnson. This was subsequently ratified by both the European and UK Parliaments.

In order to keep Member States apprised of Ireland's concerns on the impact of Brexit on the agri-food and fisheries sectors, Minister Creed continued his engagement with his EU counterparts in 2019. During the year he met with his counterparts from Belgium, Denmark, France, Germany, Poland, Spain, Portugal, Slovakia, Luxembourg, Lithuania, Slovenia and The Netherlands. The purpose of these engagements was to ensure the Withdrawal Agreement would be ratified and that meaningful negotiations would get underway as soon as possible. He highlighted the specific areas of interest to the Irish agri-food sector and kept them fully abreast of the impacts a no-deal Brexit would have on the agri-food sector in Ireland.

Minister Creed also met regularly with Commissioners Hogan and Vella to discuss the potential impact of Brexit on the agri-food and fisheries sectors and to stress the need for the Commission to be ready to deploy a range of measures to mitigate the potential impacts on farmers and processors. Minister Creed also held a meeting with Mr. Robert Goodwill M.P., the UK Minister for Agriculture, Fisheries and Food.

CAP post 2020

The legislative proposals for the next CAP 2021-27, continued to be discussed under the Romanian and Finnish Presidencies in 2019. The Romanian Presidency pressed strongly for a Partial General Approach and engaged with Member States intensively on this. However, due to the complex nature of the proposals and the number of outstanding issues raised by Member States, the Romanian Presidency instead presented at their final Agri-Fish Council in June, a Progress Report which set out the work done during their Presidency and the state of play with each of the draft Regulations.

In June the Romanian Presidency invited Member States to submit written comments on the draft Regulations which were then provided to the Finnish Presidency. Ireland submitted a full position on all three draft Regulations.

At the outset of their Presidency, the Finns undertook at the very least to present revised consolidated texts for all three draft Regulations. At best, they hoped to achieve a General Approach at Council, however, this was very much dependent on the parallel budgetary negotiation process on the Multiannual Financial Framework (MFF) post 2020.

The Finnish Presidency made great efforts to address Member States concerns, in particular, with regard to the New Delivery Model reporting system and the increased climate and environmental ambition. Despite their best efforts, it was not possible for the Finns to achieve Council General Approach and at December Agri-Fish Council they presented a Progress Report which set out the work done to date on the CAP proposals.

EU Interactions

The Finns prepared consolidated revised text on all three draft regulations. Two of the Regulations – the Horizontal Regulation (financing, managing and monitoring) and the Amending Regulation (amending the current CMO Regulation) are considered to be largely stable. However, it was accepted that there are elements within each of these Regulations that cannot be fully agreed until the MFF negotiation process has been concluded.

The CAP Strategic Plan Regulation has proved the most problematic for Member States to consider and there are many outstanding issues that will need to be resolved before agreement can be achieved.

Multiannual Financial Framework (MFF) post-2020

Both the Romanian and Finnish Presidencies sought to advance the MFF post 2020 proposals as far as possible in the hope of reaching a consensus. Agreement on the MFF proposals is a matter for Heads of State and Government, followed by adoption by the Council of Ministers with the consent of the European Parliament.

Despite holding extensive discussions with Member States, the Romanian Presidency could not bridge the diverging views amongst Member States on the appropriate level of the budget. In December, the Finnish Presidency presented a revised proposal with updated figures for Member States to consider. However, agreement could not be reached.

The President of the European Council, Charles Michel, has taken over responsibility of the MFF post 2020 negotiation process and has planned to organise technical and political bilateral meetings with Member States in an effort to reach agreement during 2020.

Common Fisheries Policy Reform

A report on the functioning of the Common Fisheries Policy (CFP) is due to be submitted by the Commission to the European Parliament and the Council by the end of 2022. The overarching goal of this policy is to ensure that fishing and aquaculture are environmentally, economically and socially sustainable, thus resulting in a competitive and viable seafood sector for all. Key

features of this policy include achieving the maximum sustainable yield (MSY) rate for all fish stocks in all cases by 2020 as well as a discards ban (Landing Obligation) which was phased in over the period 2015 to 2019.

Implementation of the key elements of the CFP continued throughout 2019 at both EU and national level. The multi-annual plan for demersal stocks in the Western Waters, which is extremely important from an Irish perspective, came into full effect early in 2019. The 2020 deadline for MSY ensured quotas, where sufficient scientific advice was available, were set at levels that ensure long term sustainability in line with the MSY principle.

The discard ban or landing obligation, which is another key element of the Common Fisheries Policy (CFP), was phased in over a number of years and fully implemented in 2019. The North West Waters Regional Group of Member States, (Ireland, Belgium, France, UK, Netherlands and Spain) set up to manage fisheries at a regional level, met regularly throughout 2019 to discuss various implementation issues and to work on additional measures following the full implementation.

Fishing opportunities or TACs (Total Allowable Catches) negotiated at the December 2019 Agriculture and Fisheries Council were negotiated and fixed in line with the MSY objective. The Minister secured 195,000 tonnes of quotas worth €275 million for Irish fishermen for 2020.

Bioeconomy Strategy

The Bioeconomy Strategy has been discussed on an ongoing basis at EU level since 2018. During 2019, the discussions intensified, culminating in the adoption of Council Conclusions on the Strategy. The Strategy applies a cross-sectoral holistic approach, with aims to connect the potential of renewable natural resources; the needs of society; and, to protect, maintain and restore eco-systems and biodiversity. The Council Conclusions also includes references to the CAP, in particular, the potential use of CAP rural development instruments namely EIP-AGRI, AKIS and LEADER to support the deployment of a local sustainable and circular bioeconomy.

EU Interactions

Market Situation

The market situation across the various agricultural sectors continued to be monitored during 2019. The early part of 2019 saw the remainder of SMP stocks in public intervention offered for sale through the invitation to tender procedure which resulted in all stock being sold out of public storage by March 2019.

Forestry Sector

During 2019 the Council of the European Union

- adopted Conclusions on the *Mid-term Review of the EU Forest Strategy*,
- adopted *Conclusions on the Communication on Stepping up EU Action to Protect and Restore the World's Forests* and
- endorsed the *Ministerial Katowice Declaration on Forests for the Climate*.

Themes covered in the conclusions on the Mid-term Review of the EU Forest Strategy include, among others, Sustainable Forest Management, climate change mitigation and adaptation, ecosystem services, rural development, addressing deforestation and forest degradation as well as nature conservation. The role of afforestation and need for on-going availability of funding is also addressed in the text.

The conclusions on the *Communication on Stepping up EU Action to Protect and Restore the World's Forests*: noted that current actions are not enough to halt deforestation and forest degradation; endorsed the objectives and scope of the European Commission's Communication, which sets out to protect and improve the health of forests (especially primary forests) as well as to significantly increase sustainable, biodiverse forest coverage worldwide; and called for coherent implementation spanning its five priority areas.

The Council of the European Union formally endorsed the *Ministerial Katowice Declaration on Forests for the Climate* in September 2019. The declaration includes a pledge to accelerate action to ensure the enhanced

contribution of forests and forest products to support achieving the long-term goal of the Paris Agreement. Continued action from stakeholders is also encouraged.

Climate Action

The new Governance Regulation (EU) 2018/1999 includes the requirement for Member States to draw up integrated National Energy and Climate Plans for 2021 to 2030 outlining how to achieve the ESR, LULUCF and RED II targets and submit to the European Commission by the end of 2019. Ireland maintained a whole of Government position regarding engagement with the process and will continue to work with colleagues across the various Government Departments.



International Interactions

World Trade Organisation (WTO)

There was no outcome on the Agriculture file at MC11 in 2017 and there has been no significant change in WTO members' positions since. However, there is pressure to have an Agriculture item on the agenda for MC12 in 2020.

Free Trade Agreements – FTAs

Negotiations continued on a range of FTAs between the EU and third countries.

EU-US

In July 2018, the EU and the US began talks on a limited trade deal which would see the elimination of tariffs on industrial goods only. The US administration requested agriculture's inclusion in the negotiations. However, Ireland supported the EU Commission position that agriculture should remain excluded from the scope of any future agreement with the US per the agreement by then EU Commission President Juncker and President Trump.

On 11 January 2019, the US published its negotiating objectives for these trade negotiations. On 18 January 2019, the EU Commission published its draft negotiating Directives for EU Council approval to commence trade negotiations with the US, excluding agriculture. On 14 March 2019, the EU Parliament considered its non-binding resolution for commencing talks with the US and issued a "no opinion" on the negotiations. The European Parliament will have a binding vote on the approval of any final Free Trade Agreement. The Council of the EU approved two mandates on 15 April 2019 for an agreement on (1) the elimination of tariffs for industrial goods and on (2) conformity assessment.

Airbus-Boeing WTO dispute: impact on the agri-food sector

The US and EU have been in a long-running dispute regarding subsidies to their respective major Aircraft manufacturers, Airbus (EU) and Boeing (US). Both sides have submitted two individual cases to the WTO for adjudication. The WTO Appellate Body has passed

judgement on both with the EU and US being found at fault. The arbitration ruling outlining the tariffs that can be imposed by the US on the EU were announced on 2nd October 2019. The equivalent parallel ruling permitting EU tariffs to be applied to US imports is due in 2020.

The WTO arbitration ruling of 2 October 2019 set the maximum level of tariffs the US may apply on EU exports to the US at \$7.496 billion. The US subsequently published a list of EU imports to the US which it applied tariffs from 18th October 2019. In the case of Irish exports to the US, the tariff rate was 25% ad valorem. This will have a significant effect on a number of our high value exports to the US, including liqueurs, butter and certain cheeses. Discussions will continue into 2020 with a view to reaching a fair and balanced agreement between the US and EU.

Autonomous 'EU 481 grain fed beef' quota

In 2019, the European Commission reached an agreement with the US on the autonomous 'EU 481 grain fed beef' quota which was initially set up to resolve a hormone use dispute between the EU, US and Canada. The existing hormone-free beef quota of 45,000 tonnes remains at the same level, the change being that 35,000 tonnes of quota will be "ring fenced" for the US. This US allocation is being phased in over a seven year period. The Agreement enters into force on the 1st of January 2020.

Canada CETA

In 2017, the European Parliament gave its consent for CETA and the agreement provisionally entered into force. As such, most of the agreement now applies. The agreement will enter fully into force when all EU MS parliaments have ratified the agreement. To date 12 EU Member States have ratified CETA: Austria, Croatia, Czech Republic, Denmark, Estonia, Finland, Latvia, Lithuania, Malta, Portugal, Spain and Sweden. The overall outcome is satisfactory from Ireland's perspective - although increased access to the EU market was granted for Canadian beef, greater access to the Canadian market for EU beef and dairy products (notably cheese) was also secured.

International Interactions

EU MERCOSUR

Twenty years of negotiations concluded on 28 June 2019 with the announcement of a political agreement on the EU-Mercosur Free Trade Agreement. The agreement includes a significant Tariff Rate Quota for beef - 99,000 tonnes Carcass Weight Equivalent imports to the EU. To assist farmers with any market disturbance challenges from the deal, the Commission is making a fund of €1billion available.

The agreement includes quotas for EU exports of cheese, milk powders and infant formula, as well as full liberalisation of spirits, chocolate and other goods, thus providing opportunities for Irish exporters. The agreement also provides that Mercosur countries are required to establish legal guarantees protecting 357 EU Geographical Indications (GIs) including Irish Whiskey and Irish Cream Liqueur.

The Agreement includes detailed chapters on Sustainability and Sanitary Phyto-Sanitary (SPS) standards. The SPS chapter ensures Mercosur countries must uphold strict EU rules and standards on food safety, plant health and animal health and welfare, protecting EU consumer's interests.

In 2019, the Taoiseach requested an independent review on the impact of the agreement on Ireland. Following a tender process, an Economic and Sustainability Impact Assessment of the EU-Mercosur Trade Deal is being carried out on the EU Mercosur Agreement. A final report is expected in August 2020. The Commission is also carrying out a "Sustainability Impact Assessment" on the proposed FTA's impact on the EU. Their final report is expected in mid 2020. The outcome of both studies will inform Ireland's approach to ratification of the agreement.

The political agreement is currently undergoing legal scrubbing and translation. It is expected, the agreement will be presented to the Trade Council in Q4 2020. The provisional application of the aspects of the Agreement which the Commission has exclusive competence (including trade) will require the agreement of the Trade Council (Qualified Majority Voting) and ratification by the European Parliament. The proposed phasing-in of the beef tariff rate quota will be over a period of five years, therefore it could take six years before the agreement is fully in place.

The formal ratification process for the wider Agreement - which requires ratification by individual Member States because it is one that contains elements which fall under both EU exclusive competence and Member State competence - is likely to prove challenging at both European and National Parliament levels.

EU/African Union co-operation

Task Force on Rural Africa

The European Commission established the Task Force on Rural Africa in May 2018, with the aim of providing recommendations on how to strengthen the African rural sector and maximise the role of the EU in creating jobs and fostering economic development in the African agriculture, agribusiness and agro-industries. The work of the Task Force is part of the wider set of actions launched by the Commission in the framework of the 'Africa-Europe Alliance for Sustainable Investment and Jobs'.

In March 2019, the Task Force Rural Africa reported to the Commission on how best to contribute to sustainable development and job creation in Africa's agri-food sector and rural economy, and recommended the following four strategic areas for action:-

1. A territorial approach for income and job creation;
2. Sustainable land and natural resources management and climate action;
3. Sustainable transformation of African agriculture;
4. Development of the African food industry and markets actions.

EU-Singapore

On 16 May 2017, the European Court of Justice (ECJ) ruled that the Singapore agreement could not be ratified at EU level without the approval of all Member States. It added that any trade deal that includes an out-of-court dispute settlement system would require ratification by the EU's 38 national or regional parliaments. Following this ruling, the result of negotiations with Singapore were adjusted to create two standalone agreements: a Free Trade Agreement (FTA) and an Investment Protection Agreement (IPA).

International Interactions

The draft trade agreements were signed on 19 October 2018 and received the consent of the European Parliament on 13 February 2019. Following the European Parliament's consent and Singapore concluding its own internal procedure, the FTA entered into force on the 21st of November 2019. The Investment Protection Agreement (IPA) requires ratification by all EU Member States before entering into force.

EU-Vietnam

The preliminary text of the Agreement covers the full dismantling of 99%-plus of tariffs over seven years for the EU and ten years for Vietnam. The Trade and Investment Agreements were signed on 30 June 2019. Both sides then commenced their respective ratification processes. The EU process is almost complete with final approval scheduled for early 2020. Once the Vietnamese National Assembly also ratifies the FTA, the Agreement will enter into force, most likely in early summer 2020.

EU – Japan

The EU-Japan negotiations for a Free Trade Agreement were finalised on 8 December 2017. The EU and Japan signed the Agreement at a summit on 11 July 2018 with the Agreement coming into force on 1 February 2019. The Economic Partnership Agreement (EPA) represents a major boost for the EU agri-food sector, with considerable additional market access provided for in relation to beef, pigmeat and dairy (cheese) products. As such, it presents a significant opportunity to grow Irish beef exports in particular. Over 200 Geographical Indications are protected under the deal with potential major gains for wine and spirit exporters also.

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 both the EU and Chinese markets. It will replace the existing 26 Bilateral Investment Treaties between China and individual EU Member States with one single comprehensive investment agreement. During 2016, the EU and China negotiators reached clear conclusions on an ambitious and comprehensive scope for the EU-China investment agreement and established a joint negotiating text. The

next round of negotiations is due to take place in Brussels between 16 - 21 January 2020.

EU-Indonesia

Two rounds of negotiations took place during 2019 with the most recent round taking place on the 2 December 2019 in Brussels. During the round, both sides exchanged a second offer for tariff liberalisation, building upon the initial offer that was exchanged at the fifth round. The second offer, while being an intermediate one, brings the proposed liberalisation to an already high percentage both in terms of number of tariff lines and trade volume, and paves the way towards an ambitious and comprehensive agreement. From an agriculture perspective the EU offer contained poultry meat, eggs, rice, sugar, meat preparations and vegetables. The 10th round is due to take place during the week of 16 - 20 March 2020 in Bali.

EU-Mexico

In April 2018, the EU and Mexico reached an 'agreement in principle' on the trade aspects of a modernised EU-Mexico Global Agreement. Technical issues are now being finalised. From an EU perspective, significant market access improvements were agreed for core exports of cheese and dairy products to Mexico. Furthermore, there is also considerable improvement of market access conditions for EU pork and poultry exports.

EU-Australia/New Zealand

Negotiations on Free Trade Agreements between the EU and both Australia and New Zealand are progressing.

Six rounds of negotiations have been completed between the EU and New Zealand, the most recent of which took place between the 10th-13th December 2019 in Wellington. Discussions were constructive with good progress in several areas with the objective to conclude in 2020.

Five rounds of negotiations have taken place between the EU and Australia with the most next round due to take place in Canberra on the 10th-14th February 2020. Negotiators discussed textual proposals submitted for various chapters, and their respective comments.

International Interactions

TRADE MISSIONS

During 2019, Minister Creed led successful agri-food missions to Turkey in March, China in both May and November, and Japan and South Korea in June. Market access for Irish sheepmeat to Japan was agreed in principle (fully achieved post trade mission) during the Trade Mission in June as well as confirmation of enhanced beef access to Japan with removal of 30 month age restriction.

Efforts to expand the global reach of Irish food and drink exports in China received a further significant boost in November 2019 with the approval of 14 additional beef plants to supply product to the Chinese market. This brought to 21, the total number of Irish plants listed with the General Administration of Customs in China. The announcement also marked a step change in Ireland's capacity to supply the Chinese market.

2019 also saw visits to more traditional markets with a visit in November to the Netherlands. During this visit, the Minister met representatives of the Dutch Veal Industry, he also visited their facilities and received reassurances both on animal welfare and capacity issues. The Netherlands is a particularly important export market for Ireland as it is our third largest destination for Irish agri-food exports.

The Minister concluded his 2019 schedule in December in the Netherlands followed by a visit to the UK, meeting key multi-national supermarket groups.

Inward Trade Visits

In addition to outward Ministerial trade missions, the Department hosted high level visiting delegations from a wide range of countries in 2019. These included China, Japan, South Korea, USA, Australia, New Zealand, Mongolia, Mexico, Iran, Turkey, Egypt, Thailand, Georgia, Qatar, Vietnam, Morocco and the UAE.

European Forest Institute (EFI)

The Department 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. These include EFI's Multi-Donor Trust Fund for policy support and the EU REDD Facility which supports countries in improving land-use governance as part of their efforts to slow, halt and reverse deforestation. EFI publications and reports are available at www.efi.int

Stepping up EU Action to Protect and Restore the World's Forests

The European Commission adopted its *Communication on Stepping up EU Action to Protect and Restore the World's Forests* on 23 July 2019. The Communication set out to protect and improve the health of forests (especially primary forests) as well as to significantly increase sustainable, bio-diverse forest coverage worldwide.

In December 2019, the Council of the European Union adopted Conclusions on the Commission Communication. The conclusions:-

- noted that current actions are not enough to halt deforestation and forest degradation;
- endorsed the objectives and scope of the European Commission's Communication; and
- called for coherent implementation between the five priority areas.

EU Forest Strategy

The current EU Forest Strategy runs from 2014 – 2020. In 2019, the forest sector stakeholders, the Agri-Fish Council, the Committee of Regions and the European Economic and Social Committee recognised the need for a new, updated and stronger Forest Strategy for the EU. In addition, sustainable forest management and the cross-cutting importance the forest sector and forestry has in delivering on our climate challenges, is also seen as playing an integral role in the new European Green Deal. As forestry policy is a national competence, Member States are closely involved in designing the new Forest Strategy. Council conclusions on a new EU Forest Strategy were adopted in April 2019. Preparations for a new EU Forest Strategy will continue in 2020.

International Interactions

European Green Deal

The new Commission President Ursula von der Leyen launched the European Green Deal in December 2019. The Green Deal presents a roadmap of actions to boost the use of efficient resources and covers all economic sectors, including agriculture, with the aim of achieving a carbon neutral economy within the EU by 2050. Further details of the Green Deal will emerge in 2020, however, it is intended to increase the EU's emissions targets by 2030, as well as introducing several strategies in 2020 to help achieve our climate and environmental ambition. These strategies include a Biodiversity Strategy to 2030 and a Farm to Fork Strategy for sustainable food systems, the latter of which is due to be published in April 2020. Elements contained within the European Green Deal and the Farm to Fork Strategy will also need to be reflected in Member States CAP Strategic Plans (which form an integral part of the CAP post 2020 proposals), and which will be approved by the European Commission.

CAP Transitional Regulations

The Transitional regulations require amendments to seven specific regulations, including the four CAP Regulations. The Regulations aim to provide certainty and continuity in the granting of support to European farmers and ensuring the continuity of support for rural development in the transitional period for those Member States who have used their 2014 – 2020 EAFRD allocations, by extending the current legal framework until the new CAP becomes available.

The Commission proposed two regulations to fulfil these aims. The first, and most urgent regulation, is the financial flexibility regulation which was adopted on 31 December 2019. The second, and more substantial regulation proposes a number of changes to the Rural Development Programme. Member States have raised a number of queries around these changes and discussions will continue into 2020. The Commission expects the transitional arrangements to be in place by mid-summer 2020, subject to agreement on the Multi-annual Financial Framework post 2020, which will clarify the position regarding the future EU budgetary allocations.

Climate Change

Ireland through the Department of Agriculture, Food and the Marine continues to actively engage with the UNFCCC's Subsidiary Bodies which are tasked with jointly considering issues related to agriculture.

Following the decision at the 2017 Conference of Parties (COP 23), known as the Koronivia Joint Work on Agriculture, which recognised the role of agriculture in tackling climate change and achieving the ambitions of the Paris Climate Agreement, the work continued with the Department attendance at the UNFCCC Intersessional Climate Change Conference held in Bonn in June 2019 and the COP 25 held in Madrid in December 2019.

Furthermore, Ireland contributed funding to a New Zealand led initiative and agreed by all parties for an additional workshop under the KJWA to be held in 2020.

Additionally, Ireland supported the Intergovernmental Panel on Climate Change (IPCC), the United Nations body for assessing the science related to climate change, to publish the Special Report on Climate Change and Land by providing input at the expert review stages and attendance at the final approval and sign-off meeting of world's governments which took place between the 2nd and 6th August 2019 in Geneva, Switzerland. Ireland is one of six countries that requested the preparation of this special report. This special report is one of three produced by the IPCC as part of their 6th assessment cycle; the others being the Global Warming of 1.5°C report published in 2018 and also a Special Report on the Ocean and Cryosphere published in September 2019.

The report's findings clearly call for urgently stepping up climate change mitigation and adaptation actions around the world, including sustainable land-related strategies that also alleviate pressures on land and food security.

International Interactions

Organisation for Economic Cooperation and Development (OECD)

The OECD Committee for Agriculture provides an international forum for senior policy officials, including Ireland represented by the Department, to share experiences and improve mutual understanding of agriculture, trade and agri-environmental policies, and to enhance policy performance and effectiveness at both the domestic and the international levels. The Committee produces two annual flagship publications: the OECD-FAO Agricultural Outlook and the Agricultural Policy Monitoring and Evaluation report. As well as attendance at the main Committee, the Department also participates in a range of related working committees.

Furthermore, the Department and EPA contributed financially to being included as a case study along with 5 other countries in a report called 'Towards Sustainable Land Use: Aligning Biodiversity, Climate and Food Policies'. This report examines challenges for aligning land-use policy with climate, biodiversity and food objectives, and the opportunities to enhance the sustainability of land use systems. This report provides good practice insights on how governments can transition to more sustainable land-use systems by better alignment of land use decision-making processes and greater convergence between land use, climate, ecosystems and food objectives.

OECD Agriculture and Fisheries Home page:

<http://www.oecd.org/agriculture/>

OECD-FAO Agricultural Outlook: <http://www.agri-outlook.org/>

OECD Agricultural Policy Monitoring and Evaluation:

<http://www.oecd.org/tad/agricultural-policies/monitoring-and-evaluation.htm>



Food Security

FOOD SECURITY

International Development

The Department has responsibility for some of the elements of Ireland's international development programme and works closely with Irish Aid in the Department of Foreign Affairs and Trade in this regard.

UN - World Food Programme (WFP)

The World Food Programme (WFP) is the United Nations organisation responsible for the delivery of food assistance to the poorest and most vulnerable people in the world. During 2019, the Department continued to represent Ireland on the WFP Executive Board as part of a two year rotation covering 2018-2019. The Department also continued its support for the vital work of the United Nations WFP by contributing €25.3 million in funding. This included an advance of €22.3 million on the 2020 contribution of €23 million as committed to in the Strategic Partnership Agreement with WFP for 2019-2021. This advance contribution gives WFP the flexibility to plan and target its funding in the most strategic, efficient and effective manner.

Africa Agri-Food Development Programme (AADP)

The AADP is a joint initiative with the 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 2019, the programme continued its work funding five Irish companies to the value of €1,225,778, of which this Department contributed €612,889. The chosen projects have the potential to create opportunities for Irish business and African farmers in areas such as: the provision and application of high performance bio-stimulants derived from seaweed extract to mitigate the effects of drought and high temperatures on crops in Kenya; and the development of a modular cheese manufacturing business in association with small holder and, primarily, women dairy farmers in Uganda.

UN- Food and Agriculture Organisation (FAO)

The Food and Agriculture Organisation of the United Nations is mandated to help eliminate hunger, food insecurity and malnutrition, make agriculture, forestry and fisheries more productive and sustainable, enable inclusive and efficient agricultural and food systems and increase the resilience of livelihoods to threats and crises. The Department leads on the Irish Government's relationship with the FAO and ensured that Ireland's position on agricultural and development matters was well represented at various FAO meetings throughout the year. In addition to paying Ireland's 2019 annual subscription of €1.43 million to FAO, further extra budgetary funding of €1.18 million was provided to the FAO in areas where it has a particular competence and which the Department considers to be of strategic importance. These include projects focussed on climate action for sustainable development; Agri-food innovation; and rural women's economic development.

Sustainable Development Goals (SDGs)

Consistent with the whole-of-government response to the delivery of Ireland's SDG commitments, where all Ministers retain responsibility for implementing the individual SDGs relating to their functions, this Department is a lead Department on five goals: SDGs 2, 12, 14, 15 and 17, which in the main relate to food security; sustainable production; and life under the sea and on the land.

Although the Department is a lead on these five goals only, the SDGs are inextricably linked and intertwined and the Department makes significant contributions on the other, equally important, SDGs. In 2019, the Department participated in five SDG National Stakeholder fora and highlighted its engagement and interaction with SDGs at the National Ploughing Championships.

National Policy Framework

NATIONAL POLICY FRAMEWORK

Food Wise 2025

Food Wise 2025 is the current ten year strategy for the agri-food sector and underlines the sector's unique and special position within the Irish economy and illustrates the potential which exists for the sector to develop further. Food Wise contained a vision of thriving primary producers and agri-food businesses at the heart of vibrant communities across the country, and was built upon five cross-cutting themes – environmental sustainability, market development, competitiveness, innovation and human capital as well as specific recommendation for key sectors. (www.agriculture.gov.ie/foodwise2025/)

Food Wise 2025 identifies ambitious and challenging projections for the industry over ten years including an 85% increase in exports to €19 billion; and the creation of 23,000 additional jobs all along the supply chain, from producer level to high end value-added product development.

Implementation process

The implementation process for Food Wise is driven by the “High Level Implementation Committee” (HLIC) and chaired by the Minister for Agriculture, Food and the Marine, with participation from other relevant Government Departments and State Agencies. The HLIC met five times in 2019.

The Environmental Sustainability Committee established to monitor and drive the implementation of the sustainability actions continued to meet during 2019.

Steps to Success 2019

The fourth annual progress report of Food Wise 2025, entitled “Steps to Success 2019” was launched in July 2019. The report highlights the progress achieved in year four in the implementation of the detailed Food Wise 2025 strategy. Of the 376 actions which were due to be commenced by 2019 or are ongoing actions, 87% have been achieved or substantial action has been undertaken; and a further 13% have commenced and are progressing well.

(<https://www.agriculture.gov.ie/foodwise2025/foodwise2025-stepstosuccess2019/>)

Steps to Success 2019 outlines what the Department and its Agencies have achieved in year four. Among the highlights for year four are:

- The launch of *Market Access Report 2018*, which provides an overview of the substantial progress and ongoing efforts made in terms of market access to third countries for Irish food producers by the Department.
- The Department and Bord Bia led four Agri-Food Trade Missions to China, USA, Canada, Indonesia and Malaysia, Japan, South Korea, Algeria and Egypt. Access secured to the Japanese market for Sheepmeat.
- A new Prepared Consumer Foods Centre was officially opened by Minister Creed in Teagasc's Ashtown Food Research Centre.
- The joint Science Foundation Ireland- DAFM Centre, VistaMilk, led by Teagasc and located in Moorepark, was launched.
- The first industry- lead *Strategy for Irish Inshore Fisheries Sector 2019-2023* was published. The strategy sets out a vision for the future of the inshore sector.
- A new seven-year strategy for the development of the Irish Organic Food Sector was published. It recognised the opportunities that exist for the sector and provides a clear direction for the further development of the sector to 2025.

Agri-Food Strategy to 2030

The agri-food sector has benefited from an approach to strategic planning through the development of ten-year stakeholder-led strategies, updated every five years. Since their inception twenty years ago, up to the current Food Wise 2025 plan, these strategies have ensured that the sector has a coherent, stakeholder-led vision and strategy to underpin the sector's continued development.

National Policy Framework

The Department began the process for developing the next ten-year strategy in summer 2019 and a public consultation was launched in July. A consultation document and online survey were issued to ascertain the views of all stakeholders on the direction of the sector to 2030. This remained open for 10 weeks and a total of 60 written submissions were received, with 214 responses to the online survey. A national stakeholder consultation event for 400 delegates to discuss these issues in more detail was held at the Aviva Stadium on the 16th October 2019. This 'Open Policy Debate' consisted of several plenary speakers, a series of six parallel break-out sessions, and an address by An Taoiseach and the Minister for Agriculture, Food and the Marine. More information can be found here: <https://www.agriculture.gov.ie/agri-foodindustry/agri-foodandtheeconomy/agri-foodstrategyto2030/publicconsultation/>

In November 2019, a Committee representative of the sector and chaired by Tom Arnold, was established and tasked with developing the agri-food strategy to 2030. Their terms of reference are to outline the vision and key objectives, with associated actions, required to ensure the economic, environmental and social sustainability of the agri-food sector in the decade ahead. The Committee's report will be short, specific and cross-sectoral, with ambitious but realistic actions.

A Strategic Environmental Assessment (SEA) will also be conducted in parallel with the work of the committee. This is to ensure that environmental considerations are fully integrated into the preparation of the strategy and is a legal requirement.

The Committee held its first meeting in November and further meetings will take place in 2020.

Future Jobs Ireland

Future Jobs Ireland launched in March 2019 and is a whole of Government plan which provides a medium term framework to create a sustainable, resilient and future-oriented economy in Ireland. <https://dbei.gov.ie/en/Publications/Future-Jobs-Ireland-2019.html>. The five pillars of Future Jobs include (i) Embracing innovation and technological challenges, (ii) Improving SME productivity, (iii) Enhancing skills and developing and attracting talent, (iv) Increasing participation in the labour force, and (v) Transitioning to a low carbon economy. The

Department contributed to the Government's Future Jobs Ireland 2019 programme under the Transitioning to a low carbon economy pillar.

The All of Government Climate Action Plan

In June 2019, the All of Government Climate Action Plan to Tackle climate breakdown was published, setting out over 180 actions to meet Ireland's EU target for 2030 (i.e. 30% reduction on GHG emissions based on 2005 levels) and putting Ireland on the right trajectory for 2050. It sets an ambition of net zero greenhouse gas emissions by 2050 while acknowledging the national policy position of an approach to carbon neutrality within the agriculture and land-use sector.

The Plan sets ambitious targets for the agriculture, forestry and land use sector as follows:

- Emissions from the sector in 2030 to be between 17.5 – 19.0 Mt CO₂ eq by achieving between 16.5 – 18.5 Mt CO₂ eq cumulative abatement over the period 2021 – 2030
- Achieve 26.8 Mt CO₂ eq abatement through LULUCF actions 8,000 ha of newly planted forest per annum
- Maintaining an annual average of 40,000 ha of reduced management intensity of grasslands on drained organic soils for the decade 2021-2030.
- Set a target for the level of energy to be supplied by indigenous biomethane injection in 2030.

There is significant strengthening of oversight by Government in the Plan including through:

- An amendment of the Climate Action Bill to provide a legal basis for the establishment of a new Climate Action Council (extending the powers of the current Climate Advisory Council);
- Support for the establishment of an Oireachtas Climate Action Committee; and
- Carbon Proofing of all large-scale Government projects.

There is also a monitoring and reporting structure to drive implementation through:

National Policy Framework

- The establishment of a Climate Action Delivery Board under Department of An Taoiseach which will report to both the Cabinet Committee and Cabinet on progress of actions within the Plan.
- The establishment of a Just Transition Monitoring and Review Group (supported by NESC and under Department of An Taoiseach) that will publish a Just Transition Strategy on a three-yearly basis.
- Within the Department, a Climate Action Management Board, chaired by the Secretary General, has also been established to drive implementation of the Department and agency-led actions within the Plan.

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 2019 (see Figure below). Funding of almost €1.5 million was provided to support the following areas:

Rural Female Entrepreneurs: Funding has helped develop the ACORNS training programme which is now in its fifth year. The programme is aimed at providing early stage female entrepreneurs living in rural Ireland with the knowledge, support and networking opportunities to develop and grow sustainable businesses, increase employment and to make a real contribution to their local communities. The 'ACORNS' programme has provided peer support and learning for 50 plus women with start-up businesses in rural areas each year. The National Strategy for Women and Girls 2017 – 2020 published by the Department of Justice and Equality in April 2017 includes an action to provide support for rural female entrepreneurs at start-up stage and the Department is the responsible body. This is also a key deliverable in the Government's Action Plan for Rural Development.

Social Farming: 2019 has seen the continuation of funding in this area to enable the design, development and implementation of a national social farming network and a number of model social farms across

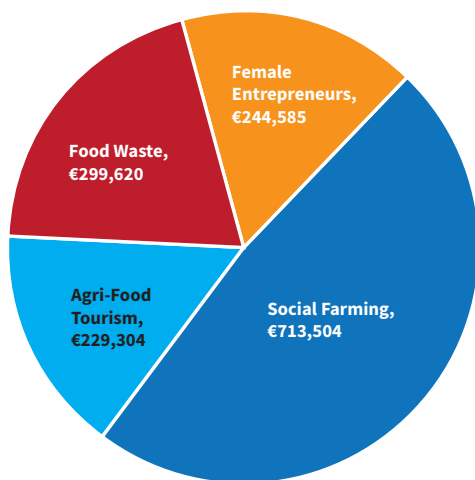
Ireland. The intention is to encourage and generate national benefits for disadvantaged groups and to support farm diversification in the rural community. Social farming involves offering, on a voluntary basis, farming and horticultural participation in a farming environment as a choice to people who avail of a range of therapeutic day support services. These operations are run in a number of settings ranging from working family farms, local community initiatives through to more institutional frameworks. This is one of the key deliverables in the Government's Action Plan for Rural Development.

Agri-Food Tourism: This area, linked to actions in Food Wise 2025, has provided funds to support both the development and expansion of the agri-food network in rural areas. Agri-food tourism broadly is the practice of offering an activity or activities in rural areas to visit areas of well-known agricultural produce and to sample and taste the local or regional cuisine or specialties. Agri-food tourism includes a wide variety of activities that involve the links between agriculture and the food produced at the local or regional level. It may involve staying on farm or touring food trails and events, participation in agricultural endeavours or buying produce direct from a farm or market. Agri-food tourism also encompasses local food, farmer and artisan market schemes that support and are paired with local and seasonal food producers and artisan crafts.

Food Waste Reduction: Funding has been provided to a number of projects to support activities that relate to the promotion and/or development of innovative food waste reduction techniques with associated environmental benefits. These projects aim to address the problem of food waste through surplus food redistribution and to carry out pilot initiatives to promote food waste reduction and prevent food waste with associated environmental benefits. Ireland generates over 1 million tonnes of food waste each year. Of this, over 300,000 tonnes come from commercial businesses and over 400,000 tonnes is generated by the industrial food producing sector.

National Policy Framework

Rural Innovation and Development Fund (CEDRA) 2019 Total Expenditure: €1.5m



Access to Finance

Food Wise 2025 identifies competitiveness as a key theme and recommends that stakeholders work to “*Improve access to finance for agriculture, forestry and seafood producers and agri-food companies*”. The Department, in cooperation with other State bodies, continues to explore and roll out additional funding mechanisms and support for farmers and SMEs in the agri-food sector.

Brexit Loan Scheme

The €300 million Brexit Loan Scheme was designed, in cooperation with Department of Business, Enterprise, and Innovation (DBEI) and the Strategic Banking Corporation of Ireland (SBCI), to provide working capital support to enable eligible Irish businesses (i.e. SMEs or small mid-caps) to implement necessary changes to address the challenges posed by Brexit. Minister Creed, in partnership with his colleagues the Minister for Business, Enterprise and Innovation, Heather Humphreys TD and Minister for Finance and Public Expenditure and Reform Paschal Donohoe TD opened the Brexit Loan Scheme for applications on 28 March, 2018 and it will remain open until 31 March 2020.

It provides for loans of €25,000 to €1,500,000 per eligible enterprise at a maximum interest rate of 4%, ranging from 1 year to 3 years, with unsecured loans up to €500,000. The loans can be used for future working capital requirements or to fund innovation, change or adaptation of the business to mitigate the impact of Brexit.

Using a combination of Irish exchequer and EU guarantees (through the EIB Group and the InnovFin loan guarantee scheme), the scheme leverages up to €300 million of lending to Irish Enterprises at a cost to the Exchequer of €23 million (€14 million provided by Department of Business, Enterprise and Innovation and €9 million provided by Department of Agriculture, Food and the Marine). Funding ensures that at least 40% of the €300 million will be available to food businesses. Due to various fund conditions and state aid considerations, primary agriculture was not eligible. At year end approximately 224 loans to the value of €47.9 million had been sanctioned, of which 38 to the value of €9.6 million relate to food businesses.

Future Growth Loan Scheme

The Future Growth Loan Scheme has been developed by this Department and the Department of Enterprise, Business and Innovation in co-operation with the SBCI and the European Investment Fund (EIF). It is being delivered through participating finance providers and makes more than up to €300 million of investment loans available to eligible Irish businesses, including farmers and the agri-food and seafood sectors. The loans will be competitively priced and will be for terms of 8-10 years and will support strategic long-term investment in a post-Brexit environment.

This is a long-awaited source of finance for young and new entrant farmers, especially the cohort who do not have high levels of security. It will also serve smaller-scale farmers, who often do not have the leverage to negotiate for more favourable terms with their banking institution.

Food companies have identified long-term investment finance of up to ten years as a critical need which is currently unavailable in Ireland. The delivery of this product and its effects will be felt all along the food production chain.

National Policy Framework

The fund is leveraged by exchequer funding of €62 million, of which 40% or some €25 million has been provided by this Department, resulting in an overall agri-food package of €120 million. However, unlike previous Schemes, this can be reviewed and adjusted according to demand. Demand for the Scheme was high, indicating that it met the identified gap in the market, with the majority of the funds fully committed as year end approached. At the end of December 325 loans to farmers in the amount of €37.5 million had been sanctioned with 57 loans to food companies in the amount of €15.5 million sanctioned. In excess of 800 additional applications were in progress. Work has commenced on consideration of options to extend or replace the loan scheme.

Further information on access to finance initiatives is available at:

<https://www.agriculture.gov.ie/agri-foodindustry/agri-foodandtheeconomy/agri-foodbusiness/accesstofinance/>

Agri-taxation

Budget 2019 included the publication by the Minister for Finance and Public Expenditure and Reform, Paschal Donohoe TD, of the “*Progress Implementation Update of the Agri-taxation Review 2014*”. This shows the excellent progress made between this Department and the Department of Public Expenditure and Reform over recent Budgets with the almost complete implementation of the 25 recommendations, which has resulted in positive changes for Irish agriculture, especially in the areas of land mobility and succession. The Review shows that taxation support to the sector averaged €930 million per annum in the years 2012 to 2016, or an average of €240 million per annum in specific agri-taxation measures.

Budget 2020 was delivered in the context of ongoing Brexit uncertainty, which limited capacity to introduce any new measures. Nevertheless, Budget 2020 included the following taxation measures:

- Renewal for another three years of Capital Gains Tax Relief on Farm Restructuring, which will continue to address the challenge of fragmentation on Irish farms and will lead to improved efficiency, as well as environmental benefits through consolidated farm holdings.

- The continuation of measures to promote and support entrepreneurship, as evidenced by the increase in the Earned Income Tax Credit by €150 to €1,500. Most farmers, foresters, fishermen and small food processors are self-employed and will see their tax liability fall with the increase in the tax credit.
- The announcement regarding microbreweries, that the qualifying production threshold for relief from Alcohol Products Tax is increasing from 40,000 hectolitres to 50,000 hectolitres, allowing larger breweries to expand, particularly with a view to their export sales.
- Enhancements to existing tax-based measures in support of enterprise, SMEs and the agri-food sector, i.e. the Key Employee Engagement Programme (KEEP), the Employment and Investment (EII) Scheme and the Research and Development Tax Credit.
- Agreement that this Department and the Department of Finance would engage on potential measures to assist farmers in meeting the challenges and obligations set out in the Climate Action Plan and to incentivise better Health and Safety in the sector.

More information on agri-taxation, including a list of measures and the ‘Agri-taxation Review’, is available at: <https://www.agriculture.gov.ie/agri-foodindustry/agri-foodandtheeconomy/agri-foodbusiness/agri-taxation/>

Legislation

In 2019, the Department successfully sponsored two Bills through the Oireachtas and made some 42 Statutory Instruments to underpin the Department’s activities in almost all sectors within its remit. Details are available at www.agriculture.gov.ie/legislation/

The 2 Bills sponsored by the Minister for Agriculture, Food and the Marine are:

The Sea-Fisheries Amendment Act 2019 No. 9 of 2019 which amends section 10 of the Sea-Fisheries and Maritime Jurisdiction Act 2006. This amendment removed an impediment to pre-existing reciprocal arrangements where vessels from Northern Ireland were allowed to fish within Ireland’s 6 nautical mile zone under Voisinage arrangements.

National Policy Framework

The Greyhound Racing Act 2019 No. 15 of 2019 consolidates and modernises the Greyhound Industry Act 1958. It improves the Governance of Bord na gCon, strengthens regulatory controls in the Industry, modernises sanctions including introducing administrative sanctions for certain infringements of the rules and improves integrity

Some of the more significant S.I.s made in 2019 include:

- The European Communities (Sheep Identification) (Amendment) Regulations 2019 (S.I. No. 243 of 2019) which amended the European Communities (Sheep Identification) Regulations 2011 (S.I. No. 309 of 2011). The amendment provided that all sheep moving from any holding with effect from 1st June 2019 was required to be identified with a tag that could be read electronically.
- The European Union (Carcase Classification and Price Reporting) Regulations 2019 (S.I. No. 254 of 2019) which give effect to Commission Delegated Regulation (EU) 2017/1182 of 20 April 2017 and Commission Implementing Regulation (EU) 2017/1184 of 20 April 2017. The Regulations provide for the dressing, classification, weighing and labelling of carcasses of adult bovine and porcine animals. They also contain provisions relating to the use of automated classification techniques, the communication of classification results and market price reporting.
- The European Communities (Sustainable Use of Pesticides) (Amendment) Regulations 2019 (S.I. No. 438 of 2019) which amend the European Communities (Sustainable Use of Pesticides) Regulations 2012 (S.I. No. 155 of 2012) and give effect to Commission Directive (EU) 2019/782. The Regulations provide for the registration requirements for professional users of pesticide equipment, they broaden the type of pesticide application equipment requiring inspection and they increase the protection of water sources used for the abstraction of water for human consumption.

Statistical and Analytical Reports

- *'Woodflow and forest-based biomass energy use on the island of Ireland (2018)'*

This COFORD Connects Note provides the 2018 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/2018/00900CCNPP51Woodflow%20-%20We.pdf>

- Forest Statistics: The Department of Agriculture, Food and the Marine has the responsibility for the collection and publication of forest statistics. The publication provides statistics about afforestation trends, nationally and on a county by county basis. It tracks forest road building, thinning and clearfelling activity as well as a range of other forest management operations. Trends in Roundwood prices also feature in the document as does information in relation to forest fire and pest damage. <https://www.agriculture.gov.ie/forests-service/forests-service-general-information/forest-statistics-and-mapping/annual-forest-sector-statistics/>

National Policy Framework

Aggregate Farm Income

Overview of 2019 Agricultural Output			
Output, Input & Income in Agriculture, 2018/2019	2018 Value €m	2019 Value €m	% Change (Value) 2018/2019
Goods Output at Producer Prices	8,181.8	8,127.6	-0.7%
Agricultural Output at Basic Prices	8,648.8	8,690.1	+0.5%
Intermediate Consumption	6,001.0	5,782.5	-3.6%
Gross Value Added at Basic Prices	2,647.8	2,907.7	+9.8%
Fixed Capital Consumption	907.2	907.2	
Net Value Added at Basic Prices	1,740.6	2,000.5	+14.9%
Other Subsidies Less Taxes on Production	1,676.3	1,628.9	-2.8%
Factor Income	3,416.9	3,629.4	+6.2%
Compensation of Employees	567.7	584.2	+2.9%
Operating Surplus	2,849.2	3,045.2	+6.9%
Source: CSO - Output, Input & Income in Agriculture Preliminary Estimates 2019			

According to the CSO Preliminary Estimate of Output, Input and Income in Agriculture, 2019, aggregate farm income (operating surplus) increased by 6.9% to €3,045 million in 2019. This follows a decrease of 16.8% in 2018. The overall value of goods output at producer prices by the sector decreased by 0.7%, or €54.1 million, to €8,127.6 million. Intermediate consumption decreased by 3.6%, to €5,782.5 million.

Research and Innovation

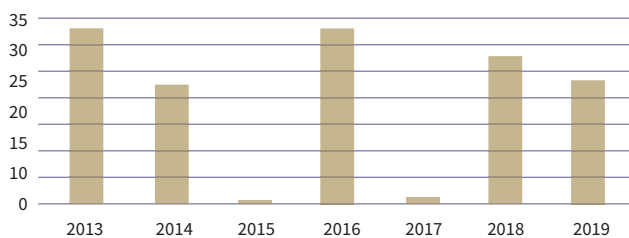
RESEARCH AND INNOVATION

Competitive Research Funding Programmes

The Department operates three competitive research funding programmes, namely:- the Food Institutional Research Measure (FIRM); Research Stimulus Fund (RSF) and the Programme of Competitive Forest Research for Development (CoFoRD). Grant awards are made periodically for ‘public good’ research projects undertaken by researchers in eligible Irish Research Performing Organisations following national Calls for Research Proposals launched, mainly, by the Department itself but also through participation in Calls operated by other national funders and transnational Calls principally under European Research Area Networks (EraNets) and the US-Ireland R&D Partnership Programme.

Over the last seven years, €140.4 million has been committed to agri-food, marine and forest research projects through these programmes.

Total Committed €140.4m National & TransNational Funding 2013- 2019



Investment under Competitive Research Funding programmes in 2019

The overall total new funding committed across all programmes and award mechanisms in 2019 was €22.7 million.

Awards made on foot of Research Call

In 2019, Irish Research Performing Organisations including Teagasc, Universities and Institutes of Technology which benefited from awards of over €20.1 million for 38 projects covering a range of topic areas. In addition to generating evidence for policy and technologies to improve agri-food practices, this investment will provide direct employment for 75 contract researchers and education opportunities for 90 post graduate students in the form of PhDs (55) and Masters Degrees (35).

Investment in research through Transnational Initiatives

In 2019, the Department continued to use funding under its competitive research programmes to enable Irish researchers to participate in collaborative transnational partnerships through selected European Research Area Networks (ERA-Nets). These ERA-NET initiatives, will result in enhanced cooperation and better alignment of national research priorities, and have the scale and scope necessary to maximise the impact of research activities across Europe.

Notable commitments under these initiatives in 2019 include:

- €350,000 committed to Irish researchers across four research projects (MilKey, GasToGrass, MELS and SEASOLUTIONS) under the EU co-founded ERA-NET “Joint Action ERA-GAS, SusAn, ICT-AGRI II”.
- €300,000 was awarded to NUIG for “InFutUReWood” an EU project cofounded under ERA-NET ForestValue.

In addition, the Department has pledged to commit a total of €1.6 million to Irish institutionally based researcher applicants that successfully compete in a further three new ERA-NET programmes relating to FOSC (Food Systems and Climate), ICT-AGRI-FOOD (ICT-enabled agri-food systems) and ICRAD (International Coordination of Research on Infectious Animal Diseases) as well as a JPI Healthy Diet for a Healthy Life Call looking at the prevention of under-nutrition in the elderly (PREVNUT).

Research and Innovation

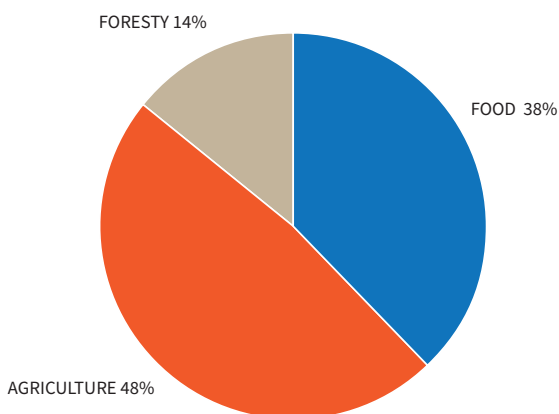
The US-Ireland R&D Partnership is a tri-jurisdictional alliance between Ireland, Northern Ireland and the United States which aims to promote collaborative innovative research projects that create value above and beyond individual efforts. The agricultural component of this is facilitated by the USDA's National Institute for Food and Agriculture (NIFA). In response to NIFA's 2019 Call, the Department launched, in conjunction with DAERA NI, the Call for Irish participants in the US-Ireland R&D Partnership, with funding being made available for research proposals across a potential of six research areas.

Awards made jointly with other national research funders.

In 2019, the Department entered into cofounding arrangements with the Sustainable Energy Authority of Ireland (SEAI), the Environmental Protection Agency (EPA) and the Northern Irish Department of Agriculture, Environment and Rural Affairs (DAERA NI). We also continued our collaboration with the Irish Research Council's Employment Based Post Graduate Programme and our co-funding of the SFI VistaMilk Centre. In addition, the Department also pledged to co-fund four projects under the EPA's 2019 Research Call.

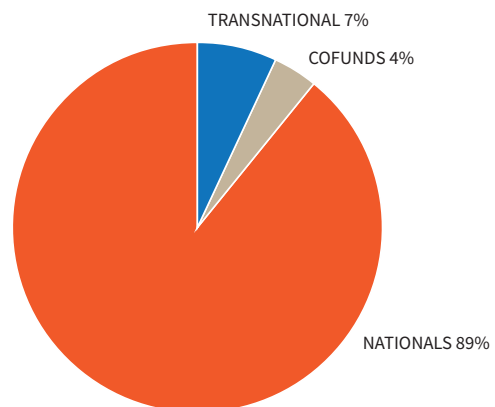
The percentage of expenditure by Sector.

2019 Awards: National (DAFM alone or with another funder) and Transnational by programme %



The percentage of funding committed in 2019 by funding mechanism

2019 Awards: National (DAFM alone or with another funder) and TransNational %



The Department continues to monitor and evaluate the progress of projects which have received research grant awards under FIRM, RSF and CoFoRD. In 2019 all proposals were submitted through the Department's new grant management software.

IE-DE Collaboration

Arising from the Ireland – Germany Joint Plan of Action on bilateral cooperation, the Department of Agriculture, Food & Marine (DAFM) and Teagasc together with the Federal Ministry for Food & Agriculture (BMEL), the Federal Office for Agriculture and Food (BLE) and the Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB) organised a Germany-Ireland Bilateral Workshop at the Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), Potsdam on the 25th-26th November 2019. This workshop, which aimed at identifying mutual research demands and establishing a sound foundation for future transnational research cooperation, had a focus on the areas of agri-digitalisation and the intensification of research and innovation on agriculture, climate change and land use management so as to assist in developing a carbon neutral and circular agri-food system. Irish research institutions

Research and Innovation

(among them Teagasc, University College of Cork, Tyndall Institute, University of Limerick, Cork Institute of Technology, University College Dublin, Maynooth University, Waterford Institute of Technology, NUI Galway) provided twenty-two participants for the workshop that focused on four main topics: Soil Management, Grassland Management, Nutrient Circularity and Animal Housing, in order to start to address the initiative's objectives.

Horizon 2020 and Horizon Europe

Horizon 2020 (2014-20) is the EU Framework Programme for Research and Innovation. The Department of Agriculture, Food and the Marine in conjunction with the Marine Institute (MI) are responsible for the Societal Challenge 2 (SC-2) funding area of Horizon 2020 which has a fund of €3.8 billion - including €850 million allocated to the Bio-based Industries Joint Undertaking (BBI JU). The Department 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 while the Department also provides a representative to the BBI States Representative Group. The Government has set a national drawdown target of €1.25 billion from Horizon 2020 including a drawdown target of €77 million (2%) from the SC2 budget. The Irish drawdown from the BBI & SC-2 funding programmes for 2019 was €14.48 million bringing the total to date to €85.64 million which represents 2.22% of the overall SC2 budget.

During 2019, four Horizon 2020 Programme Committee meetings were attended, these are meetings of representatives from all countries participating in Horizon 2020 and allows direct communication between each country and the Commission to help steer and monitor the direction of the framework programme. Furthermore, an initial preparatory meeting of the upcoming Horizon Europe, starting in 2021, was attended at a Research and Innovation open day. The theme of the meeting was the novel Mission on Soil Health and Food. Progress on the development of the new European Green Deal was also monitored; this is a new €1 billion call that will be launched in late 2020 to help Europe achieve its aim of becoming a

carbon neutral continent by 2050. At a national level the Department, MI and Teagasc attended high level group meetings under the chair of DBEI to keep informed of progress and upcoming areas of interest. The Department NCP also made presentations to researchers in UCD & UCC on remaining opportunities under Horizon 2020. He also maintained close ties with colleagues in Northern Ireland to help generate robust North-South collaborative applications that, if successful, would be of mutual benefit to the Island as a whole.

Bioeconomy Implementation Group

A high-level Implementation Group, jointly chaired by the Department and the Department of Communications, Climate Action and Environment and consisting of nine Departments and eight Agencies, held three meetings in 2019. The implementation group produced a report to Government that was agreed by Cabinet in June 2019 highlighting activities to date undertaken to implement bioeconomy policy statement actions. Additionally, the Implementation Group coordinated an Information Day in UL in May 2019 with partners Marine Institute, InterTrade Ireland and Department of Environment, Agriculture, Rural Affairs, Northern Ireland to highlight funding opportunities available under the EU Biobased Industries Joint Undertaking initiative. The Implementation Group also coordinated Bioeconomy Ireland Week in October 2019 including a range of events that took place all over Ireland.

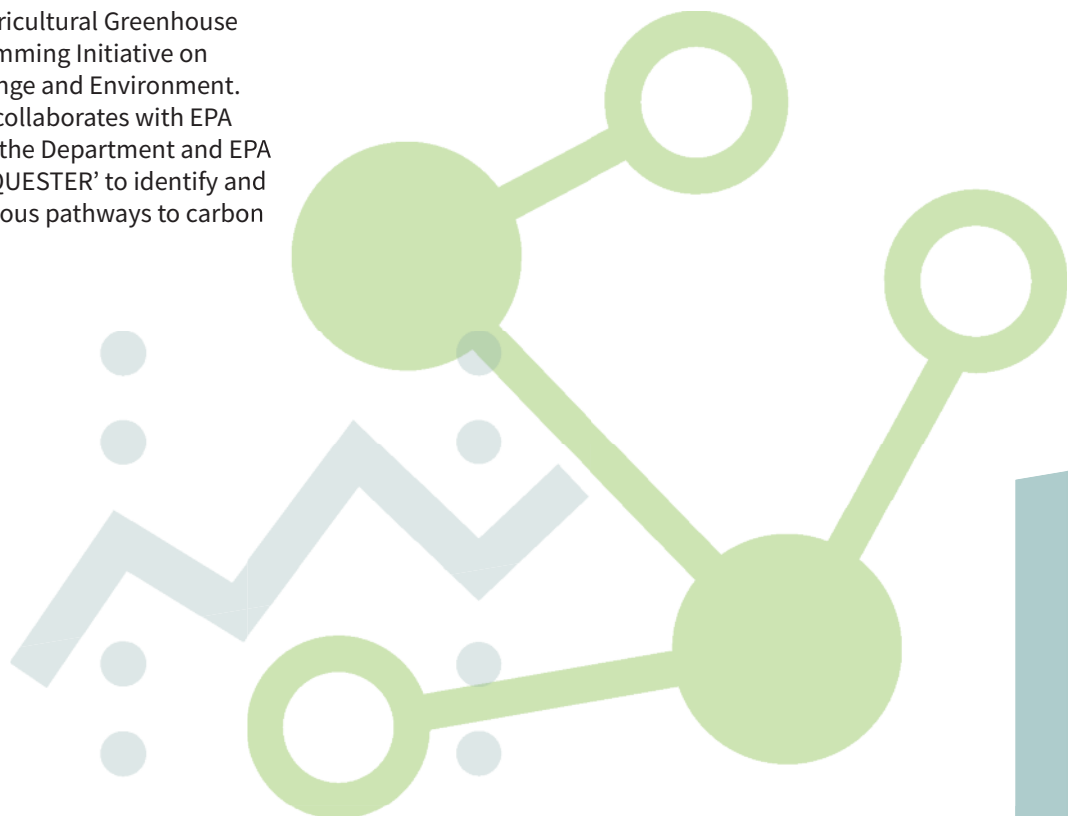
Research and Innovation

Codex Alimentarius

Ireland's active participation in Codex Alimentarius continued in 2019. The Department continues to coordinate and chair the Irish Codex Advisory Committee (ICAC), which met twice in 2019 and 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 five sessions of different Codex Committees in 2019 and related EU Council Working Party meetings reflecting the mix of expertise required to deal with the complex range of issues under discussion.

Climate Research

The Department and Teagasc continue to strongly support investment in and engagement with climate-related research through various national funding frameworks; EU Research and Innovation Framework Programmes; and transnational initiatives such as Global Research Alliance on Agricultural Greenhouse Gases and the EU Joint Programming Initiative on Food, Agriculture, Climate Change and Environment. Furthermore, the Department collaborates with EPA research calls and during 2019 the Department and EPA co-funded a project called 'SEQUESTER' to identify and explore the implications of various pathways to carbon neutrality.



Food and Drinks Sector

FOOD AND DRINK SECTOR

Overview

The agriculture and food sector continued to play a vital role in Ireland's economy with agri-food exports accounting for 9.5% of total exports with a value of €14.5 billion, marking growth of over 63% since 2010. The UK remained Ireland's largest agri-food export destination, with exports of €5.5 billion in 2019 or 38% of total exports. Exports to the EU (excluding the UK) were worth €4.7 billion, while exports to the Rest of the World were worth €4.3 billion in 2019. The top three export categories in 2019 were Dairy Produce at €5.0 billion, Beef at €2.3 billion and Beverages at €1.7 billion, accounting for €9.1 billion or 63% of total worldwide agri-food exports.

The agri-food sector makes a significant contribution to employment, accounting for 7.1% of total employment or 164,400 jobs, in rural and coastal areas.

Spirit Drinks

The drinks industry is a major driver of economic activity across the economy of Ireland at a macro and rural level, with 2019 exports valued at €1.71 billion. Alcohol beverage exports in 2019 were valued at €1.56 billion. The US remains the key market for alcohol exports with Irish Whiskey (€517.5 million) and Irish Cream (€183.3 million) exports accounting for 41% (€701 million) of exports.

All categories including gin, beer and cider exports showed increases in exports with Irish Whiskey performing exceptionally. Irish Cream liqueur held firm, despite the challenges of US tariffs on EU dairy. The distilling industry has grown from 3 distilleries in 2014, to 31 at the end of 2019 and potentially a further 32 being proposed. Volume growth in the sector is largely driven by continued double-digit demand for Irish Whiskey in many markets.

Significant export growth is anticipated over the mid-term, with the industry having the potential to grow exports by at least 85% to over €2 billion, creating and sustaining additional jobs, predominantly in rural Ireland.

In 2019, Irish Whiskey exports continued to grow and reached over €810 million for the first time and brought cumulative growth of the category to over 194% in the seven years since 2012. The most important market was the United States showing over 324% growth over the seven year period since 2012 and accounting for almost 64% of all whiskey exports in 2019.

Together with Irish Cream exports, which were valued at €364 million, this represented a major contribution by Irish spirit drinks to the export performance of Ireland's food and drinks industry. Once again, the United States was the most important market accounting for just over 50% of all Irish Cream exports.

Irish Whiskey	2013	2014	2015	2016	2017	2018	2019
Total Exports €m	316,916	348,067	442,427	503,576	576,419	647,174	811,688
Exported to United States €m	147,161	165,397	233,343	291,892	340,754	382,097	517,416
Irish Cream	2013	2014	2015	2016	2017	2018	2019
Total Exports €m	336,026	287,250	311,064	292,858	326,729	343,352	364,026
Exported to United States €m	139,009	131,291	163,220	144,791	166,105	168,519	183,632

Food and Drinks Sector

Geographical Indications: Protected Spirits

Regulation 110/2008 (to be replaced by Regulation 2019/787) sets out definitions of the categories of spirit drinks (alcoholic drinks with a minimum alcohol content of 15%), including rum, whiskey, gin, vodka and liqueurs, and recognises and protects a list of spirit drink geographical indications (GIs) including the three Irish GIs - Irish Whiskey, Irish Cream and Irish Poitín.

Verification checks for Irish Cream are carried out by the Department and those for Irish Poitín and Irish Whiskey by the Revenue Commissioners. The three spirit drinks are protected on an all-island basis.

Applications for verification are required for premises involved in the brewing, fermentation, distillation, maturation, bottling and labelling of these spirit drinks. Under Regulation 110/2008 a charge is required for these visits.

In 2019, the Department received applications from eight premises involved in Irish Cream production while the Revenue Commissioners carried out verification checks on 58 Irish Whiskey production premises. In addition, they also carried out verification checks on 12 Irish Poitín premises.

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 2019, the Department worked with a number of proposers to develop applications, and to progress existing expressions of interest. Ireland currently has eight registered food GIs - Oriel Sea Salt (PDO) and Oriel Sea Minerals (PDO), Blaa/Waterford Blaa (PGI), Connemara Hill Lamb (PGI) Clare Island Salmon (PGI), Imokilly Regato (PDO), Timoleague Brown Pudding (PGI) and Sneem Black Pudding (PGI) which was awarded GI status in December 2019. The Comeragh Mountain Lamb and Wexford Blackcurrant applications having successfully completed National Consultation are being scrutinised by the European Commission, pending publication for European Consultation.

EU Commission GI Audit 2019

As part of the EU Commissions routine Annual Audit Inspection Plan, the EU Commissions audit service DG SANTE undertook an audit mission to Ireland in September 2019 to evaluate the Control Systems related to Protected Designation of Origin (PDO), Protected Geographical Indications (PGI) and Traditional Specialities Guaranteed (TSG) for Agricultural Products and Foodstuffs and Geographical Indications (GI) of Spirit Drinks.

The purpose of the audit was to verify that Ireland's official controls for GI products are carried out in accordance with EU regulations. The overall finding of the Audit indicates that Ireland is performing satisfactorily in regards to its GI Controls and regulations. While the overall conclusions were mostly positive and inspections observed were overall adequate, there were a small number of (minor) finding specifically relating to guidance given to inspectors to ensure uniformity in verification checks and the implementation of an official PGI/PDO sampling plan.

The Department has agreed an action plan with all the Competent Authorities involved in the process to address the findings. Significant progress on certain elements such as agreement of a Protocol and MOU between all Competent Authorities involved and the development of a National Sampling Plan for Irish Whiskey is expected during 2020.

Labelling

EU Regulations on wines, spirit drinks, aromatised wines, fruit juice, coffee, chocolate, jams, jellies and marmalades set out product-specific labelling rules to ensure authenticity and to protect both consumers and producers. During 2019, the Department carried out checks at retail level to ensure that product labels were in conformity with these Regulations and with general labeling requirements as prescribed by the Regulations. In recent years an increase in the occurrence of internet fraud against EU registered PDO and PGI products in the Food and Drink sector has been identified. The Department is continuing to proactively examine potential online evocation and misinformation on websites and social media, and has also coordinated multi-agency responses to requests and queries from other Member States.

Food and Drinks Sector

Unfair Trading Practices Directive

Directive (EU) 2019/633 on unfair trading practises in business-to-business relationships in the agricultural and food supply chain entered into force on 30 April 2019. EU law requires the Directive to be transposed into national law by 1 May 2021.

A cross-departmental working group with the Department of Business, Enterprise and Innovation (DBEI) was established in April 2019 to explore the policy and operational implications of transposing and enforcing the Directive, and met seven times. The Department also continues to work with the EU Commission with regard to the Directive.

In October 2019 a public consultation process on the transposition of the Directive was launched by the Department. Over 650 submissions from individuals, stakeholder organisations and public representatives were received.

Prepared Consumer Foods Centre

The Prepared Consumer Foods (PCF) sector accounted for €2.7 billion in agri-food sector exports in 2019 and €3.8 billion in imports. The UK accounts for 67% (2019) of these exports and so the sector is particularly exposed to Brexit. To address this challenge and the traditionally low levels of Research & Development by companies in the sector the Prepared Consumer Food Centre was launched in late 2018. Following from previous funding, a further €5m was provided for the centre in Budget 2019. The centre continues to support companies in the Sector, through the purchase of equipment and the provision of space for use, which provide them with the opportunity to pilot the machines, to scale up their own production and to enable adoption of novel technologies to meet evolving consumer demands and expectations. Companies can also avail of the specialist knowledge and expertise of Teagasc staff in piloting and developing food products.

Up to the end of December 2019 a total of 66 companies have availed of the facilities at the PCFC since its opening in October 2018.

EI Capital Investment Scheme - SME Capital Investment Fund

This scheme is operated through Enterprise Ireland (EI) and is open to all Small and Medium Sized enterprises with the aim of helping them to improve their productivity and competitiveness in the face of challenges from Brexit through the acquisition of new capital equipment and technology and through innovation. In 2019 there were three approvals under this scheme at a total value of €466,877.

Artisan and Speciality Food Sector – The LEADER Food Initiative

Under the 2014-2020 Rural Development Plan (RDP) €15 million was allocated to the LEADER Food Initiative to support artisan, micro and small food producers in rural areas. The funding is delivered using the LEADER methodology. In 2019, 24 new project approvals for funding under the scheme were made. The total cost of completing the approved projects was €3.4 million. LEADER provides partial funding for an approved project and as such €1.72 million in funding was approved for draw down on a phased basis across those 24 approved projects. By the end of 2019 a total of €317,374 had been paid out under the LEADER scheme to various approved projects.

Artisan, Local and Speciality Food

In 2019, the development of artisan, local and speciality food was advanced through measures supported by the Department, Bord Bia and Teagasc. Specifically, the Department funded circa €30,000 in bursaries for students undertaking the Diploma in Speciality Food Production in UCC. The Diploma is a one-year part time (fetac level7) bursary foundation course in food science and food business for food producers, potential start-ups, those interested in developing artisan businesses and / or promoting the artisan sector. It is run by the Food Industry Training

Food and Drinks Sector

Unit in UCC (part of the School of Food and Nutritional Sciences). The Diploma was developed by UCC in 2005 in partnership with CAIS, Slowfood Ireland, Ballymaloe Cookery School, Teagasc and Veterinary Department, Cork Co. Council for the artisan sub-sector. These remain as stakeholders with Bord Bia, Teagasc, FSAI contributing course modules and strengthening its national dimension.

Diploma graduates have typically established a number of micro companies, with some of these small scale food operators subsequently expanding their local businesses to regional level. Graduates have also progressed academically within UCC to gain further skills, qualifications to develop their companies and/or participated in food industry initiatives to facilitate product development. Some graduates have won awards for their products. The Diploma falls within national policy recommendations, vis-a-vis the future developments of the Irish artisan and speciality food sector specifically Food Wise 2025 and CEDRA 2019.

EU Promotion Programmes for Agricultural Products – EU Regime

EU funding is available on a competitive basis to agri food sector bodies for generic promotion of the quality, safety, nutrition or production methods of EU agricultural products. The EU Promotion Policy for Agri-Food Products regime acts as key for opening up new markets and to diversify trading partners. With the common denominator - *'Enjoy, it's from Europe'* it aims to help the sector's professionals to break into or consolidate international markets and to make consumers more aware of the efforts made by European farmers.

A total of €201.1 million is available for promo programmes with EU co-financing rates ranging from 70% to 85% – with Industry funding of the balancing 15%/20%/30% required. An annual work programme sets out the strategic annual priorities for promotion measures in terms of products, schemes and markets to be targeted that year, with the corresponding allocated budgets. Calls for proposals are issued in January each year by the Consumers, Health, Agriculture and Food Executive Agency (CHAFEA), who subsequently assess and select the programmes. In 2019 a Bord Bia sponsored Pork & Poultry programme

in China and Mexico was among those selected for funding to commence in January 2020.

The Department is currently running a number of Promotional Programmes – all involving Irish agri-food sector bodies; *"Milk Moments"*; *"Mushrooms Complement Everything"*; *"European Lamb "Tasty Easy Fun"*; and *"European Beef and Lamb – Excellence in Food Safety & Sustainability"*.

Food Dudes Programme/School Fruit & Vegetables Scheme

The Food Dudes Programme is an evidence-based incentivised behaviour changing programme developed by the Food and Activity Research Unit, Bangor University, Wales. Under its' horticulture remit, Bord Bia manages and oversees the implementation of the Food Dudes programme since it was first rolled out in Ireland in 2005. It is funded by the Department and the EU through the EU School Scheme which incorporates the School Fruit and Vegetables Scheme. Food Dudes aims to increase sustained fruit and vegetable consumption amongst primary school children through repeated tasting of fruit and vegetables over a 16 day intervention period with the support of accompanying measures in the form of role models (Food Dudes Heroes) and small rewards. In the 2018/2019 school year, 117,234 children and 700 schools participated in the programme.

School Milk Scheme

The EU School Milk Scheme (SMS) has operated in Ireland since 1982 with the objective of promoting and encouraging the consumption of milk amongst school children. The Scheme is funded by the Department and the EU through the School Scheme. The National Dairy Council was appointed in 2017 to oversee the implementation of the School Milk Scheme in Ireland. In the 2018/19 school year, the NDC oversaw the distribution of 1,540,620 litres of milk to 577 schools and 52,252 children. A number of accompanying measures to support the distribution of milk to the children such as 'National School Milk Week' and specially designed educational lesson plans focusing on sustainability, the environment and health and nutrition were also implemented.

Food and Drinks Sector

Bord Bia

Bord Bia supports Irish food and drink companies with market insight and expertise as they seek to build long-term trading relations in export markets in the UK, continental Europe and internationally, while identifying new and emerging markets particularly in Asia.

Statement of Strategy

This is the first year of Bord Bia's Statement of Strategy 2019-2021 "Building Differentiation, Winning Growth". Bord Bia's stated vision for the Irish food and drink industry is as follows "To bring Ireland's outstanding food, drink and horticulture produce to the world, thus enabling the growth and sustainability of producers."

The Strategy set out four strategic priorities, which will contribute to the delivery of the Irish Agri-food industry road map export targets: - Food Wise 2025 These are:

- (i) Driving Success and Growth in the Market
- (ii) Insight to Power Growth
- (iii) Building Reputation for Growth
- (iv) Leading Through People.

Customers around the globe recognise that Irish food and drink is world class: that it is high-quality, distinctive, and made by a diverse range of creative producers from a unique and fortuitous island location.

Bord Bia remain positive that the twin messages of sustainability and quality will continue to open doors for Irish food producers the world over.

Origin Green

Ireland's sustainability programme continues to bring the Irish food and drink industry on the journey of sustainable food production. Membership includes farmers, food producers, retailers and food service operators, all committed to measurable improvements in environmental performance. By the end of 2019 at manufacturing, retail and foodservice level, there were a total of 345 verified OG members, additionally 625 had registered plans, 156 in plan development state, 124 submitted plans.

At retail and foodservice level, OG had 11 verified members, with a further 14 are registered and actively developing sustainability plans.

Bord Bia hosted nine introductory plan development webinars in 2019. The webinars introduced Origin Green to new members, who were also assigned a dedicated Origin Green mentor and participated in a six-week plan development course. Over 20 companies attended each session.

Sustainable Quality Assurance Schemes

At the end of 2019 there were some 54,000 producer members of Origin Green with a number in one or more Sustainable Quality Assured Schemes. There are 53,337 members of the Sustainable Beef and Lamb Assurance Scheme, 16,094 members of the Sustainable Dairy Assurance Scheme along with membership in the Bord Bia quality schemes for poultry, pigmeat, amenity horticulture, fruit and vegetable. In all, 35,733 Sustainable Beef and Lamb Assurance Scheme (SBLAS) audits were conducted in 2019, an increase of 2,179 on 2018. Of these, 78% were on beef-only farms, 18% on beef and sheep farms with the remaining 4% on sheep-only farms. 8% of audits were on the farms of new applicants or re-applicants to the scheme.

The work undertaken on Origin Green in 2019 contributed to the positioning of Ireland as a unique leader in sustainability. As a reflection of this, Bord Bia will host the Global Sustainability Summit in September 2020 in the Dublin Convention Centre.

Bord Bia undertook a communication strategy to demonstrate the tangible and intangible benefits of Origin Green to a broad base of stakeholders in 2019. This involved communicating its impact directly to members; encouraging citizens to become aware of and to take pride in the programme; engaging business leaders in the tangible commercial benefits of the programme; and enhancing collaboration on sustainability with peer organisations such as Teagasc, BIM, Enterprise Ireland and IBEC. As Origin Green extends into areas of EU focus such as emissions, water, waste and nitrates, collaboration with key stakeholders is key to successfully driving

Food and Drinks Sector

improvements in sustainability performance with all members, farmers and companies alike.

Monthly updates were provided to members through the Origin Green e-zine. Member materials were updated and work to improve the Origin Green website in terms of user experience and content was also undertaken.

The **Origin Green Ambassador** programme builds understanding of the Origin Green sustainability programme among international customers. Ten participants in the 4th programme completed their sustainability and Origin Green training in September 2019. The first series of international placements will run until May 2020 with Albert Heijn (Holland), Britvic (UK), Unilever (UK) McDonalds, Sainsbury's, Sodexo, Amazon, Waitrose and Nestle. Origin Green Ambassadors continued to build trade awareness globally of Ireland's Origin Green programme, by engaging in dialogue with the world's leading food and drink accounts.

National Food Innovation Hub

The Department is providing Teagasc with almost €9 million in funding on a phased basis towards the construction of a new National Food Innovation Hub at the Teagasc Food Research Centre in Moorepark, Co. Cork. Just under €1.2 million was allocated to the project in 2019. The principal objective of the "Hub" is to create a network for innovation and business involving dairy and food companies and research institutes with a focus on food, health and nutrition. The Hub will comprise custom designed Research and Development units and offices that Teagasc will make available to food companies at commercial rates. It will support innovation in the food industry thus enabling companies to become Brexit ready while also generating market focused research initiatives. On completion the project is expected to result in the development of new food products and processes, leading to economic growth and new jobs.



Primary Production

MEAT

BEEF

Beef Production and Trade

Beef worth over €2.3 billion or just short of 530,000 tonnes was exported in 2019, a decrease in value of 4% and of volume of 1% on the previous year. This made Ireland the 6th largest net exporter of beef in the world. In value terms over 90% of beef exports went to countries within the EU with the UK accounting for 43% of total exports. Third Country markets made up 10% of beef exports. In terms of volume 84% of beef products were exported to countries within the EU and 16% exported to Third Country Markets. Live exports increased by 22% in 2019 to over 300,000 head.

Slaughter reached over 1.7 million head in 2019 which was a 4.4% decrease on 2018 figures.

The average price for R3 Steers in 2019 was 365.19 c/kg, which represented a 6% decrease on the previous year, with a high price of 389.13 c/kg recorded during May. The average 2018 price was 389c/kg.

Beef Policy Developments

Beef Environmental Efficiency Pilot (BEEP)

The Beef Environmental Efficiency pilot was launched in 2019 aimed at improving economic and environmental efficiencies on farm through gathering performance metrics facilitating more informed decision making.

The scheme targeted the weaning efficiency of suckler cows by measuring the weight of their calves pre weaning as a proportion of the dam's weight. Cows that produce heavier calves at weaning as a proportion of their own live weight typically have a lower emissions intensity of production. The key factors being the cow's lower feed requirement and the higher value output from the calf as well as the consequential option to slaughter at a younger age.

16,424 farmers carried out the required weighing and recording and received payments totalling €15.3 million. The evaluation of BEEP Pilot conducted to date indicates that it has helped farmers recognise the benefits of weighing their animals and the data generated has improved genetic evaluations.

The Beef Exceptional Aid Measure (BEAM) was announced in May 2019. This provided temporary exceptional adjustment aid to farmers in the beef sector in Ireland subject to the conditions set out in EU Commission Implementing Regulation (EU) 2019/1132. BEAM was funded by a combination of EU aid and Exchequer support, provided in light of the difficult circumstances that Irish beef farmers have been facing as a result of the market volatility and uncertainty. 23,374 farmers participated in BEAM resulting in payments of almost €78 million.

Establishment of the Beef Taskforce

The Irish Beef Sector Agreement was reached between stakeholders on 15 September 2019. As part of this agreement, the Beef Taskforce was established to monitor the implementation of the commitments entered into and as a platform for strategic engagement with key stakeholders.

Broadly the agreement contains two strands: a number of interventions which provided an immediate benefit for beef producers including changes to the bonus structure and longer-term objectives and structural reform of the sector.

The Beef Taskforce has an independent chair, Mr Michael Dowling, and updates and relevant documents are publicly available at <https://www.agriculture.gov.ie/farmingsectors/beef/beeftaskforce/>

Market Diversification

Increased diversification of markets remained a priority in 2019. In value terms 90% of beef products were exported to countries within the EU and 10% exported to Third Country markets in 2019. However, significant progress to diversification has been made by securing access into key International markets including China, US and Japan in recent years.

Primary Production

Further access to the Chinese market for Irish beef in 2019 was a significant achievement in terms of market diversification. A successful beef audit was conducted in September 2019 with the inspection of 14 applicant beef plants who were subsequently approved to export to China.. 2019 also saw improved access to Japan, when the 30 month age restriction for beef was removed and a revised certificate introduced which allows for the export of boneless beef derived from cattle of all ages.

Beef Producer Organisations

The first two beef Producer Organisations in Ireland were established in Q4 of 2019 and engagement with prospective groups is ongoing. Producer Organisations have the capacity to strengthen the position of the primary producer in the supply chain and under the current Rural Development Programme, funding is available to support establishment of groups through funding of advisory costs.

SHEEP

Sheep Production and Trade 2019

Sheepmeat export values increased by 1% on previous year values to reach almost €318 million, while volumes rose by 3%. Slaughtering decreased by 7% in 2019 to just under 2.8 million head. The national average price in 2019 was €460.10/100Kg, a 4.5% decrease on the previous year.

Sheepmeat worth over €318 million, or almost 62,000 tonnes was exported in 2019. In value terms over 71% of Sheepmeat products were exported to countries within the EU, a further 20% was exported to the UK and 9% exported to third country markets. In terms of volume 65% of sheepmeat products were exported to countries within the EU, 24% was exported to the UK and 11% exported to Third Country Markets. A total 40,000 tonnes of sheepmeat products were exported to the EU, with France receiving the highest amount of over 18,000 tonnes, followed by the United Kingdom with nearly 15,000 tonnes.

Year 3 of the Sheep Welfare scheme opened in February 2019. The scheme provides support of €10 per ewe to farmers with breeding ewe flocks and will

run up to 2020. Advance payment under Year 3 of the scheme issued in November 2019. €14.91 million was paid to 18,489 participants and represented an advance payment rate of 85%. Balancing payments for year 3 of the scheme will issue in Q2 of 2020.

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 €100 million. 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 Three Year Knowledge Transfer Programme for the sheep sector was launched in 2016 and concluded in 2019. Approx 3,860 farmers participated in Year Three of the Knowledge Transfer Sheep Programme which concluded end of July 2019.

Sheepmeat Policy Developments

Year 3 of the Sheep Welfare scheme opened in February 2019. The scheme provides support of €10 per ewe to farmers with breeding ewe flocks and runs up to 2020. In the first three years of the sheep welfare scheme, €50.3 million was paid to 18,594 farmers. The scheme provides support for farmers who undertake actions which make a positive contribution to flock welfare.

In July 2019, sheepmeat access to the Japanese market was finalised. Five Irish sheepmeat plants, producing over 90% of Irish sheepmeat, are now approved and listed for export to Japan.

2019 Meat Market Access

Considerable progress was made on a wide range of meat market access issues in 2019 including:

- The approval of an additional 14 Irish beef plants for export to China in October 2019 on foot of a successful inspection visit in the summer by Chinese auditors hosted by the Department.

Primary Production

- Expanding our access to the Japanese beef market with the agreement on the lifting of the 30 month age restriction and a revised certificate which allows the export of boneless beef derived from cattle of all ages.
- In July 2019, sheepmeat access to the Japanese market was finalised. Five sheepmeat plants, producing over 90% of Irish sheepmeat, are now approved and listed for export to Japan.
- The agreement of a veterinary health certificate for the export of beef and pork to the Ukraine. The agreement of a veterinary health certificate for the export of beef to Barbados
- Access to significant, established markets was expanded with a veterinary health certificate for raw preserved meat products and preparations agreed for Hong Kong and one for butter basted whole turkeys agreed for South Africa.
- In addition to the Chinese audit in late summer the Department hosted high-level audit inspections from three other priority markets' competent authorities:
- In March auditors from Japan's Ministry of Health, Labour and Welfare (MHLW) conducted a week long inspection of Irish meat plants as part of our applications for the lifting of the 30 month age restriction on beef exports and sheepmeat market access;
- In June inspectors from the United States Department of Agriculture (USDA) Food Safety Inspection Service (FSIS) conducted a successful reinstatement audit on beef and pigmeat.
- In December, government officials from Malaysia's Veterinary Service (DVS) and Halal Authority (JAKIM) conducted a poultrymeat audit.
- These incoming inspections are crucial either in relation to the maintenance of existing market access, seeking new market access or showcasing Irish production standards and developing further contacts in Ministries abroad. The market access gains this year for both China and Japan are a testament to the value and importance of these visits.

- 2019 was also a banner year for the Departments' intensified programme of trade mission with successful ministerial trade missions to Turkey, Japan, South Korea, the UK, the EU and two separate missions to China in May and November

PIGMEAT

Production and Trade

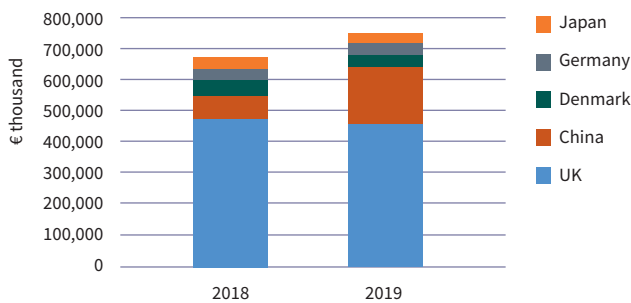
On foot of substantial growth in recent years, Pigmeat is now the fourth most valuable sector of the Irish agri-food industry after dairy and beef. Exports were up by approximately 8% in value terms in 2019, reaching an all-time high of €890 million according to Central Statistics Office figures. This equates to approximately 6% of overall food, drink and horticulture exports. The UK remains by far our largest export destination, accounting for a 52% share of exports. However, third country markets, which have been steadily expanding in recent years, rose to 29% of total share in 2019. This is illustrated by the significant expansion in Ireland's pig meat exports to Asia, and to China in particular, where export values more than doubled from €79 million to €177 million due to increased export demand as a result of African Swine Fever (ASF). Domestic retail sales came in at €412 million for the year, largely due to Ireland's 28kg per capita consumption rate, which remains high by international standards. This growth in export values vindicates the accurate direction and focuses of the Food Harvest 2020 and Food Wise 2025 strategies. Further evidence of this can be seen when we look at longer term trends; since 2010, export values of Irish pigmeat have risen by over 250%.

Outbreaks of African Swine Fever (ASF) have had significant influence on global production and trading patterns in recent years. Numerous new outbreaks of ASF have been reported across a wide geographical range of China. It is expected that more than 50% of China's herd, or 30% of the world's pigs, are to be culled as a result of the current outbreak. In 2019, the main effect of ASF for the Irish pig sector was increased export opportunities to China.

Primary Production

2018 was a poor year for producers with pig prices remaining stubbornly low all year, but 2019 saw record highs reached throughout the second half of the year, with €1.91c/kg reached in December. Coupled with a favourable feed price, last year was a very good one for Irish pig producers.

Selected Pigmeat Export Destinations, 2018-2019



Policy Developments

Pig Implementation Strategy Group

The Pig Implementation Strategy Group met four times during 2019. Chaired by Dr. Sean Brady, the group oversees implementation of the recommendations set out in the 2016 report of the Pig Industry Stakeholder Group. The report, which contains over 60 recommendations, addresses a number of challenges for the pig sector under a wide range of themes including Bio-Security, Animal Health & Welfare, Quality Assurance, Veterinary Medicines, and Salmonella Control. Last year, major achievements which the PISG was involved in included the introduction of LEAN Principles Programme for Farmers in the pig sector, Animal Health Ireland beginning work in the pig sector, and the raising of the TAMS investment ceiling from €80,000 to €200,000 (pending EU Commission approval).

Pig Salmonella Control Programme

Under the Pig Salmonella Control Programme, monthly samples are taken at factories for all producers who supply more than 200 pigs for slaughter per annum. Over the course of 2019 just over 20,500 (20,668) samples from 348 herds were taken and tested in order to provide up-to-date results for both farmers and processors on salmonella prevalence.

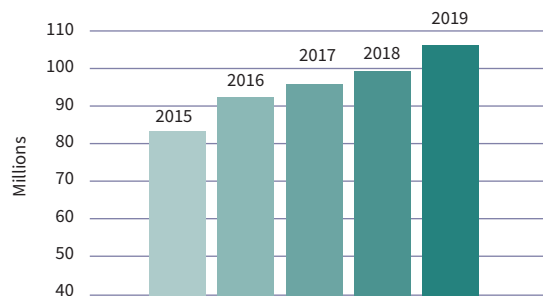
POULTRY AND EGGS

Production and Trade

Over 800 farms are involved in commercial poultry production in Ireland, broken down between poultry for meat, egg production, breeding farms and hatcheries. The industry supports around 6,000 jobs, primarily in rural areas.

Over 106 million birds were slaughtered in export-approved plants during 2019, 96 million of which were chickens. This represents a 7.6% increase over 2018, and in volume terms, Irish production hit record levels in 2019, up 6% year-on-year to reach 161,000 tonnes.

Poultry Slaughter, 2015 - 2019



Ireland has access to 61 countries (including EU countries) for the export of poultry meat. CSO figures show that while the volume of exports rose by just under 6% from 136,000 tonnes to 144,000 tonnes in 2019, the value of Irish poultry exports for 2019 fell by 4% to just under €294 million. The UK (€216 million) accounted for 74% of that figure and France (€11 million), Denmark (€8 million), The Netherlands (€10 million) and South Africa (€29 million) also featured prominently as export destinations.

At the end of 2019, there were a total of 257 hen egg units registered with this Department and the associated total no. of hens places registered exceeded 3.65 million, a slight increase on the 2018 figure.

Primary Production

Summary Table of Hen Egg Producer Categories in 2019:

Hen Egg Producer Category	Registered Units	Total Hen Places
Free Range	175	44%
Enriched Caged	36	52%
Organic	38	3%
Barn	8	1%
Total	257	100%

There continues to be a substantial and growing trade in the export of Free Range and Organic eggs for human consumption to Middle Eastern Countries with more than 8 million eggs in 220 Consignments exported in 2019.

Over 200 poultry farmers participated in Year Three of the Knowledge Transfer Poultry Programme which concluded end of July 2019. Payments commenced in October 2019.

Policy Developments

The Department's Poultry and Egg Official Control Programme's function is the implementation of official controls on Food Safety and Food Authenticity at Food Business Operators (FBO's). A range of official controls on egg producers and poultry meat producers are implemented through inspections and sampling of FBOs in order to check compliance with food safety and authenticity legislation. More than 2,200 inspections were undertaken on egg and poultrymeat establishments in 2019 under Food Hygiene and Marketing Standards legislation. 307 egg samples were sent for various residue analyses in 2019, the majority formed part of the National Residue Control Plan requirements.

Over 220 poultry farmers participated in year three of the Knowledge Transfer Poultry Programme.

DAIRY

Production and Trade

The strong recovery in dairy markets experienced in 2018 continued in 2019 with strong global demand for dairy products underpinning a stable performance by the Irish dairy sector.

2019 was a much more favourable year for grass growth and forage production which contributed to an increase in milk production of 5.3% compared to 2018 with total deliveries exceeding 7.9 billion litres in 2019. Irish milk production represented approximately 5% of total EU milk production in 2019. The average price paid to farmers in 2019 was 33.9c/l (yearly average including VAT and bonuses paid), down 3.2% from 35.04c/l in 2018.

In 2019, Ireland exported dairy products to approximately 140 countries with a value exceeding €5 billion. This equated to a +12% volume growth and a +10% value growth compared to 2018.

Sales of Butter exceeded the €1 billion mark for the second year in a row in 2019 and sales of cheese, whey and skim milk powder also saw significant growth in both volume and value in 2019. EU-27 account for 35% of the value of Irish dairy exports in 2019 with 45% to international markets, while the UK accounted for 20% of the value of dairy exports. Other significant export markets include the Netherlands (14%), China (11%), Germany (7%) and the United States (7%).

At the beginning of October 2019, the Office of the United States Trade Representative (USTR) released a list of products to be subjected to additional duties of 25%, including some important and flagship European agriculture products. The additional duties took effect from the 18th October 2019. Irish butter and cheese fall under the categories of dairy products most affected and are subject to additional import duties of 25% ad valorem.

Primary Production

Irish dairy exports to the US amounted to 52,915 tonnes, worth approx. €332 million in 2019. Approx €194 million of Irish butter and approximately €44 million worth of cheese was exported in 2019 from Ireland to the US. Ireland accounts for almost 90% of EU butter exports to the US.

The key EU market development in 2019 was the sale of the remaining Skimmed Milk Powder (SMP) from EU intervention stocks which had been overhanging the EU SMP market for the last few years. This has allowed the SMP price to continue its evolution to a more market driven basis than in the recent past.

Policy Development

During the Milk Quota regime the Department introduced the Milk Production Partnerships Scheme, to assist in intergenerational transfer, improve efficiency and bring about economies of scale at farm level. Following the ending of the Milk Quota Regulations in 2015, the Department established a new Farm Partnership Register. There are currently 2,970 active registered farm partnerships. Supports include preferential stock relief; a start-up grant scheme; and favourable terms for partnerships in Department Schemes.

In June 2017 the Department launched the Succession Farm Partnership (SFP) Register aimed at encouraging best practice in intergenerational land transfer in order to address, among other things, the issue of lack of experience on transfer. An annual income tax break of €5,000 is provided for up to five years and the farmer commits to transferring a minimum of 80% of the partnership assets to the successor between 3 and 10 years into the agreement. At present there are approximately 60 such SFPs in operation.

The Department also provides support to the Macra Land Mobility Service, a match making service for farmers who wish to engage in collaborative working arrangements but who have no readily identifiable collaborator. The Department provided funding of €50,000 per year to the service from 2017 – 2019 inclusive to support the efforts of Macra and Industry to capitalise on potential efficiency gains from collaborative working.

CROPS

Cereals

The overall production of cereals for the country was estimated at 2.2 million tonnes for 2019 which was an increase on the low production of 1.8 million tonnes in 2018 but still somewhat behind 2017 production which stood at 2.3 million tonnes. The quality of grain was high in 2019 with high hectolitre weights and straw yields also returned to normal levels particularly in spring crops but this did result in a drop in price from the extremely high prices attained in 2018.

The total cereal area harvested in 2019 was 261,400 ha a modest increase in cereal area for the first time since 2012. A higher area of winter crops, which tend to yield higher than spring crops, along with more normal yields for spring crops in particular saw production return to normal.

Area, Yield and Production of Cereals 2019*

	Area (000 ha)	Yield (t/ha)	Production (000 tonnes)
Wheat	62.1		589
Winter	58.4	10.1	560
Spring	3.7	8.3	29
Barley	176.0		1,448
Winter		81.44	9,427.29
Spring	94.6	8.00	719
Oats	23.3		188
Winter	16.4	8.85	137
Spring	6.9	7.70	51
Totals	261.4		2,225

Source: Teagasc Estimated Cereal Production 2019

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

Sustainable Production

Fertiliser and Lime Inspection Programme

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 2019, a total of 267 samples were taken at manufacturers' premises (186 fertiliser samples and 81 lime samples). 641 individual analyses were carried out for fertilisers, which resulted in an out of tolerance of 3.9%. 243 individual lime analyses were carried out with a result of 8.2% out of tolerance.

There were a total of 46 active quarries in 2019 and one new ground limestone quarry was licensed during 2019.

Year	2015/16	2016/17	2017/18	2018/19
Nitrogen (tonnes) (% change)	1,377,754 (+1.34%)	1,510,972 (+9.6%)	1,670,799 (+10.6%)	1,500,701 (-10.18%)
Phosphorous (tonnes) (% change)	805,600 (+0.9%)	899,337 (+11.6%)	1,005,689 (+11.8%)	921,818 (-8.34%)
Potassium (tonnes) (% change)	815,204 (+1%)	911,933 (+11.87%)	1,019,805 (+11.8%)	941,501 (-7.68%)
TOTAL (tonnes) (% change)	1,411,913 (+1.18%)	1,552,809 (+9.98%)	1,714,729 (+10.4%)	1,547,082 (-9.78%)

Ground limestone usage was down on the previous year (2018) by 25% to 762,865 tonnes. This follows an increase in lime use in 2018.

Year	2016	2017	2018	2019
Ground Limestone sales (tonnes) % change	967,281 +8.2%	737,118 -24%	1,020,502 +38%	762,865 -25%

Sustainable Production

2019 Nitrates Derogation

The Nitrates Derogation is an important facility for intensively stocked farms as it allows them, subject to additional environmental conditions, to farm up to 250 kgs N/ha, or the equivalent of three dairy cows per hectare. In December 2017, Ireland successfully secured a renewal of our Nitrates Derogation for 2018 - 2021. In 2019, a total of 6,800 farmers made an online application for a Nitrates Derogation.

Nitrates Derogation Review 2019

EPA reports have highlighted deterioration in water quality and increasing green house gas and ammonia emissions. There are also significant issues around the decline of EU protected habitats in Ireland. In light of the increasing land area being farmed under derogation and the environmental pressures outlined, it was considered prudent and important to the longer term retention of this important facility to review the conditions of the Nitrates derogation. Ireland's current derogation concludes in 2021, and failing to address the environmental pressures above, would negatively impact on any negotiations to renew this important facility. As part of this review, a public consultation was held and 75 submissions were received.

The Nitrates Expert Group, which comprises of officials from the Department, EPA, DHPLG & Teagasc reported the findings from this review which is published here: <https://www.agriculture.gov.ie/ruralenvironmentsustainability/environmentalobligations/nitrates/2019nitrate derogationreview/>

New measures arising from the recommendations of the Nitrates Expert Group will be included in the Terms & Conditions for the Nitrates Derogation applications in 2020 and 2021.

Nitrogen and Phosphorus (N&P) Data 2019

The Department's online system, www.agfood.ie provides farmers with detailed N&P statements, reflecting cattle only stocking rates on their holding. Statements are available online monthly from May to December 2019, allowing farmers to monitor their

Nitrate levels in order to comply with the limits. Text messages also issue periodically to farmers registered to receive them who are in the higher brackets for the time of year

Agricultural Catchment Programme (ACP) 2019

Phase 3 of the ACP commenced in January 2016 and concluded at the end of 2019 and built on the gains and experiences from earlier phases of the programme.

The ACP works in partnership with over 300 farmers in six intensively farmed catchments and this farmer engagement, which is built on the relationships of the advisers with their farmer clients, facilitates the research elements of the programme. The research work is carried out according to a single experimental design which is implemented rigorously in each catchment. A range of biophysical and socio-economic parameters are used to evaluate the impact of the National Action Plan (NAP) measures and the derogation implemented by farmers under the Nitrates Directive. The outcomes of this research provide a valuable insight into the processes that determine the impact of agricultural activity on water quality in the catchments.

ACP research indicates that in 4 out of 5 of the catchments, improvements in nutrient management on land is evident. Overall, evidence from the ACP indicates that supporting farmers, through technical advice, to make better decisions regarding how they manage nutrient applications is likely to be the single area with the greatest potential to improve outcomes for water quality on Irish farms. This should deliver increased efficiencies for the farmer while reducing risk of nutrient loss to water.

Phase 4 of the ACP commences January 2020 until December 2023 and as well as building on the knowledge gained in the previous three phases, Phase 4 is enhanced to now also include research on GHG, Carbon sequestration and this is both relevant and vital for this Department in the context of the All of Government Action Plan to Tackle Climate Disruption. The ASSAP is also now included in the ACP programme.

Sustainable Production

Agricultural Sustainability Support and Advisory Programme (ASSAP) 2019

The Agricultural Sustainability Support & Advisory Programme (ASSAP) is an innovative collaborative initiative supported by this Department and the Department of Housing Planning and Local Government and industry to achieve farmer behavioural change for the protection of water in order to meet Water Framework Directive objectives. It is a whole of Government, whole of sector approach to provide direct advice to farmers in 190 areas-for-action for the protection and improvement of water quality. 30 sustainability advisors are assigned to this programme, 20 provided by the Government and 10 by the Dairy Co-ops. These 30 advisors are working within a unified partnership structure which encompasses Teagasc, the Co-ops and LAWCO (Local Authorities Water and Communities Office).

The programme draws on the experience and resources of key sectoral and industry stakeholders including the two Departments, the Local Authorities, the Dairy Co-ops, Teagasc, Bord Bia and the farm organisations. The Department also provides significant administrative support to the Programme.

This is a new approach to achieving improvements in water quality and supports the goals of the Food Wise 2025 strategy, facilitating increased productivity hand-in-hand with a more sustainable sector. This will be achieved by advisors working with farmers focusing on improved nutrient management with more targeted use of fertiliser, better farmyard practice and appropriate measures for identified critical source areas. Over time more widespread sustainability approaches developed by Teagasc will be implemented focusing on climate change and biodiversity.

The second River Basin Management Plan (RBMP), published in April 2018, identifies that 1,460 river and lake water bodies are at risk of not meeting the Water Framework Directive's quality objectives; agriculture is the significant pressure in 53% of these water bodies. The Nitrates Regulations are the main agricultural measure in the RBMP; these regulations lay down comprehensive requirements for farmers to abide by to

ensure the protection of waters from agricultural sources. However, farmer compliance rate with these regulations over the years has been unsatisfactory leading to the conclusion that a new collaborative initiative is required for better farmer engagement.

The ASSAP has been set up to provide free advice and support to farmers to assist with complying with the nitrates regulations, provide solutions for critical source areas and to improve water quality. It is estimated that there are around 20,000 farmers in these 190 areas-for-action of which around 7,000 will be receiving advice under this programme from 2018 to 2021.

Forestry

Forests cover 11% of the land area of the country, a significant increase from a low of 1% forest cover at the beginning of the 20th century. Private afforestation, undertaken with support from the State, contributed to this increase, with forest cover in Ireland increasing by some 320,000 hectares between 1985 and 2012. This is one of the highest levels of increase in forest cover among developed countries. The development of forestry in Ireland over the last number of decades has resulted in the creation of an indigenous and internationally competitive industry that supports jobs and communities across rural Ireland. Notwithstanding an ongoing level of new planting, forest cover in Ireland at 11% is one of the lowest levels in Europe, with the European (EU28) average being c.33%.

The establishment of new forests is funded under the Afforestation scheme, which forms part of the Forestry programme 2014-2020. The table below sets out the area of new forests planted, for which grants were paid.

Afforestation levels 2013-2019 (hectares)

2013	2014	2015	2016	2017	2018	2019
6,252	6,156	6,293	6,500	5,536	4,025	3,550

Sustainable Production

Following the Forestry Programme 2014-20 midterm review (MTR) which was completed in 2018, a series of new schemes introduced had their first full year of implementation in 2019. The strong increase in broadleaf tree species planting in 2018, did not continue in 2019, but in response to measures in support of Broadleaf planting it remains at a significantly higher level than before MTR with 25% of broadleaf afforestation as a percentage of total planting in 2019.

A very strong interest in the Woodland Improvement Scheme was observed in 2019 while demand for the new Continuous Cover Forestry scheme exceeded expectations.

The Forestry Division successfully managed and supervised the transformation of 14,128 forestry parcels relating to six Counties into the Department's new Land Parcel Identification System in 2019.

Woodland Environmental Fund (WEF)

The Woodland Environmental Fund (WEF) is unique in terms of schemes run by the Department. Instead of distributing exchequer and EU funding to farmers, the WEF creates a third source of finance to support their farming enterprise. Under this initiative funding from the business community is given directly to farmers to establish native woodlands. The WEF ties in with the Department's existing Afforestation Scheme which covers 100% of the cost of establishing native woodlands and also pays an annual premium to the landowner of up to €680 per hectare payable each year for 15 years. The WEF involves an additional top-up of €1,000 per hectare by the business as a once-off payment for farmers and other private landowners. Businesses taking part in the WEF are able to demonstrate their corporate social responsibilities by funding projects that are good for the environment and society as a whole. Companies participating so far in WEF include Lidl, Aldi, Microsoft, Accenture, An Post and KBI Global Investment.

The National Forest Inventory

During 2019, preparations were made to commence the fourth NFI cycle. Field data collection is scheduled to commence in February 2020. Multi-resource information will be collected across the forest estate including information on forest area and species composition, growing stock (m3), biodiversity, forest health and carbon content.

The COFORD Council

The COFORD Council is a body comprising of stakeholders from across the forestry sector who are appointed by the Minister of State for Forestry to advise his Department on issues related to the development of the forest sector in Ireland.

The COFORD advisory council 2019-2021 has established a number of Working Groups and has published a number reports across a broad range of areas. The following working groups have been established;

- Forest Genetic Resources Working Group
- Roundwood Forecasting and Wood Mobilisation Group
- Working Group on Forests, Climate Change Mitigation and Adaption
- Working Group on Forest Policy, monitoring of implementation
- Working Group on Promotion of Forestry and Afforestation
- Working Group to formulate the socioeconomic contribution of the Irish forest sector Ecosystem services

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.

Sustainable Production

Initiatives to Support Private Forest Owners to Manage Forests

Since the 1980s, some 22,000 individual landowners have established new forests in Ireland. This represents an investment by the State of approximately €3 billion. Although plantation forests form approximately 7% of the world's forests, they supply over a third of the world's timber (FAO) and continue to play an important role in providing multiple benefits.

According to the All Ireland Roundwood Production Forecast 2016 – 2035, published by COFORD, wood production is set to double from 4 million cubic metres to 8 million cubic metres by 2035 mostly from these privately owned forests. In order to realise, and maximise, the return on the investment by the State and landowners in forestry to date, the mobilisation (harvesting, extraction and use) of this timber is essential, thereby also creating economic activity along the supply chain through activities such as harvesting, transportation, replanting and processing. The COFORD Council has published a number of reports highlighting key barriers to mobilisation which need to be addressed to ensure timber is harvested at the levels forecasted.

Knowledge Transfer Groups for Forestry

'Mobilising Ireland's Timber Resource', a policy document issued by COFORD, identified a number of barriers to private timber mobilisation (i.e. extraction and sale of timber from privately owned forests) in Ireland. These barriers include the fragmentation of the private forest estate – with forests averaging 8.8 hectares in the ownership of 22,000 private forest owners.

As part of the Forestry Programme 2014-2020, the Department introduced some measures to target challenges to the forestry sector and to develop and promote a forestry culture in Ireland. One of these measures was to extend the Knowledge Transfer model to Forestry. A lack of forest management knowledge amongst a significant proportion of private forest owners was recognised as a substantial barrier to

timber mobilisation. In 2017, the Department provided funding for a pilot Forestry Knowledge Transfer Scheme for 270 private forest owners in four groups. The pilot study was successfully completed in March 2018 and a national scheme was launched in May 2018, followed by another national scheme in 2019 with more than 600 participants taking part in the schemes in each year.

The purpose of the Forestry KTG scheme is to provide private forest owners with additional knowledge and support in management activities in their forest. The scheme uses peer-to-peer learning, where the group, assisted by a forestry professional acting as facilitator, discusses and shares knowledge on various topics. There were seven learning events in each module, with up to two events at outdoor venues, such as a saw mill or a forestry site.

Organic Farming

While the Organic Sector in Ireland is still relatively small in relation to agriculture as a whole, the Organic Sector is one experiencing considerable growth at present. There are currently 2,356 organic operators in Ireland, of whom over 1,850 are farmers. The area of land under organic production has expanded dramatically under the current Rural Development Programme, thanks to the suite of supports that have been put in place. Latest figures indicate that there are now some 74,000 hectares under organic production, an increase of nearly 50% on the position at the start of the Programme in 2014.

Organic Farming Operators and Hectareage

2016	2017	2018	2019
2,127 (72,364ha)	2,136 (70,722ha)	2,127 (71,000ha)	2,356 (74,000ha)

Sustainable Production

A range of organic events took place in 2019 to raise awareness on organic farming. In February 2019, Bord Bia co-ordinated Ireland's participation at Biofach, which is the 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 2019 included the demonstration organic farms programme organised by Teagasc, which involved 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 €500,000 for investments off-farm is available.

Genetic Resources

The Department, under the Genetic Resources Grant Aid Scheme issued its annual call for proposals in relation to the conservation of plant, animal, forestry, micro-organisms, invertebrates and aquatic genetic resources.

In 2019, funding of over €40,000 was allocated to six projects to support research undertaken by third level institutions, stakeholder associations and sector interest groups relating to a range of topics including

- Analysis of heritage crops,
- Market opportunities for endangered Irish equine breeds
- Breeding programme for Droimeann cattle
- A strategy for the conservation of native free living honeybee colonies
- Conservation of the Irish apple genome
- An insitu conservation project for priority crop wild relative

For further information:

<https://www.agriculture.gov.ie/farmerschemespayments/otherfarmersschemes/conservationofgeneticresourcesforfoodandagriculture/geneticresourcesprojects/>

Climate Change

The long-term policy vision for the agriculture and land use sector is 'an approach to carbon neutrality in the agriculture and land use sector, including forestry, which does not compromise the capacity for sustainable food production. Over the course of 2019 the environmental goals of the agriculture and land use sector including forestry were progressed in line with the long-term policy vision for a carbon neutral sector.

Adaptation and Mitigation Planning

Ireland's first statutory National Adaptation Framework was published in January 2018 and identified twelve priority areas where sectoral adaptation plans are required to be prepared. This Department is the lead Department for three of these priority areas: agriculture, forestry and seafood. During 2018, work commenced on the development of a first statutory sectoral adaptation plan for the three areas under the Department's remit which must be submitted to Government no later than 30 September 2019.

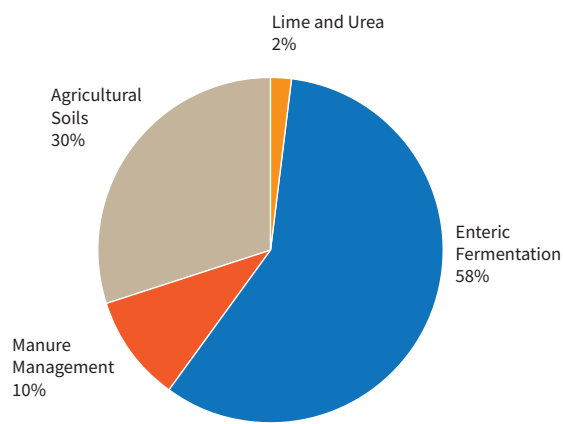
Towards the end of 2018 preparations commenced for the development of an All of Government Plan to tackle climate disruption. This Plan builds on the National Mitigation Plan and will include actions to deliver on our climate targets.

The Department published its first statutory Agriculture, Forest and Seafood Climate Change Sectoral Adaptation Plan during 2019. The overall adaptation goal of the Sectoral Adaptation Plan is to build resilience to the effects of climate change and weather related events in the agriculture, forestry and seafood sector, to reduce any negative impacts where possible, to take advantage of any opportunities and to contribute to the achievement of the Department's Statement of Strategy Goals.

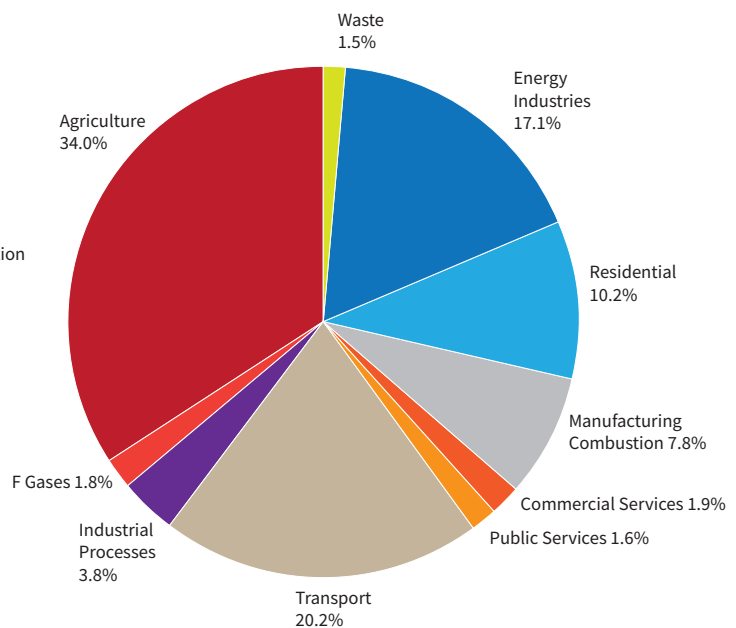
Sustainable Production

During 2019 the All of Government Climate Action Plan to tackle climate breakdown was published setting out the actions required to meet Ireland's EU target for 2030 as discussed above.

Distribution of Irish agriculture emissions 2018



Greenhouse gas emissions in Ireland 2018



Total Agriculture and Land Use Emission Levels

National target Vs 1990 baseline	1990 CO2eq Tons	2018 CO2eq Tons	Variance %
Overall total agricultural and land use emission levels	20.35	20.59	+1.13%
Total agricultural CO2eq emission levels	19.62	19.99	+1.89%
- Carbon Dioxide (CO2)	0.40	0.58	+45.00%
- Methane (CH4)	12.76	12.97	+1.60%
- Nitrous Oxide (N2O)	6.44	6.45	+0.15%
Total agricultural land use related emission levels			
Grassland and Cropland	6.88	6.40	
Forestry	-3.861	-4.34	
Harvested Wood Products	-0.413	-0.871	

Sustainable Production

Clean Air Strategy

The Clean Air Strategy for Ireland is coordinated by the Department of Communications, Climate Action and Environment (DCCAE). It provides an opportunity to address air pollution in Ireland, containing a suite of policies and legislative proposals to update and modernise EU clean air legislation. A key component is a revised National Emission Ceilings Directive (NECD) with more ambitious and protective national emission ceilings for key pollutants which sets tighter limits in 2030 for five air pollutants - particulate matter (PM10 and PM2.5), sulphur dioxide (SO₂), nitrogen oxides (NO_x), ammonia (NH₃) and volatile organic compounds (VOC).

The Department of Agriculture, Food and the Marine continues to engage with DCCAE in relation to the development of Ireland's Clean Air Strategy as a nationally coordinated strategy to implement the EU NECD 2016. The NECD entered into force on 31 December 2016 and Ireland transposed it into national legislation with S.I. No. 232 of 2018 (European Union (National Emission Ceiling) Regulations 2018). The Department collaborated closely with DCCAE to develop the agriculture components of Ireland's National Air Pollution Control Programme (NAPCP) submitted in April 2019.

Under the NECD, Ireland has had a mandatory ceiling for ammonia since 2010 which was exceeded for the first time in 2016 and continues to rise. As 99% of all ammonia emissions come from the agri-food sector, there is an onus on the sector to reduce emissions and bring them in line with the legislative limits. In November 2019, the Department of Agriculture, Food and the Marine released a Code of Good Agricultural Practice for Reducing Ammonia Emissions which raises awareness of the options for farmers. This is a guidance document that outlines the best practice actions farmers can take to help reduce their ammonia emissions. It is a requirement for every Member State to make this code available to all farmers and to submit it as part of the response to addressing the NECD and Gothenburg protocol. This code will ensure coherence with Ireland's Nitrates Action Programme (NAP) and

will further encourage improvements in nitrogen use efficiency. Furthermore, conditionality of the Nitrates derogation was reviewed and now includes some ammonia abatement measures such as use of low emission slurry spreading technology.

Bioenergy

The main contribution of the agriculture and forest sectors 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. Other sources of biomass include energy crops or grass silage.

The mid-term review of the Forestry Programme 2014-2020 was published in early 2018 and included substantial increases in the premiums paid for growing trees suitable for fibre and biomass.

This Department continues to work closely with the Department of Communications, Climate Action and Environment to explore further opportunities for encouraging the sustainable use of farm manures and agri-residues - primarily for use in the Anaerobic Digestion industry for the production of biogas/biomethane and forest based biomass, all of which can displace fossil fuels and energy intensive materials.

A new Support Scheme for Renewable Heat (SSRH) was launched in 2018 by SEAI and is open to commercial, industrial, agricultural, district heating, public sector and other non-domestic heat users. The scheme provides grant support for the installation of air source, ground source and water source heat pumps. The Scheme offers ongoing operational support (a tariff) based on useable heat output in renewable heating systems, in new installations or installations that currently use a fossil fuel heating system and convert to using the following technologies:

- Biomass boiler or biomass HE CHP heating systems
- Biogas (anaerobic digestion) boiler or biogas HE

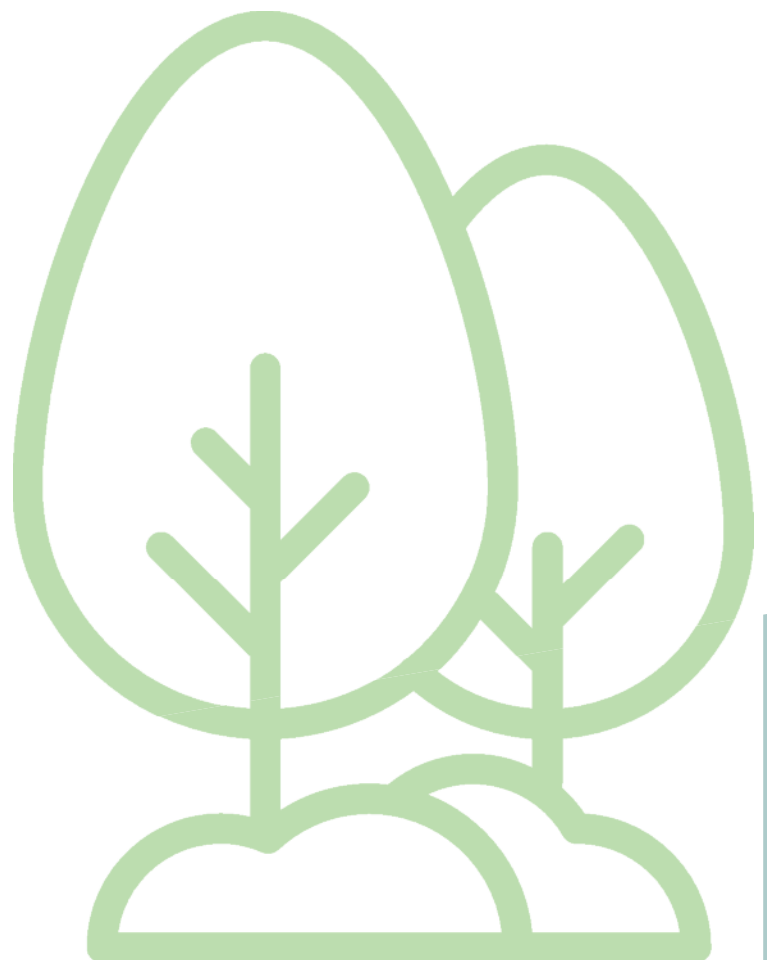
Sustainable Production

CHP heating systems

The Department supports renewable heat technologies in the form of supports for biomass boilers under the Pig and Poultry Investment Scheme (PPIS) and the Young Farmer Capital Investment Scheme (YFCIS). Air-source heat pumps are currently supported under PPIS and YFCIS schemes and they may be used as part of a water heater under the Dairy Equipment Scheme. Grant aid is also available under PPIS and YFCIS schemes for solar panels used for electricity production (photovoltaic) and water heating that are permanently erected to buildings used for pig, poultry and egg production. New energy grants under TAMS were announced in early 2019 with grant aid for solar PV now extended to all sectors and all lighting funded under the scheme will be required to be LED lighting.

Energy efficiency is fundamental to reducing carbon emissions and energy costs. Some of the elements of TAMS II support the installation of new dairy equipment which is more energy efficient than older technology. Furthermore, the Sustainable Energy Authority of Ireland (SEAI) re-opened the pilot dairy energy efficiency scheme which grant aided the installation of variable speed drives.

The Department continued to support the promotion of the Wood Fuel Quality Assurance scheme and the provision of advice on forest-based biomass supply chains and fuels. See www.woodenergy.ie. New wood energy supply chain software was developed by the Department and made available through the www.coford.ie and www.woodenergy.ie websites. In addition, a number of workshops related to this software were organised nationally.



4

Strategic Goal Seafood Sector

*Deliver a sustainable,
growth driven sector focused
on competitiveness and innovation
driven by a skilled workforce
delivering value added products
in line with market demands*

Seafood

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 Food and Agriculture Organisation (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 worldwide to meet this need.

The value of Irish seafood exports in 2019 was estimated to be in the region of €577 million, maintaining the value of 2018. Challenges were found in certain sectors while there was positive growth in others. The value of salmon exports increased by 25%, driven by a 20% increase in volume with positive price growth. Global demand for seafood continued to increase in 2019 and Irish exporters reported strong demand for their products in the main export markets.

The main EU markets, France, Spain, Italy and Germany account for approximately 50% (€288 million) of total exports by value. The International market accounted for approximately 36% (€206 million) of total exports in 2019. Exports to the four main Asian markets (China, Hong Kong, South Korea and Japan) remained stable in value terms in 2019 compared to 2018. These markets accounted for 14% of total seafood export values. The wider South East Asian markets (Taiwan, Vietnam, Singapore, Malaysia and Thailand) accounted for over 14% (€81 million) of total export values in 2019.

Main Product Trends

In the pelagic sector, a reduction of 20% in Ireland's total allowable catch for mackerel had a direct impact on the volumes exported in 2019. However, prices and demand for Irish mackerel were strong particularly in Asia where there was a shortage of stocks. The best performing pelagic markets in 2019 were in Asia and in Europe while significant growth was seen in the UK and Middle East. Demand for Irish mackerel in China has increased by around 61% in value, while demand for Irish horse mackerel increased by 174% in Egypt. The African markets performed well earlier in the year but struggled to match the new price levels. Core markets in Europe also performed well. Spain remains our main market for whitefish followed by the UK and France, these markets represent over 85% of total whitefish exports. The Irish whitefish total allowable catch remained relatively stable in 2019 compared to 2018.

Export values on Irish shellfish fell in 2019 after a number of challenges affected production throughout the year. The largest shellfish export in 2018 was frozen prawns, which accounted for an estimated 10% of total seafood exports.

The live crab sector had another very productive year, growing in export value by 63% with excellent performances being recorded in France, which increased in value terms by 47% during 2019. This was driven by a doubling in export volumes to this market despite a 29% decrease in the average price per tonne.

Exports of prepared shellfish which include clams and whelks, decreased in value by 27% during the year driven by volume declines of 23% during this period. South Korea, which remains the main export market, accounting for almost 73% of total exports in this category, decreased in value by 22% during the year. Exports to China decreased by 44% while export value to Hong Kong declined by 20% during the year.

The Irish oyster sector had a tough year with export values decreasing by 15%. Exports of packed oysters to all major export partners declined significantly. Export values to France declined by 15%, China 25% and Hong

Seafood

Kong by 21%, all driven by volume. In 2018, salmon export values increased by 43% while the price of Irish salmon continued to increase as demand drove the organic salmon sector. The French market continued to dominate Irish salmon exports, accounting for 41% of total values, while exports to Poland doubled from 1,000 tonnes to 2,000 tonnes and increasing in value from €9 million to €21 million year on year.

Common Fisheries Policy

The seas around Ireland (ICES Sub Areas 6 and 7) contain some of the most productive and biologically sensitive areas in EU waters. The fisheries stocks within these areas come under the remit of the Common Fisheries Policy (CFP).

The main objective of the CFP is to allow for the rebuilding of fish stocks in European waters over time which will support the viability of the European fishing industry through long term management of stocks, reducing and eliminating discards and rebuilding stocks to Maximum Sustainable Yield (MSY).

- Phased ending of discards – The discard ban or landing obligation, which is a key element of the Common Fisheries Policy (CFP), was phased in over a number of years and was fully implemented in 2019. The North West Waters Regional Group of Member States, (Ireland, Belgium, France, UK, Netherlands and Spain), is in place to manage fisheries at a regional level under the CFP and meets regularly to agree discard plans and other fisheries measures in consultation with the relevant stakeholders. It consults the relevant Advisory Councils of stakeholders on a regular basis. The group met regularly throughout 2019 to discuss various implementation issues and to work on additional measures following the full implementation of the landing obligation.

- Maximum Sustainable Yield (MSY) is the level which allows the highest catch of fish while keeping stocks sustainable in the long term. 2019 marked the deadline under the CFP to end overfishing by setting Total Allowable Catches (TAC) in accordance with the scientific advice. This means that for most stocks, where sufficient advice is available, quotas have been set at levels that ensure long-term sustainability, in line with the MSY principle. The catch limits proposed by the European Commission in the Atlantic, the North Sea and the Baltic Sea have seen over-exploitation decline drastically over the last number of years. Fishing opportunities negotiated at the December 2019 Agriculture & Fisheries Council were fixed for 2020 in line with the MSY objective. For 32 of the 47 stocks of particular interest to Ireland, the quotas for 2020 were set at or below the scientific advice where available, meeting MSY criteria. For other stocks, the Council agreed restrictive or precautionary quotas to allow for unavoidable by-catches or the collection of scientific data.

- Multi-annual fisheries plans - The aim of multi-annual fisheries plans is to restore and maintain fish stocks at sustainable levels while ensuring the social and economic viability for fishermen operating in certain regions. In March 2019, the European Council adopted the multiannual plan for management of fisheries in Western Waters, which is extremely important from an Irish perspective.

The regulation sets out a comprehensive management plan including all relevant fish stocks and sets fishing objectives for the key target species. It ensures these stocks are fished in line with the MSY principle while catches are managed accordingly to the precautionary approach.

Fisheries Management and Conservation

FISHERIES MANAGEMENT AND CONSERVATION

Fish Quota Management 2019

In 2019, the Department was responsible for managing over 193,606 tonnes of fish quotas. As part of this management process, under the Sea-Fisheries and Maritime Jurisdiction Act 2006, 997 authorisations and amendments were issued. In addition, 60 Fisheries Management Notices and 10 Statutory Instruments were brought into effect by the Minister to support the management of Ireland's fisheries.

Also in 2019, 40 separate Demersal (whitefish and prawn) fish stocks were managed in consultation with the Quota Management Advisory Committee, which involves representatives of the fishing sector. Catch limits set out in the Fisheries Management Notice are displayed on the Department's web-site and circulated to industry representative organisations.

Quota Balancing 2019

A Quota Balancing system is being introduced on a phased basis to assist with the full implementation of the landing obligation (as provided for under Regulation (EU) No.1380/2013, Article 15). A Pilot Quota Balancing Policy for Pelagic Stocks was implemented in 2018 and a Pilot Quota Balancing Policy for Demersal (Whitefish) Stocks is due to be implemented in 2020. The quota balancing system contributes to conservation and management of fish quotas. Quota balancing carried out up to April 2020, for pelagic stocks fished in 2019, will result in over 4,600 tonnes of quota being balanced and redistributed. In respect of the 2019 fisheries, 336 quota balancing statements were issued to licence holders by the end of April 2020.

2020 Total Allowable Catches and Quotas

In the context of preparing for the annual EU negotiations, a Sustainability Impact Assessment on Total Allowable Catches (TACs) and quotas for 2020 was presented to the Dáil by the Minister in December 2019. 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 November 2019.

The EU Council of Fisheries Ministers in December 2019 agreed TACs and quotas for 2020. The Minister secured 195,000 tonnes of quotas worth €275 million for Irish fishermen for 2020. Key achievements included an increase in quotas for a number of important stocks – including Mackerel (41% increase), and Haddock (+30%), Monkfish (+7%) and Megrims (+3%) in the Celtic Sea. Stocks such as Cod and Whiting in the Celtic Sea remain in very poor shape and agreement was reached on the introduction of significant additional safeguards designed to rebuild these stocks. The Council agreed measures will deliver the necessary protections for Cod and Whiting while still allowing vessels to continue fishing in a sustainable way.

Taking these necessary steps now will aid the rebuilding of the stocks in our Celtic Sea fisheries and avoid the need for closures.

SeaFest 2019 – Harnessing Our Ocean Wealth – Developing Ireland's Blue Economy

SeaFest 2019 attracted over 90,000 visitors to Cork City Docklands during the three-day event from 7-9 June 2019. This was the first of a three year location of the event in Cork, following the previous successful three year staging of the event in Galway from 2016-2018. As Ireland's national maritime festival, SeaFest aims to strengthen our maritime identity, increasing participation and engagement with the sea in accordance with Goal 3 of Harnessing Our Ocean Wealth (Ireland's Integrated Marine Plan). Working together with Cork City Council and a wide range of partner agencies and organizations, the Marine Institute coordinated SeaFest on behalf of the cross-government Marine Coordination Group, which is chaired by the Minister for Agriculture, Food and the Marine. The Department's marine agencies, BIM, SFPA and Bord Bia were central to the event showcasing Ireland's range of activities and highlighting Ireland's diverse seafood industry and marine resource.

The associated sixth 'Our Ocean Wealth Summit' also took place as part of SeaFest. The theme of the 2019 Summit held on 10th of June at Cork's City Hall, was 'Shared Voices from Small Island States'. The 750 delegates attending the event heard from leading national and international speakers including former

Fisheries Management and Conservation

US Secretary of State John Kerry, UN representatives of Small Island Developing States (SIDS), political and business leaders, and young ocean ambassadors. The principal discussions focused on climate change impacts on the health of our shared oceans resources. Minister Creed addressed delegates at the Summit, welcoming continuing positive growth trends in Ireland's Blue Economy and sharing Ireland's recent experiences with sustainable blue growth initiatives.

The Minister also launched, on behalf of Government, the annual Harnessing Our Ocean Wealth Review of Progress. The summit was also addressed by An Tánaiste and Minister for Foreign Affairs and Trade, Simon Coveney, Minister of State for Housing and Urban Development Damien English and Mairead McGuinness, First Vice President, European Parliament. Other key events that took place during SeaFest included The Irish Marine Industry Showcase, Smart Maritime and Offshore Wind on June 11th at Millennium Hall, Cork City Hall, coordinated by Enterprise Ireland.

At a local level in the host city of Cork, it is estimated that SeaFest and associated events in 2019 generated €4.1 million in direct income for the city's tourism industry. Local, national and international media coverage of the festival reached record levels. For example, media coverage reached an estimated audience of 100 million with SeaFest 2019 featured on shows such as SkyNews, RTÉ Nationwide and RTÉ Countrywide. SeaFest also received a national award for 'Best Cultural Event' at the 2019 Event Industry Awards and was described by judges as "a great celebration of Ireland's maritime heritage that serves an important cultural purpose".

Aquaculture Licensing

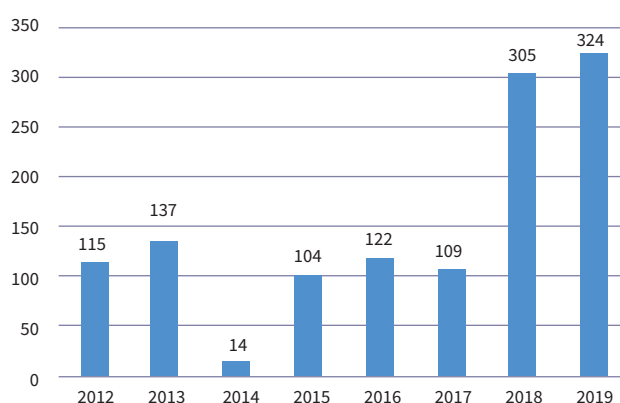
The independent Aquaculture Licensing Review Group, appointed by the Minister to review the process of licensing for aquaculture and its associated legal framework, submitted its Report to the Minister in May 2017.

The Review Group carried out a detailed investigation of the existing aquaculture licensing process, undertook comprehensive stakeholder consultation and examined comparative national and international consent systems to determine best practice for managing a complex licensing process in a transparent, environmentally appropriate and legally robust manner.

Since receiving the Report of the Review Group, the Department has engaged in detailed consideration of the recommendations set out in the Report with a view to their implementation, having regard to the legislative, environmental, technical and public interest issues that arise. The Department has also engaged closely with industry representatives and relevant State Agencies.

The core reason for the Licensing Review Group was the need to address in a focused manner the Aquaculture Licensing backlog. In response the Department undertook a two-year project to eliminate the shellfish licensing backlog. This resulted in 305 and 324 licence determinations achieved in 2018 and 2019 respectively.

Aquaculture Licence Determinations 2012 – 2019



Fisheries Management and Conservation

Approximately 1200 licence determinations have been made since 2012.

The shellfish licensing backlog has now been eliminated as an issue affecting the aquaculture industry. The elimination of the shellfish licensing backlog is a game changer for the industry and provides the solid footing for the industry long demanded by industry representatives.

The effective elimination of the shellfish licensing backlog has enabled the Department to turn its focus to the backlog in the processing of marine finfish aquaculture licences. The processing of applications for finfish licences in the marine environment is complex, not least due to the requirement for operators to produce Environmental Impact Statements and for the Department and relevant Agencies to analyse these reports in detail. A substantial number of Environmental Impact Statements remained outstanding from aquaculture operators in 2019. The Department worked closely with Industry Representatives in 2019 with a view to expediting the submission of the outstanding Environmental Impact Statements.

Sea-Fisheries (Amendment) Act 2019

The Sea-Fisheries (Amendment) Act 2019 was signed by the President on 4 April 2019 and was commenced by the Minister on 23 April 2019. The Act provides for legislative amendments to the Sea-Fisheries and Maritime Jurisdiction Act 2006 in order to address the Supreme Court finding in October 2016 that fishing by Northern Ireland vessels within the 0-6 nautical mile zone of the territorial waters of the State was not permitted by law.

Developing Sustainable Inshore Fisheries

The National Inshore Fisheries Forum (NIFF) met on four occasions during 2019 to discuss and develop proposals concerning inshore fisheries and their interactions with Natura 2000 sites. The NIFF is supported by a network of six Regional Inshore Fisheries Forums (RIFFs), which involve representation from inshore fisheries and other marine stakeholders. A dedicated website provides information on the work of the Forums: www.inshoreforums.ie.

The Minister launched the *Strategy for the Irish Inshore Fisheries Sector 2019-2023* on behalf of the NIFF at the end of February 2019. The strategy was developed through an extensive process involving the Inshore Fisheries Forums and is the first industry-led blueprint for the sector. It identifies objectives and actions that will shape the work of the Forums over the next few years. Bord Iascaigh Mhara (BIM) is leading implementation of the strategy, which will seek to target funding support available under the European Maritime and Fisheries Fund to where it can be most effectively used. A strategy implementation group, which includes the Department, BIM, the Marine Institute, the Sea-Fisheries Protection Authority and industry representatives, is monitoring and driving implementation progress.

The Minister approved an industry-proposed increase of the Minimum Conservation Reference Size (MCRS) for landings of brown crab. The measure raised the MCRS to 140mm for brown crab taken by Irish sea-fishing boats in waters around Ireland (ICES areas VI and VII), an increase on the 130mm MCRS set out in EU legislation. The Minister also approved an industry-led initiative to provide legal protection for crawfish v-notched as part of a Marine Institute research project in the southwest.

Management of the all-island mussel seed fishery continued in 2019, with the autumn fishing season commencing in the Irish Sea in late September and starting in Castlemaine Harbour, Co. Kerry, in early October (see Natura 2000 section below). The fishery continues to be certified by the Marine Stewardship Council (MSC). The current certification, which was issued in 2018 and is valid for five years, says the fishery has been found to comply with the MSC requirements and is well-managed and sustainable. This follows a previous conditional certification received in 2013. At the end of 2019, a six-week public consultation took place to seek the views of those with an interest in the Irish Sea mussel seed fishery regarding management arrangements in place for the fishery. The consultation concluded on 31 December with 86 submissions received.

Fisheries Management and Conservation

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 2020. 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). 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.

The Minister approved an amendment to the fisheries Natura plan for the mussel seed fishery in Castlemaine Harbour, Co. Kerry, at the start of October 2019. The request for an amendment arose from the industry and on screening, was not found to be a material change to the plan which would require appropriate assessment. Also, the Minister issued a fisheries Natura declaration in October to extend the boundaries of an area around Dalkey Island where fishing for mussels is prohibited. The Minister accepted a recommendation from the Marine Institute to close the area on a precautionary basis due to the presence of protected reef habitat.

The Climate Action and Low Carbon Development Act 2015, building on the National Climate Change Adaptation Framework, provided for the preparation of Sectoral Adaptation Plans. Following on from preparatory work carried out in 2018 a draft Agriculture, Forest and Seafood Climate Change Adaptation plan was published for public consultation on 27 June 2019. The draft plan was subsequently updated to reflect issues raised in the submissions received as part of the consultation process. The Agriculture, Forest and Seafood Climate Change Sectoral Adaptation Plan was approved by Government on 31 October 2019 and can be viewed on the Department's website.

The Seafood Climate Adaptation Working Group, consisting of representatives from each of the Marine Agencies (BIM, MI and SFPA) and the Department, helped ensure the delivery of a comprehensive Sectoral Adaptation Plan which addresses key adaptation areas. The Marine Institute (MI) reviewed The United Nations Intergovernmental Panel on Climate Change (IPCC) Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC), published in September 2019, and summarised the key findings of the report which included that oceans are likely warming at all depths, global sea level is rising and geographical shift of species is being observed.

Opportunities to raise awareness of climate change within the seafood sector were availed of throughout 2019 including the distribution of a climate change adaptation planning leaflet at events including SeaFest, the Skipper Expo and several of the SFPA Breakfast events. A Seafood Climate Adaptation booklet containing six case studies was also available at Seafest; the case studies help develop a deeper understanding of how climate change will impact the seafood sector and promote discussion on climate adaptation.

Clean Oceans Initiative

Protecting our oceans is one of 17 Global Goals that make up the 2030 Agenda for Sustainable Development. Ireland's commitment to Goal 14, Life below water is reflected in the enthusiasm shown towards the Clean Oceans Initiative. Bord Iascaigh Mhara (BIM), Ireland's Seafood Development Agency, is a Sustainable Development Goal (SDG) Champion 2019-2020 for Goal 2 (End Hunger), Goal 8 (Decent Work and Economic Growth), Goal 12 (Responsible Consumption and Production) and Goal 14 (Life Below Water).

The Clean Oceans Initiative was launched by the Minister in January 2019 at Union Hall Pier, Co. Cork to address marine plastic pollution being encountered routinely by Irish sea-fishing boats. At that time the Minister called for all Irish trawlers at every pier and every port to actively participate in Ireland's first coordinated initiative on land and at sea to collect, reduce and reuse marine litter and clean up our marine environment.

Fisheries Management and Conservation

European Maritime and Fisheries Fund OP 2014-2020 (EMFF)

Ireland's 2014-2020 EMFF Programme was formally adopted by the European Commission in December 2015 and contains a broad range of support measures to foster the sustainable growth of the seafood sector (fisheries, aquaculture and processing). The Programme is co-funded by the European Union and the Government of Ireland. EU support for the Programme amounts to €147.6 million over the seven-year Programme lifespan and this EU funding is supplemented by Government funding, to bring the total support available under the Programme to approximately €239.2 million.

All EMFF schemes were operational by the end of 2018. In the period 1 January 2019 to 31 December 2019 the following actions were supported under the EMFF OP 2014-2020.

Union Priority	2019 Public Expenditure
Sustainable Development of Fisheries	€17,827,402
Sustainable Development of Aquaculture	€5,730,130
Supporting the Common Fisheries Policy	€24,701,335
Community Led Local Development	€3,014,706
Marketing & Processing of Seafood Products	€5,010,288
Supporting the Integrated Maritime Policy	€2,696,820

While progress on the implementation of the EMFF OP is monitored and reported to the Commission annually, evaluation of its contribution to achieving policy objectives is reported periodically i.e., in 2017, 2019 and 2024. Programme impacts at the end of 2019 will be evaluated as part of an enhanced Annual Implementation Report to be submitted to Commission in June 2020.

Fishery Harbour and Coastal Infrastructure Capital Development Programme

In 2019, the total voted expenditure on this Programme was €29.4 million, of which €27.7 million was spent on the Fishery Harbour Centres, with a further €82,000 spent on Cape Clear Island and for maintaining a range of piers, lights and beacons around the coast under the Department's remit. 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.

Key Projects in Fishery Harbour Centres in 2019

Castletownbere

Harbour pier development works currently under construction at Castletownbere will provide an expansion of the existing Dinish Wharf to include an additional 216 m length of quay, capital dredging works, two rock armoured breakwaters and associated works. The €23.44 million works contract was awarded in July 2018. The construction works commenced in October 2018, progressing steadily throughout 2019 with capital dredging, steel sheet piling, tubular piling, placement of engineering fill materials and concrete decking to extend the pier, in addition to construction on two new breakwater arms at the entrance to the inner harbour. This project incurred an expenditure of €16.8 million in 2019.



**Dinish Wharf Expansion, Castletownbere FHC
Construction Contract Works in progress 2019**

Works were also completed in 2019 on the construction of a new Harbour Administration building at the Mainland Quay, Castletownbere. This project involved the demolition of the old auction hall and existing harbour offices and the construction of the new building and new car park. The building will accommodate the Harbour Master, his staff and also the SFPA port staff. The development was opened by the Minister in May 2019 and provides a focal point in the harbour and will contribute to the redevelopment of the harbour and town areas to coincide with proposed traffic management improvements planned for the town. This project cost €1.88 million in total and had an expenditure of €0.51 million in 2019.



**New Harbour Administration Building,
Castletownbere FHC
Construction Contract Works completed in 2019**

Ros An Mhíl

In 2019, a project comprising the construction of a breakwater extension to provide additional shelter to the small craft harbour commenced in November 2018 and was completed in April 2019, with a total project cost of €0.75 million (including expenditure of €0.63 million in 2019).



**Breakwater Extension, Ros An Mhíl FHC
Construction Contract Works completed in 2019**

Fishery Harbour and Coastal Infrastructure Capital Development Programme

Killybegs

To meet the increasing demand from the fishing industry, work commenced in 2017 on the construction of a 120 metre extension to the pier at Smooth Point. The pier extension will accommodate vessels with a draft of up to 9 metres at low water. Phase 1 of the project involving the removal of contaminated sediment, bringing it ashore for treatment and stabilisation and subsequent disposal for beneficial re-use was completed in 2018. Phase 2 of the project was commenced in 2019 and consists of the dredging of clean sediment to -9mCD and the construction of 120 metre of quay wall. The €12.9 million works contract was awarded in August 2019. Works completed on site in 2019 included the dredging and disposal at sea of approximately 45% of the soft bed material and the removal of approximately 7,000 cubic meters of rock that was stockpiled on site for re-use within the harbour. Total project expenditure in 2019 was €5 million.



**Smooth Point Quay Extension, Killybegs FHC
Dredging Works in progress 2019**

Dunmore East

Phase 4 of the West Wharf Remedial and Improvement Works was completed in October 2019, with a total project cost of €0.7 million. The works involved the demolition of 50 metres of the existing wharf deck and its replacement with a new reinforced concrete wharf structure, remedial works to the existing reinforced concrete piles and the replacement of the existing greenheart fenders with super arch fenders. This project will further enhance the facilities at the port, following on from substantial dredging project completed in 2015.



**West Wharf Remedial Works Phase 4,
Dunmore East FHC
Construction Contract Works in progress 2019**

Local Authority Harbour Infrastructure

In 2019, a total of €1.4 million was spent on works at Local Authority owned harbours, piers and slipways under the Fishery Harbour and Coastal Infrastructure Development Programme and the Marine Leisure and Marine Tourism Programme. A total of 33 projects from coastal Local Authorities around the country benefited from the funding.



Strategic Goal Corporate Development

Maintain and develop strategic, operational, regulatory and technical capacity to achieve operational excellence



Financial Management

Overall Expenditure

The Department was responsible for Voted expenditure of over €1.641 billion in 2019. In addition to voted expenditure, the Department spent €1.250.8 billion in EU EAGF funded schemes, bringing total expenditure to €2.8 billion.

Expenditure on Irish Agriculture, 2019	
	1,250.8
Direct Payments	1,204
Intervention/APS	(12)*
Other Market Supports	61.8
Other	(3)
Voted Expenditure (excluding Administration)	1,362
*Programme A – Food Safety, Animal and Plant Health and Animal Welfare	93
*Programme B – Farm/Sector Support and Controls	802
*Programme C – Policy and Strategy	337
*Programme D – Seafood Sector	130
Administration	280
Total Voted Expenditure	1,641
Total Expenditure	2,892.5

*€-12.6 million was as a result of sales of skimmed milk powder in stock

EU Receipts

The Department claimed and received funding from the EU in 2019 in respect of measures financed from the following EU Funds:

EAGF (European Agriculture Guarantee Fund)
Veterinary Fund

EAFRD (European Agricultural Fund for Rural Development)

Financial Management

Summary of EU Receipts in 2018 and 2019		
	2018 €m	2019 €m
EAGF	1,222	1,193
EAFRD*	401	324
Veterinary Fund	10	9
Fisheries (FIFG, EFF, EMFF**)	16	23
Other	1	1
Total	1,650	1,550

* Includes receipts transmitted to the Department of Rural and Community Development

** Advance funding on EMFF not booked to A&A

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 2019 by the Accreditation Review Group (ARG). The Secretary General chairs this group which includes representatives from the Department of Public Expenditure and Reform, the Revenue Commissioners and the Department of Rural and Community Development. It met on four occasions during 2019. 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 Audit Committee was established to provide independent and objective advice to the Secretary General on the internal audit policies, the management of risk appropriate to the functioning of the Department and the operation of the internal audit function. The Committee operates under a Charter which defines the purpose, authority and reporting

relationships of the Audit Committee, Internal Audit Unit and management of the Department. In 2019 the Committee reviewed and updated this Charter in line with its commitment to periodically review same. The amended Charter reflects internal audit best practice and allows for a greater degree of flexibility in appointing Committee members.

The Committee met four times in 2019 and the Chairman also met with the Secretary General on two separate occasions. In its 2018 Annual Report, which the Chair presented to the Management Board, the Committee expressed satisfaction with the controls operated by the Department as evidenced by the outcome of audits completed by the Internal Audit Unit.

Internal Audit Unit

The Internal Audit Unit (IAU) completed a substantial body of internal, food safety and scrutiny audit work during 2019. The IAU operates in accordance with best practice and the professional internal auditing standards of the Institute of Internal Auditors (IIA). It follows a comprehensive and widely recognised approach towards finalising its annual audit programme including consideration of:

- The Department's Risk Register,
- Details of expenditure (national and EU), and
- Consideration of the full audit universe.

Financial Management

During 2019, the Unit completed fifteen internal audit reports on a variety of areas including aspects of the €1.25 billion Basic Payment and Greening Schemes, schemes included under Ireland's €4 billion Rural Development Programme, the Governance of State Bodies and areas within the Department's Information Management Technology framework. The findings from these audits allowed the Director of Internal Audit to indicate in his Annual Report that the "*Secretary General and Management Board can take reasonable assurance that adequate governance arrangements, risk management practices and internal controls are in place and operating effectively across the wide range of schemes and activities audited by the Unit*".

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.

Risk Management

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 identified and recorded.

Risk Management structures in the Department have been strengthened, through the recruitment of staff to the Risk Management Team (Finance Division), the designation of a Risk Officer (Finance Division) and the re-establishment of the Risk Management Committee. Oversight of Risk Management has been enhanced and a project has commenced to replace the current Risk Management Database with a system that is more robust, flexible and easier to use. Development and testing of the eRisk Risk Management System for the

Department, in conjunction with the Office of the Government Chief Information Officer, has been ongoing throughout 2019, with the system and associated training due to be rolled out in the first half of 2020.

CAP Beneficiaries Publication

In accordance with EU Regulation 1306/13 Member States must ensure annual ex-post publication of the beneficiaries of CAP funding for both legal and non-legal persons. Material must be published no later than 31 May each year for payments made in the previous year. The following information is available on the website: -

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

Prompt Payment

During 2019, a total of 127 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 €10,868. The value of all invoices that were paid late amounted to €544,691 which represents 0.25% of the €220,500,600 total payments falling within the terms of the Regulations.

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:

Financial Management

Prompt Payments Jan-Dec 2019 Payments made	Number	Value	Percentage
Within 15 days	21,131	€182,323,230	81.68%
Within 16 to 30 days	4,481	€37,511,841	17.32%
In excess of 30 days*	258	€665,529	1.00%
Total	25,870	€220,500,600	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.

Public Procurement

The Central Procurement Unit, established in 2011, supports the Department in undertaking procurements through the dissemination of key policy information, advice and support in the preparation of tenders and other procurement related matters. Through the provision of a training programme across the Department, the Unit has sought to ensure best practice at operational level so that effective value for money is achieved in a compliant manner.

In 2019, the Unit assisted in the establishment of Dynamic Purchasing Systems, provided advice on over fifty Requests for Tender and assessed over eighty requests to procure without a competitive process. The Unit also participated in an Office of Government Procurement (OGP) pilot project and as one of a handful of central government contracting authorities the Department undertook a 'self-serve' mini competition from an OGP framework. When rolled out the pilot will introduce further efficiencies in public procurement.

At the same time, and to ensure that procurement is implemented consistently across the Department, the Unit developed a suite of procurement templates for low value procurements and non-competitive procurements. Throughout 2019 the Unit also undertook a monthly review of registered contracts aimed at identifying non-compliance, facilitating improved financial reporting and closer alignment of Department spends with Office of Government Procurement (OGP) procurement categories.



Staff and Organisational Management

STAFF AND ORGANISATIONAL MANAGEMENT

Workforce Planning and Deployment of Resources

The Department adopts a strategic approach to workforce planning and deployment of resources to ensure a highly skilled, motivated and effective workforce is in place to meet our strategic goals. During 2019, the Department recruited and appointed 570 staff (including replacement staff) across a range of disciplines and professions including economists, a range of science and agriculture focused disciplines, solicitors, veterinarians, and administrators. The Department continuously seeks to build capacity and capability in our workforce through Learning & Development and staff mentoring opportunities. Mobility and staff rotation is also used by the Department to ensure sufficient experienced staff are available to effectively manage succession planning and contingency planning. Mobility encourages managers to embrace resource sharing and succession planning processes, provides strong development opportunities to all staff and develops an adaptable workforce with a wide knowledge base. Regular movement of staff across the Department promotes a culture of sharing new ideas and best practice as well as contributing to a flexible, resilient workforce that can adapt and react within the challenging environment in which we operate.

The Department continues to commit to supporting a positive working environment for all staff that provides equality of opportunities, and an environment that supports family-friendly initiatives and work-life balance. To this end, the Department continued to develop policies and guidance during 2019 to support these objectives in line with the HR Strategy, EveryOne.

During 2019, the Department actively participated in the Whole-of-Government approach to the preparedness and contingency planning for Brexit. The Brexit staffing complement required was assessed based on anticipated throughput volumes at Border Inspection Posts and an estimate of the increased

requirement for import controls and for potential export certification of output from the Agri-Food sector. The Department established a new Import Controls Operations Division with responsibility for implementing frontline control functions arising from Brexit. A combination of recruitment of new staff, temporary redeployment of existing staff and contracts for service were availed of to ensure sufficient resources were available for deployment to this new Division as required. The deployment options used by the Department were with a view to being as flexible as possible, taking the inherent unpredictability of the situation and the need to be prepared for multiple contingencies into account, with these contingencies in turn dependent on ongoing Brexit developments, particularly in the political sphere.

Recruitment

The demand for recruitment to all business streams within the Department, as well as promotions and assignments, remained at high levels throughout the year. Major campaigns were held to recruit Veterinary Inspectors, Technical Agricultural Officers and Assistant Agricultural Inspectors. Several avenues were availed of to meet the anticipated demand for additional resources arising out of Brexit including internal redeployment and the recruitment of significant numbers of Portal Inspectors in particular.

Learning and Development

The Department provided a wide range of Learning and Development opportunities in 2019 in areas such as leadership, management, interpersonal and communication skills, finance, IT, and health and safety.

In this regard, the Department worked closely with One Learning, the Government shared service for Learning and Development, to deliver much of this training via its new Learning Management System (LMS). The launch of this new LMS has now allowed all Government Department staff to directly access a curriculum of 67 individual courses. These courses are designed to meet the needs of a wide variety of staff from junior to senior levels.

Staff and Organisational Management

In addition, the Department continued to deliver a variety of specialist training across a range of technical, agricultural, forestry, veterinary, engineering and scientific areas. One hundred and seventeen Department staff members involved in Official Controls at policy and implementation level attended formal courses provided by the European Commission Better Training for Safer Food (BTSF) Programme and many others undertook BTSF eLearning courses.

There were also considerable number of Learning and Development events delivered in relation to Brexit. These included both induction training for new staff as well as specialized training.

Partnership

Partnership is a co-operative forum of staff, management and union representatives, which has existed in the Department in various forms since 1998. Following a series of Partnership consultations in 2018, a new Terms of Reference designed to renew and reinvigorate Partnership structures in the Department guided Partnership activities in 2019.

The Department's Central Partnership Committee convened three times in 2019, in Agriculture House, Cavan and Portlaoise. A Local Partnership Committee was established in Clonakilty, and a Southern Region staff email network was established. Staff representatives of the Clonakilty LPC and the Southern Region network joined staff representatives from the Department's existing LPCs, in Backweston, Cavan, Johnstown Castle and Portlaoise, at the Central Partnership table. Accommodation Issues, moving from the Departmental Council agenda, and Reports from the Regions were established as standing agenda items for Central Partnership.

Diversity, Equality and Inclusion

The Department is a long-time supporter of facilitating employment opportunities for people with disabilities. The Department has exceeded the 3% minimum employment requirement in each of the last ten years with the level at 3.5% at the end of 2019. The Department supports the AHEAD (Association for Higher Education and Disability) Willing Able Mentoring (WAM) Programme which aims to promote access to

the workplace for graduates with disabilities. During 2019 the Department facilitated four paid and mentored placements under the WAM Programme for suitably qualified candidates. Many former WAM participants have gone on to secure permanent employment.

The Department also participates annually in Job Shadow Day, which is a national project bringing people with disabilities and local employers together for one day to promote equal employment opportunities and highlight the valuable contribution people with disabilities can and do make at work.

During 2019, the Department facilitated three trainee placements on the Oireachtas Work Learning Programme (OWL), an applied learning, development and socialisation programme for young adults with an intellectual disability. The Programme aims to support individuals in developing the skills and confidence which will lead them to access paid employment in the open labour market.

During 2019, and as part of the Equality & Diversity strategy, work was undertaken on procurement of an eLearning course on Equality & Diversity in the Workplace. The eLearning resource, developed specifically for the Irish Public Sector with relevant Irish case studies, addresses various aspects of equality & diversity in the workplace including diversity, unconscious bias, harassment and discrimination.

Conduct and Performance

The tradition of the Department has been one of loyal and impartial service for the benefit of our stakeholders and of the country. In 2019, standards of probity and performance remained high throughout the Department. Such concerns as there were with respect to conduct and performance continued to be managed under the auspices of the Civil Service Disciplinary Code or the *Civil Service management of Underperformance Policy, as appropriate.*

Civil Service Awards

The Civil Service Excellence and Innovation Awards (CSEI) are an annual event established under the Civil Service Renewal Plan which recognizes the

Staff and Organisational Management

achievements of staff across the Civil and Public Service. The Department held an Internal Excellence and Innovation Awards event where the Secretary General recognised the staff involved in working on sixteen different projects. Five of these were submitted to the CSEI Awards with one initiative, “Bee Green - Pollinator Friendly Campus (Backweston)” nominated in the Employee Engagement category.

Another project which was submitted to the CSEI Awards, the “Haulbowline Island Remediation Project” won two other awards outside the CSEI; the “Engineering Project of the Year for 2019” and the “Local Authority Engineering Initiative Award”. In this project, a multi-disciplinary Project Team led by the Department, working closely with Cork County Council oversaw, procured and delivered the complex task of removing any potential threat of hazardous materials at the former steelworks site on Haulbowline Island, Cork Harbour.

Innovation

Innovation is central to Government policy in continuing to develop the Public Service in order to address complex challenges and meet the expectations of society. “Innovation for Our Future” is one of three key pillars of Our Public Service 2020. The Department hosted an Innovation week from 9th – 13th December in conjunction with the inaugural Public Service Innovation Week to encourage positive change in how the Department’s services are provided. A dedicated email continues to be available for staff suggestions for new ideas, ways of working or adapting existing approaches.

Asset Management

The Health and Safety Section provides health and safety training to ensure compliance with statutory requirements and based on Training Need Analyses. In 2019, the courses provided included manual handling, first aid, fire safety management and specialised training for fishery harbour centres, laboratories and farms to include forklift training, abrasive wheel etc. The Section also provided Induction Training to new recruits. With the emphasis on Brexit in 2019 the Section provided health and safety training for staff assigned to Dublin and Rosslare Ports. The Section

also provided advice and support in relation to health and safety requirements for facilities in Dublin Port.

The Health and Safety Section also conducted a number of audits of Department locations and activities in 2019. Audits were conducted in compliance with the Department’s Health and Safety Risk Management System. Other initiatives to progress health and safety risk management in the Department included: Health and Safety Newsletter, New HSRMS Policy Documents and Wellbeing Lunchtime Talks.

Energy Efficiency

The Department is committed to energy efficiency and effective energy management. It is working with the key stakeholders to assist in the delivery of the National target set for the Public Sector of 33% energy efficiency by 2020. The Department has improved its energy efficiency by 36.8% surpassing the target set with 12 months to spare. This was achieved by low cost measures such as behavioural changes in our committed staff, better energy management by our services divisions, and some lighting retrofits. We are already preparing for the 2030 targets of 50% reduction in energy usage from the 2009 baseline and the new carbon reduction of 30%.

All Government Departments and public bodies were required to provide a resource efficiency action plan to their respective Minister on the measures they are taking to minimise waste generation and maximise recycling. The Departments Resource Efficiency Action Plan 2019-2021 was submitted and published in September 2019.

Accommodation and Services Division established Green Teams in each of the Regional Head Offices to engage staff in energy and resource efficiency measures. The Green Team consists of volunteer representatives from management and staff.

The Energy Team has participated in the SEAI Energy MAP Training and workshops to both improve energy management practices and identify opportunities for larger scale works. It is working closely with OPW, high energy users within the Department and bodies under our aegis to establish good energy management practices across the group and increase energy efficiencies.

Staff and Organisational Management

Services Division

Services Division are committed to providing the highest standard of accommodation to all staff, in conjunction with the OPW. An ongoing update of procurement processes are ensuring value for money across a range of services including contract cleaning, waste management, security, records and other areas.

Brexit brought significant challenges and the Division lead the Internal Brexit Infrastructure Working Group which was central to delivering on Brexit Infrastructure across three locations on seven different sites. There have been three different deadlines in 2019 for delivering on Brexit Infrastructure, each posing its own set of challenges.

The Division manages the Department's property portfolio, made up of six main offices, 16 regional offices, four BCPs, other provincial offices, laboratories and field stations with a budget of approximately €10 million annually for associated costs. The Division is responsible for services payments associated with these locations. It monitors and reports on the Department's Energy usage to the SEAI.

Staff of the Division are based in:

- Dublin with responsibility for Agriculture House, Backweston Administration Building, other offices in Dublin city and state inspection facilities at Dublin Port, Rosslare Port and Dublin Airport
- Portlaoise with responsibility for 4 headquarters offices, 16 regional offices, all other provincial offices and 8 laboratories and field stations, and the state inspection facilities at Cork and Rosslare ports and Shannon and Cork airports.
- The Regional Offices are located at Cavan, Cork, Clonakilty, Raphoe, Galway/Athenry, Tralee, Naas, Drumshanbo, Limerick, Castlebar, Navan, Tullamore, Roscommon, Tipperary, Waterford and Enniscorthy.

Farm Safety 2019

Farm safety is a critical issue facing farming today. Statistics show that accidents on farms cause over 40% of all workplace deaths, more than any other sector, while accounting for only 6% of the workforce. Between 2010 and 2019 there were 208 fatal accidents on farms. In 2019, there were 18 fatal farm accidents, with 12 of these accidents occurring to farmers aged 65 or over.

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.

Through the *Research Stimulus Fund* the Department is funding a farm safety research project entitled: "BESAFE - Behaviours for Safer Farming: The health and safety of farmers is a significant challenge for the social sustainability of Irish agriculture". Though fatality rates have fallen in other industries in the past 20 years, rates in agriculture have remained stubbornly high. Farming is not like other occupations. Farmers commonly work alone for extended periods of time. They self-supervise their work practices and behaviours. Farming involves multiple tasks that can be affected by external factors, e.g. the weather. Given the unique occupational characteristics of farming there is a need to tailor approaches that seek to improve safety. The aim of the BeSafe project is to develop and support the adoption of these approaches thereby effecting positive lasting change.

In addition, a mandatory Health and Safety element is included in the Knowledge Transfer Programme under the 2014-2020 Rural Development Programme. These groups directly engage with farmer participants on the important issue of farm safety. Each of approx 18,000 farmers completed a farm health and safety component for the one to one Farm Improvement Plan completed with their approved facilitator for all three years of the Programme. This builds on the discussions in the Year One meetings on the topic of Health and Safety that each of the approximately 1,100 Knowledge Transfer Groups was required to hold.

Developing IT Capability

DEVELOPING IT CAPABILITY

Major ICT Developments in 2019

The Department is critically dependent on information and communication technology (ICT) for the delivery of its schemes and services. The major ICT developments in 2019 included the following:

IT Infrastructure

The Department provides full ICT infrastructure support for all Department staff including email, Data File Sharing (DFS), network support, telephony (including mobile telephony), remote access, website hosting, server support, desktop productivity software, internet access and anti-virus. It also makes extensive use of virtualisation and data storage technologies.

Cyber Security

In response to the global increase in the threat of malware and computer hacking, the Department has a team dedicated to cyber security using specialist tools, with access to NCSC and external experts if required.

ICT Shared Services

In line with the Public Service ICT Strategy, the Department continues its provision of ICT infrastructure shared services during 2019 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.

Department of the Taoiseach (DoT): This Department continued to provide network support to Department of the Taoiseach. Phone services in DoT are also provided via a Department-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 2019 this environment paid circa 130,000 current and former civil servants.

The Department provides the Department of Health with phone services via the Department-hosted Voice over Internet Protocol (VoIP) phone system, which is managed internally by our ICT staff. 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.

Laboratory Services Support

In line with the Strategic Development of the Department of Agriculture, Food and the Marine Laboratories (2019-2028) work has commenced in securing and implementing a modern Laboratory Information Management System (LIMS) on behalf of the Laboratory Services.

Payment Schemes

The Department continued to maintain and enhance our I.T. systems which support our various schemes throughout 2019 as follows:

- Basic Payment Scheme (BPS)
- Green, Low-Carbon, Agri-Environment Scheme (GLAS)
- Areas of Natural Constraint (ANC)
- Targeted Agricultural Modernisation Schemes (TAMS II)
- Knowledge Transfer Schemes (KT)
- Beef Data and Genomics Programme (BDGP)
- Organic Farming Scheme (OFS)

Developing IT Capability

- Sheep Welfare Scheme (SWS)
- Young Farmers Scheme (YFS)
- Protein Aid
- Beef Exceptional Aid Measure (BEAM)
- De Minimis Schemes

- BVD Compensation (beef)
- BVD Compensation (dairy)
- Beef Environmental Efficiency Pilot (BEEP)
- Fodder Transport Support Measure
- Fodder Measure for Tillage Farmers 2018
- Kerry Purebred Cattle Scheme
- Sheep EID Tag Subsidy
- Forestry Knowledge Transfer
- Collaborative Farming Grant
- Mart CPR Aid

All Basic Payment Scheme (BPS) applications were submitted using the now mandatory on-line system in 2019. Circa 129,000 applications were received by the closing date of 15th May 2019.

Online facilities were further enhanced to assist farmers to trade their BPS entitlements with 21,140 transfer applications (100% online) being received by the closing date of 15th May 2019. This included the facility for online appeals for National Reserve/Young Farmer Scheme delivered in Q3.

Online facilities were used to enable Entitlement Transfer Facilitators to assist farmers to trade their BPS entitlements. 21,647 Transfer applications (100% online) were received by the closing date of 15 May 2019.

A fundamental redesign of the Areas of Natural Constraint (ANC) payment system was delivered in 2019 to cater for newly categorised eligible land under the ANC redesignation project. This included a new Degressive payment. All applications for ANC were submitted online in 2019 by way of farmers BPS applications. Further to changes in EU Regulations, payments under the ANC scheme were amended to be delivered in two installments, with 85% advance payments issued on 18th September and a 15% balancing payment issued in early December. The total paid under the 2019 ANC Scheme by balancing

payment in December was almost €238 million to 95,000 farmers.

New TAMS schemes functionality to enable applications for solar panel investment was developed during the year.

Functionality was delivered to support the new Bovine Exceptional Aid Measure (BEAM) scheme. Applications for the scheme were 100% online and payments issued on schedule in December 2019.

New energy grants under TAMS were announced in early 2019 with grant aid for solar PV now extended to all sectors and all lighting funded under the scheme will be required to be LED lighting.

The Calf Investment Scheme was announced in December 2019, this scheme supports investments for calf rearing and welfare facilities. The scheme opened in January 2020 with 2,400 applications received under the scheme. Funding of €4 million has been made available.

Basic Payment Scheme (BPS) and Areas of Natural Constraint (ANC)

Following the rollout of full online applications in 2018, all applications for the ANC and BPS schemes were made online in 2019.

Knowledge Transfer Schemes (KT)

The KT Scheme is a fully online scheme and three online systems were developed to administer this scheme. A dedicated online system for scheduling and reporting attendance at meetings and national events together with two purpose built online systems for the Farm Improvement Plan used by advisors and the Animal Health Measures used by vets. In 2019 over 20,500 individual participant payments issued in relation to the scheme.

Developing IT Capability

Sheep Welfare Scheme (SWS)

Year 3 of the Sheep Welfare Scheme opened in February 2019. Advance payments under year 3 of the scheme commenced in November 2019 with payment of €14.91 million issuing to 18,489 applicants.

Land Parcel Identification System (LPIS) Rebuild
The Land Parcel Identification System (LPIS) is the Department's spatial database. It contains over 1.1 million polygons/parcels representing the land holdings of over 130,000 farmers. The system was built on initial digitising of paper maps and was completed in 1995 for the original area-aid scheme. These parcels have been updated and modified on a continual basis since then. The current LPIS system facilitates the administration of payments to farmers under a range of schemes. However, its underlying database/IT infrastructure is now dated, and is in need of a major update.

The objective of the LPIS Rebuild project is to develop a new LPIS that is up-to-date, compatible with best available technologies, fully functional and compliant with regulatory requirements. The new system will be of the standard required for the efficient delivery of EU funded schemes into the future, and will provide an excellent platform to add value to Department's service delivery channels.

As part of the LPIS Rebuild project, existing LPIS data will be transformed to the Ordnance Survey Ireland (OSi) Prime 2 spatial database. Prime 2 was launched in 2015, and is the most up to date and authoritative database of spatial information in Ireland. It is the national mapping standard which allows geographic objects such as land parcels, buildings and roads etc. to be uniquely identified and referenced. The Prime 2 database is a seamless digital database for the entire country.

The latest phase of this modernisation is now underway, and the new LPIS went live for one county in early 2019. It is expected that the remainder of the country will go live on a phased basis, with all counties transformed by 2021.

Along with the LPIS Rebuild project new LPIS imagery is received annually and in accordance with EU Regulations is reviewed to identify any ineligible features which may be contained within LPIS parcels.

Land

The Land Parcel Information system (LPIS) is the Department's spatial database. Each year circa €1.7 billion is paid by the Department to Irish farmers based on the data within LPIS. It contains over 1.3 million polygons/parcels representing the land holdings of over 130,000 farmers. The system was built on now legacy technology and has been the subject of several EU Audits. In 2019, as part of a project to totally rebuild the LPIS systems, the Department completed the process of reviewing and updating existing LPIS data to improve the positional accuracy and align departmental GIS data to Ordnance Survey Ireland (OSI) Prime 2 data in County Louth. The new LPIS data was used for the application and processing of County Louth BPS applications for 2019. The core GIS application that maintains the LPIS data was replaced with a new application which uses newer technology. As part of the development a new workflow application was developed which will replace the older legacy workflow application. The reviewing and updating of more counties commenced in Q4 2019.

Development of the Generic Land Management (GLAM) system which enables the recording of land management plans also continued with the system being used by several EIP-Agri projects.

Forestry

The iFORIS system provides functionality for the processing of all applications for grant aid for forestry. In 2019 development work included: -

The provision of online application processes for Form 1 and Form 2 claims.

Functionality to cater for Mid-term Review Schemes including Woodland Improvement, Deer Fencing and Hare Fencing.

Developing IT Capability

A major overhaul and update of the Appropriate Assessment Procedure for approvals.

Inspections

The Agriculture Field Inspection and Testing (AFIT) system is a shared business system allowing for the coordinated allocation, scheduling, tracking, data entry of inspections and any associated penalty calculations. The system is available nationwide and currently caters for over 120 different inspection types including animal welfare, scheme, ante-mortem in factories and veterinary plant health inspections. Additional functionality was developed to reduce further the paper processes in the field using ruggedised laptops. There was an increased use of GPS devices to ensure more accurate measuring of land parcels.

Animal Identification & Movement (AIM)

The animal identification system support management of the national herds and is used to register animals and trace movements for cattle, sheep, pigs, and goats. This system provides assurance on traceability of animals as part of the overall food supply chain.

The Integrated Fisheries Information System (IFIS)

IFIS is the principal computer system to support the management and control of sea fishing activities and the implementation of the Common Fisheries Policy (CFP). It includes several related systems including the Electronic Recording System (ERS), an on-vessel system (ieCatch), an Inspectors Module (ieInspect) and a customer portal (fishingnet.ie).

As part of the new CFP arrangements the **European Maritime and Fisheries Fund (EMFF)** programme has been agreed and will run for the life of current CFP to 2020. Under this programme significant computer systems development have been implemented over the period to support monitoring, control and management of sea fishing activity.

During 2019, the Department introduced a new technology platform as part of a technology modernisation programme to support the introduction of improved business processes for the industry and the Department in future years.

The main new services implemented in 2019 included –

- Quota Balancing System to facilitate the adjustment of future quota allocations to address where a vessel has exceeded its allocated quota
 - Enhancements to the Pelagic Fisheries Quota balancing system.
 - Development of a Demersal quota balancing system
- Commencement of a customer portal to provide online services to Fishers.
- Updates to the technical format for the exchange of information as required under EU Regulation.

The introduction of a system to perform cross-checking analyses and verifications of data through automated computerised algorithms and mechanisms on sea fishing declarations for the Sea Fisheries Protection Authority.

Main Sea Fisheries functions processed in IFIS in 2019

Sea Fisheries Transaction/Activity	Total Processed
Vessel Positions	4,900,000
Fisheries Sales Notes	143,065
Log Sheets	34,642
Fishing Activity Reports	114,081
Landing Declarations	10,386
Fleet Details (to EU)	564
Inspections	2,630
Fish Quotas Managed	193,606 tonnes
Fishing Authorisations/Amendments Issued	997
Fisheries Management Notices Issued	60
Licence Offer Letters issued	256
New Licences Issued	248
Non-Operative Licences Issued	183
Licence Renewals Issued	2,853
Licence of Traditional Pot Fishing Boats	245
Licence for RSW Pelagic Segment	23

Developing IT Capability

Financial Management System – SAP

The Department's SAP Financial Management System is a key component of ensuring that the Department maintains its Accredited EU Paying Agency Status. The new system enhancements and business process improvements delivered during 2019 include -

- Collections Management: Further refinement added to the work list generation, promise to pay and statistical reporting features
- Paperless output option: An additional 10,000 farmers enabled for the paperless Remittance Advice solution thereby removing all from receiving paper output
- Financial Reporting: Extra functionality included into the reporting solution to facilitate the collation of the Fisheries Harbour Fund account
- Banking Services: The switchover to a new banking services provider was successfully completed
- Purchasing: Revised purchasing controls introduced, and new reporting elements added ISO27001 Information Security & GDPR: Implemented controlled access to cleared financial documents 7 years and older.
- Technical upgrade: SAP Solution Manager System upgraded to version 7.2

During 2019, the SAP system processed over one million payments to farmers/vendors. Over 30,000 purchase orders were created for goods/services received and some 35,000 sales invoices were issued for services provided.

The usage of Financial Self Service (FSS) application that allows farmer/vendor clients to view their accounting information on-line and print a Statement/Remittance advice continues to increase with over 60,000 farmers/vendors having accessed the FSS application by the end of 2019.

Online Services/Promotions

Several promotion activities were conducted in 2019 to highlight the benefits of the Department's online services portal www.agfood.ie, and the number of farmers registered to use online services continued to increase. At year end, some 124,947 farmers were registered for agfood services either as individuals or through their agents, representing over 98% of all farmers (127,023 BPS 2019 applicants).

SMS Messaging -SMS offers a cost effective and efficient means of communication to alert farmers and other clients on topics of interest including various scheme closure dates, payment dates, etc. In total, 1,782,754 text messages issued to Farmers and other customers in 2019 on a wide range of issues.

At end of 2019, over 140,000 clients (including Farmers) had provided their mobile phone numbers to the Department and had also permitted use of those numbers for the Department messages and alerts.

Transactional SMS - The facility enabling the automated electronic based linking of farmers to their agents for various schemes, using agfood.ie and interactive SMS, resulted in successful linking of more than 20,554 farmers to agents and farmers to partners using this method in 2019, saving time and administrative burden for farmers, agents and the Department. There were 153,395 notifications to Customers, these included BPS notifications, AIM Tag enquiry replies, etc.

Department Websites

During 2019, further improvements were made to the Departments' website www.agriculture.gov.ie and a number of related sub-sites to enhance usability for readers and visitors. This included a redesigned main website homepage and Brexit page to simplify access to import information on the site.

Developing IT Capability

A new search engine was implemented across multiple websites offering fast and accurate search results for users.

Technical improvements were made on several sub-sites to optimise these for viewing on mobile devices to improve access to available information. Various parts of the main website were amended to improve the organisation of information on the website to make it more readily accessible.

A new website www.marketaccess.ie was launched to assist exporters by listing the various market access requirements that must be met to successfully export goods to certain countries.

Small Systems Support

In addition to the larger corporate level systems, the Department provides many smaller systems (90+) that support important business functions across many divisions of the Department and this centralised initiative ensures full lifecycle ICT support for these systems.

Examples of business functions supported include: Beef Prices (Carcass and Live), Nitrates, Veterinary Medicines, Seed Potatoes, Vegetable Marketing/Plant Health, Pesticides/Biocides, Compound Feeding Stuffs, Fallen Animal System, Risk Management System, Agricultural/Forestry Appeals, Rostering for Veterinary Inspectors at Meat Plants, Business Collaboration functions (Lotus Notes), Inter-System connectivity (BizTalk); and Windows 10 upgrade support across a range of systems and technologies to ensure continuity.

Data Analytics

The Information Management and Technology Statement of Strategy 2017 – 2020, recognises that data is a key asset to the Department, the value of which, without compromising security or integrity, should be exploited to enhance and support analysis and decision making in the Department as a whole. A Data Analytics Unit was established in 2017 to provide a platform for data analysts and business users to work

together to create business models which would yield actionable results which can feed into decision making and policy making in the Agri-Food sector.

In 2019, this unit was expanded, and a number of modelling exercises were carried out in the areas of Animal Health and Welfare, Economics and Planning, the Environment and Brexit.

Brexit Systems

The IMT Brexit Project Development team was established in late 2018 to define the requirements and put in place appropriate technology and information systems to support the Department in carrying out the increased volumes of Sanitary and Phytosanitary control inspections expected at EU/Third Country borders in the event of the UK's exit from the EU.

In 2019, two IMT Systems, an Inspection Import Notification System (INIS) and an Export Certification System (ECS), were rapidly developed and equipment and network connectivity were installed at several locations in Dublin port for the initial UK exit date of March 29 2020.

These systems were further refined and enhanced throughout 2019 as extensions were granted and network connectivity was also installed in Rosslare Port.

Work will continue in 2020 to enhance these systems further to meet the requirements of the end of the post Brexit transitional period as well as providing functionality that can be used to support imports and exports from other 3rd countries.

The Enterprise Programme Management Office (EPMO) was established in Spring 2018. Its role is to support internal Business Divisions to align their Programmes and Projects to the Strategic Objectives, Priorities and Business Planning processes of the Department. Currently the EPMO is supporting the Laboratories Programme, The Food Safety and Authenticity Programme and approximately 10 individual projects drawn from various Divisions throughout the Department.

Corporate Affairs

CORPORATE AFFAIRS

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 works on an assessment of human rights and equality issues relevant to its functions.

Protected Disclosures Act 2014

Two protected disclosures were made in 2019. Both cases were ongoing at the end of the year.

Helping Bereaved Families/Inheritance Enquiry Unit

The Department 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.

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 2019, it responded to requests for assistance from 1701 families and released a total of €14.6 million in payments to the estates of deceased farmers.

Customer Service

15 customer service complaints were received by the Department's Quality Service Unit in 2019 and were examined and responded to in line with Department's

customer complaints procedure. This represents a 50% decrease in complaints compared to 2018.

Office of the Ombudsman

The Department responded to a total of 42 individual cases from the Office of the Ombudsman in 2019.

Freedom of Information (FOI)

A total of 381 FOI applications were received during 2019.

Access to Information on the Environment (AIE) Regulations

A total of 69 Environmental Information Requests were received under AIE Regulations in 2019, an increase of 16% from the 59 received the previous year.

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 overseen by a monitoring committee under an independent chairperson. 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 2019.

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 agriculture schemes set out in Schedule 1 to the Agriculture Appeals Act, 2001. Appeals Officers and the Director of Agriculture Appeals have an independent legal status provided in the Agriculture Appeals Act, 2001. The Office's Annual Reports are on the website: www.agriappeals.gov.ie

Corporate Affairs

In 2019, the Office received 570 agriculture appeals, an increase of 2.5% on 2018. 491 cases were closed in 2019 which included appeals outstanding from previous years. A summary of the outcome of cases received and decided in 2019 is as follows:

Outcome of agriculture appeals closed in 2019

Appeals Allowed, Partially Allowed or Revised by the Department	44%
Appeals Withdrawn, Invalid and Out of Time	13%
Disallowed	43%

Forestry Licence Appeals Service

The Forestry Appeals Committee (FAC) considers appeals against decisions by the Department with regard to applications for forestry licences. A total of 712 appeals relating to 372 individual forestry licences were received by the Office by the end of 2019.

Review of the Agriculture Appeals Act, 2001

The Programme for a Partnership Government (2016) included a commitment to review the Agriculture Appeals Act, 2002. The Report of the Review committee was published in 2018. A number of the key recommendations require amendments to the Act which have not yet been possible.

Investigations Division

The Department is the principal regulator of the agri-food sector. Investigations Division is a key element of the Department's enforcement capability, underpinning the quality and traceability standards which facilitate trade and provide reassurance to consumers and customers.

Investigations undertaken principally relate to alleged offences concerning the bovine disease eradication schemes, animal identification and movement

requirements, public health issues, animal welfare, the use/supply of illegal substances in animal production and the inappropriate use and/or supply of animal remedies. The investigations undertaken represent the most serious elements of non-compliance.

The Division can investigate alleged wrongdoing across all areas of the Department and offers assistance to Divisions regarding potential fraud and/or illegality cases and in relation to any limitations with regard to their current governing legislation. Where genuine weaknesses arise, as cases are tested in the courts, the Division engages with Legal Services Division and the relevant Divisions to ensure that legislation continues to support the Department's regulatory functions appropriately.

Investigations Division also works regularly with external agencies, e.g., An Garda Síochána, Customs authorities, DAERA, PSNI, IGB, IHRB, international authorities and regulatory bodies.

In 2018, a review of investigations and prosecutions within the Department was commissioned to identify how the Department's Investigations Division can best support the strategic objectives of the Department and the wider agri-food sector. Implementation of the recommendations of that review commenced during 2019. The conduct of investigations is guided and governed by Investigations Division's Code of Practice (COP) for the Conduct of Investigations, which outlines the requirements and approach taken by the Division when conducting investigations.

The Head of Investigations Division is supported by a small multi-disciplinary team of investigators and support staff. Oversight of the Division is conducted by a Steering Group which reviews aspects of governance, strategy, practices and procedures in the Division.

During 2019, 31 official investigations were initiated by the Division; in 2018, 29 investigations were officially logged by the Division.

Communication Unit

COMMUNICATIONS UNIT

Engaging, consulting and communicating with citizens, customers and stakeholders is integral to delivering the Department's strategic objectives. Over the course of the year, the Department undertook public consultations across a range of policy areas, including a consultation on a National Climate & Air Roadmap for the Agriculture Sector to 2030 and Beyond. Consultation on the future of the Common Agricultural Policy (CAP) included a series of town hall events and the establishment of a new CAP post-2020 Consultative Committee to provide a forum for stakeholders to share their views and remain updated as the CAP reform discussions progressed. The department also hosted an open policy forum where some 400 delegates came together to discuss the next Agri-Food Strategy to 2030.

During the year, the Department undertook public information campaigns in relation to our schemes, services and policies. This included working closely with the Department of the Taoiseach and other Government Departments to deliver a Brexit preparedness information campaign, including activity across print and digital media. As part of this campaign, the Department hosted a series of workshops – Brexit: Practical steps to keep agri-food trade moving - for agri-food businesses of all sizes and their logistics companies, retailers and transport companies to assist businesses to take steps to ensure their goods would move efficiently through ports after the UK's departure from the EU.

New schemes and strategies, including our Plant Health and Biosecurity Strategy, which sets out the importance of plant health and biosecurity for Ireland as well as ensuring that all relevant stakeholders are aware of the risks to plant health in Ireland, and their role and responsibilities to reduce that risk, were publicised.



Data Management

DATA MANAGEMENT

Information Security

The Department was successfully accredited with ISO 27001:2013 Information Security certification in August 2016 and recertified as mandated by the EU in 2019. Over 800 staff received Information Security awareness training in 2019, this training updated staff with regards to the security and protection of the Department's data and ensures ongoing compliance with the ISO 27001 standard as it reinforces the best practice principles of Information Security.

Data Protection

A total of 33 Subject Access Requests were received in 2019 under Article 15 of the General Data Protection Regulation (GDPR), an increase of 22% on the previous year.

In early 2019 the GDPR Project Group amalgamated with an ISO Data Security Project Group as both groups were working towards similar goals and objectives. This Project Group was renamed as the Data Management Division (DMD) Project Group.

This Group met 6 times in 2019 and continued its work to ensure a high level of compliance with the GDPR and with ISO 27001:2013 Information Security standards.

A data protection awareness programme was introduced in 2018 which included an on-line training course. Circa 2400 staff received Data Protection training in 2019 and targeted workshops were held to provide more in-depth training to key contact staff (Information Officers) in each Division, to ensure they have a higher level of understanding of Data Protection challenges. This enables targeted staff to assist with queries in their Divisions and provide the information needed for the Department's Record of Processing Activity, in accordance with Article 30 of the GDPR. In 2019 the Data Protection Unit proactively prepared the Department for the possibility of Brexit and has endeavored to put in place relevant Data Protection safeguards to ensure that the duties of the Department can continue post Brexit.

Records Management System

Work continued in 2019 to formally put in place a project plan and structure to progress the implementation of a standardised records management policy and infrastructure in the Department (eDocs).

Informational sessions around the new records management system were delivered to over 900 Department staff in offices around the country. eDocs was rolled out to 11 divisions across the Department in 2019 as part of a pilot project to assess the level of work involved and streamline the procedures going forward. Continued roll out is planned for 2020 with a view to having all divisions within the Department using eDocs by end of 2021.

Customer Relationship Management

The Department has made the strategic decision to replace the legacy software applications, currently running the Department's Contact Centres, with a unified Customer Engagement Contact Centre application. This strategic decision is also in tandem with one of the major themes of the Civil Service Renewal Plan to "Foster a sense of excellent customer service."

As a result, new Direct Payments Customer Engagement Contact Centres (in Portlaoise and Wexford) went live in October 2019 and has been positively welcomed by both internal staff and clients of the Department.

The introduction of the new Customer Engagement Contact Centres has enhanced the Department's customer service by:

- Offering a unified service experience across self-service and assisted service channels (e.g. phone, email and online queries). This unified solution provides consistency and full visibility of our clients interactions with the Contact Centres, which drives higher customer satisfaction and increased productivity.

Data Management

- Providing a better understanding of customers' interaction history and a snapshot of their activities with the Department.
- Providing enhanced integration of ICT systems thus reducing the unnecessary duplication of calls/queries.
- Leveraging insights and resources to create individualised and consistent experiences across all channels.
- Providing a more holistic view of the customer and the facility allows us to ensure we are being responsive to the customers' needs through improved monitoring of customer queries, especially at peak application/payment times.
- Improved inter connectivity between the 1st Level Contact Centres and the other compatible divisions across the Department. Real time connectivity to other internal Department systems facilitates more enhanced customer service, and ultimately providing a single integrated view of the customer.
- Improved reporting and forecasting functionality in respect of customer queries.

The introduction of a new and improved Contact Centre has enhanced our service delivery to our customers and will mitigate reputational risks to the Department. In addition, the Department is committed to continually streamlining, simplifying and improving our customers' interactions with the Department. To this end, a formal Lessons Learnt exercise is planned for Q2 2020. As part of Phase 2 of this project, the Contact Centre system will be implemented into the Oireachtas Liaison Unit (OLU), Regional Veterinary Offices network and the IT Helpdesk.

Appendix A - Organisation of the Department

Organisation of the Department as at 31 December 2019

The senior management team is the Management Board. This is headed by Brendan Gleeson, Secretary General and comprises eight Assistant Secretaries General/Directors, the Chief Veterinary Officer, the Deputy Chief Veterinary Officer, the Chief Inspector, and the Director of Laboratory Services.

MB/Director	Deputy	Function	Head of Division	Location
Cecil Beamish Seafood and Marine		Aquaculture & Foreshore Management	John Quinlan	Clonakilty
		Marine Programmes	Paschal Hayes	Clonakilty
		Marine Engineering	Noel Clancy	Clonakilty
		Sea Fisheries Administration	Kevin Moriarty	Clonakilty
		Seafood Policy and Development	Josephine Kelly	Clonakilty
Martin Blake Chief Veterinary Officer		Animal Health & Welfare	Vacant	
		Import Controls (Operations) Division	Hazel Sheridan	Dublin
		National Disease Control Centre, Border Inspection Posts Policy, Veterinary Internal Audit	June Fanning	Dublin
	Michael Sheahan Director of Operations	Business Systems Co-ordination & Development	Stephen Fitzpatrick	Dublin
		Veterinary Public Health Implementation	Peter Maher	Regions
		Veterinary Northern Area Management Team	Jarlath O'Connor	Regions
		Veterinary Southern Area Management Team	Eilish O'Brien	Backweston
		ERAD, Veterinary Medicines, and Veterinary Council of Ireland	Colm Forde	Backweston
		Ruminant Animal Health & ERAD, Premises Registration & Animal ID	Eoin Ryan	Backweston

Appendix A - Organisation of the Department

MB/Director	Deputy	Function	Head of Division	Location
	Paula Barry-Walsh VPHIS Deputy Chief Veterinary Officer	Surveillance, Animal By-Products and TSEs	Paul Corkery	Backweston
		Animal Welfare, Animal Meds & AMR	Robert Doyle	Backweston
		Trade & Vet Certification	Dave Nolan	Dublin
		Animal Identification & Movement	Martin Farrell	Backweston
		Milk & Meat Hygiene & Animal By-Products	Bernie Brennan	Portlaoise
		Veterinary Public Health Policy	Joe O'Flaherty	Dublin
Donal Sammin Director of Laboratories	James Choiseul Head of Agricultural Labs	Bacteriology/Parasitology	Maire McElroy	Backweston
		Food Chemistry	Jim Garvey	Backweston
		Pathology	John Moriarty	Backweston
		Plant Science Division	AnnMarie Dillon	Backweston
		Regional Veterinary Labs & Blood Testing Lab	Michael Casey	Backweston
		Food Microbiology	Montserrat Gutierrez	Backweston
		Virology	Ronan O'Neill	Backweston
Bill Callanan Chief Inspector	Donal Coleman Director	Climate Change & Bioenergy Policy	Edwina Love	Portlaoise
		Livestock Breeding, Production & Trade	Gerry Greally	Portlaoise, Cavan
		Nitrates, Biodiversity & Engineering	Jack Nolan	Wexford, Portlaoise
		Research, Food & Codex	Richard Howell	Dublin
		Pesticides Controls	Tom Medlycott	Backweston
		Pesticides Registration	Aidan Moody	Backweston

Appendix A - Organisation of the Department

MB/Director	Deputy	Function	Head of Division	Location
		Plant Health & Horticulture	Barry Delany	Backweston
		Feedstuffs, Fertilisers, Grain and Poultry	Sheila Nolan	Backweston
		Crops Evaluation & Certification	Michael Moloney	Backweston
Paul Savage International & Brexit		EU Division	Sharon Murphy	Dublin
		Brexit & International Trade	Louise Byrne	Dublin
		CAP Rural Development	Corina Roe	Dublin
		Permanent Representation Brussels	Breffini Carpenter	Brussels
		Agricultural Counsellor	Damien Flynn	London
Sinead McPhillips Agri-Food Strategy		Food Industry Development	Vacant	Dublin
		Meat & Milk Policy	Maria Dunne	Dublin
		Economics & Planning	Seán Bell	Dublin
		Dairy Controls	Nicholas Finnerty	Dublin
Eilis O'Connell HR & Corporate Communications		Services, Health & Safety, Management Services	Heber McMahon	Dublin, Portlaoise
		Corporate Affairs, F.O.I, Minister's Office	Padraig McMahon	Dublin, Portlaoise
		Human Resources	Kevin Galligan	Dublin, Portlaoise
		Legal Services	John Kinsella	Dublin, Cavan
		Data Management	Darren Murray	Dublin
		Communications	Meg Laffan	Dublin
		Investigations Division	Tim Drea	Backweston

Appendix A - Organisation of the Department

MB/Director	Deputy	Function	Head of Division	Location
Sean Keevey Information Management Technology		IMT Animal, Customer, Financials & Fisheries Systems	Joe Hanly	Dublin, Portlaoise, Backweston
		IMT Direct Farm Payment Systems	Alan King	Dublin, Portlaoise
		IMT Infrastructure	Seán Connolly	Dublin
		IMT Co-ordination & PMO	Louise Jevens	Dublin
Kevin Smyth Governance		Accounts	Colm McKiernan	Cavan
		Agriculture Appeals	Angela Robinson	Portlaoise
		Finance Division & Central Procurement Unit	Martin Crowley	Dublin, Portlaoise
		Internal Audit Group	Gordon Conroy	Dublin, Portlaoise
		Horse & Greyhound Racing & Teagasc	Rebecca Chapman	Dublin Cavan
Colm Hayes Rural Development		Agricultural Environment & Structures	Eoin O'Brien	Wexford
		Forest Service	Patricia Kelly	Wexford
		Forest Sector Development/COFORD	Fergus Moore	Dublin
		Forest Service Inspectorate	Seamus Dunne	Dublin
		Organics, Market Supports & Locally Led	Bridgeena Nolan	Wexford
		Agri Environment & On Farm Investment	Miriam Cadwell	Wexford
Paul Dillon Direct Payments		BPS (Inspections; Financial Control; Policy Co-ordination)	Paul McKiernan	Portlaoise
		Basic Payment Scheme (Operations)	Fintan O'Brien	Portlaoise
		CAP Entitlements & Financial Controls	Francis Morrin	Portlaoise
		Direct Payments Integrated Controls	Thomas Keating	Dublin

Appendix B - State Bodies

Aquaculture Licences Appeals Board

Kilminchy 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.

With its headquarters in Dublin, Bord Bia has a network of overseas offices in Amsterdam, Dubai, Dusseldorf, Lagos, London, Madrid, Milan, Moscow, New York, Paris, Shanghai (Asia Office), Singapore, Stockholm, Tokyo 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 seafood and aquaculture sectors by focusing on the opportunities for growth in these sectors while promoting responsible environmental practices.

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.

Appendix B - State Bodies

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.hri.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 KX25
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 through 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.

National Milk Agency

Holly Park Studio
Holly Park Avenue
Blackrock
Co. Dublin
A94 R6F7
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.

Appendix B - State Bodies

Teagasc

Agriculture and Food Development Authority

Oak Park
Carlow
R93 XE12
Tel: 059 917 0200
Website: www.teagasc.ie

Teagasc – the Agriculture and Food Development Authority – is the national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities. Established under the Agriculture (Research, Training and Advice) Act 1988, 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 appointed by the Minister for Agriculture, Food & the Marine and has representatives from the farming organisations, the food industry, the universities, the Department of Agriculture, Food and the Marine and Teagasc staff.

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 Ireland and throughout Ireland's exclusive fishing limits. It was established on 1 January 2007 under the Sea-Fisheries and Maritime Jurisdiction Act 2006 and 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 managed 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 C - VOTE 30 - 2019

		€000
Administration		280,002
i	SALARIES, WAGES AND ALLOWANCES	180,355
ii	TRAVEL AND SUBSISTENCE	9,002
iii	TRAINING AND DEVELOPMENT AND INCIDENTAL EXPENSES	5,305
iv	POSTAL AND TELECOMMUNICATIONS SERVICES	4,547
v	OFFICE EQUIPMENT AND EXTERNAL IT SERVICES	37,106
vi	OFFICE PREMISES EXPENSES	36,702
vii	CONSULTANCY SERVICES AND VALUE FOR MONEY AND POLICY REVIEWS	92
viii	SUPPLEMENTARY MEASURES TO PROTECT THE FINANCIAL INTERESTS OF THE EU	760
ix	LABORATORY SERVICES	6,133
A.	Food Safety, Animal and Plant Health and Animal Welfare	93,039
A.3	Food Safety, Animal and Plant Health and Animal Welfare	93,039
	TB & Brucellosis Eradication	37,544
	TVIs Meat Inspection	23,738
	Fallen Animals Scheme	7,615
	Animal Identification and Movement	7,925
	Vet. Testing & Research	4,984
	Animal Welfare incl. Control of Horses	3,579
	Other Animals Dis. Measures	3,154
	Pesticide / Plant Protect	1,159
	BSE Comp. & Related Costs and Testing	1,053
	Scrapie	307
	Other	1,981
B.	Farm/Sector Support and Controls	801,581
B.3	Agri-environmental Schemes	236,500
	GLAS	213,799
	Organic Farming Scheme	9,377
	Locally Led Agri-Environment Schemes	9,614
	Other	3,711
B.4	Areas of Natural Constraint Scheme	248,552
B.5	Development of Agriculture and Food (Farm)	83,650
	Targeted Agricultural Modernisation Scheme (TAMs)	76,519
	Horticulture Industry	5,834
	Organic Sector	897
	Other	400

Appendix C - VOTE 30 - 2019

	€000
B.6 Beef Sustainability Schemes	87,108
BDGP (Beef Data & Genomics Programme)	43,403
BEAM (Beef Exceptional Aid Measure)	27,149
BEEP (Beef Environmental Efficiency Pilot)	16,556
B.7 Knowledge Transfer	22,167
B.8 Animal Welfare Scheme for Sheep	17,382
B.9 Early Retirement Scheme	187
B.10 Forestry and Bio Energy	89,732
Afforestation	80,151
Forestry Support Scheme	8,786
Forestry Development	670
Other	125
B.11 Control & Other Support Scheme Costs	14,213
B.12 Other Schemes	2,090
C. Policy and Strategy	336,685
C.3 Research Quality & Certification	25,161
Quality Assurance Scheme	6,400
R&D in the Food Sector	7,700
Research Stimulus Fund	5,334
Forestry Research	1,419
Livestock Breeding incl ICBF	2,294
Equine Breeding	714
Other	1,301
C.4 Development and Promotion of Agriculture and Food (Non Farm)	7,550
Food Industry Schemes incl PCF Centre	4,591
Food & Hort. Promotion Prog.	2,045
Other	914
C.5 Teagasc Grant	134,673
C.6 An Bord Bia Grant	44,844
C.7 Horse and Greyhound Racing Fund	84,000
Horse Racing Ireland	67,200
Bord ná gCon	16,800
C.8 Cedra Rural Innovation & Development Fund	1,486

Appendix C - VOTE 30 - 2019

		€000
C.9	Food and Donations – World Food Programme	25,300
C.10	Other Services	13,671
	International Cooperation	3,641
	General Legal Expenses	1,371
	Non-Thoroughbred Hrse. Ind.	2,996
	Misc. Pension Payments	1,641
	Rural Dev. Technical Assist	1,368
	Johnstown Castle Restoration project	1,020
	Other	1,634
D.	Seafood Sector	129,801
D.3	Fisheries	41,562
	Dev. & Upgrading of Harbours for Fisheries	29,362
	Seafood Development Programme	9,753
	Environmental Compliance	1,904
	Other	543
D.4	Marine Institute Grant	34,926
D.5	Bord Iascaigh Mhara Grant	38,195
D.6	Sea Fisheries Protection Authority	13,005
D.7	Haulbowline Remediation Project	2,113
	Total Gross Voted Expenditure	1,641,108

Appendix C - VOTE 30 - 2019

		€000
Receipts		
Appropriations in Aid		-388,443
E.1	Recoupment of Salaries, etc. of officers on loan to outside bodies	-690
E.2	Forfeited Deposits & Securities under EU intervention, export refund etc.	-187
E.3	Refunds from Veterinary Fees for inspection at poultry and other meat plants	-19,531
E.4	Receipts from Veterinary Fees for Live Exports	-664
E.5	Receipts from fees for dairy premises inspection services	-8,143
E.6	Receipts from Sale of Vaccines, livestock, farm produce, etc. at Veterinary Research Laboratory and farm at Abbotstown; recoupment of quarantine expenses at Spike Island	-602
E.7	Receipts from Seed Testing fees, certification fees, licensing fees, pesticides, registration fees, etc. and receipts from Backweston Farm	-2,766
E.8	Receipts from farmer contributions towards the cost of eradicating bovine disease	-7,637
E.9	Land Commission receipts	-380
E.10	Other Receipts	-3,129
EU Co Funding Transfers		
E.11	Market Intervention expenses and financing costs for other FEOGA(Guarantee) section measures	-300
E.12	Intervention Stock Losses, etc.	-960
E.13	EAFRD (European Agricultural Fund for Rural Development)	-299,533
E.14	Veterinary Fund	-9,279
E.15	Other Guarantee Receipts from EU (Agriculture)	-36

Appendix C - VOTE 30 - 2019

		€000
Fisheries Related Receipts		
E.16	Proceeds of Fines and Forfeitures in respect of Sea Fisheries	-292
E.17	Receipts under the 1933 Foreshore Act and the 1954 State Property Act	-188
E.18	EU –Recoupment in respect of expenditure on the Conservation & Management of Fisheries	0
E.19	Aquaculture Licence Fees	-578
E.20	EU Receipts for EMFF	-23,030
E.21	EFF (Fisheries) 2007-2013	0
E.22	Receipts from Sustainable Foods Systems Ireland	-74
E.23	Receipts from pension-related deduction on public service remuneration	-10,444
Total Receipts		-388,443
Net Expenditure		1,252,665

Appendix D - Performance Budgeting

Strategic Goal

“To promote and safeguard public, animal and plant health and animal welfare for the benefit of consumers producers and wider society”

Objective 1:

Food Safety, Animal and Plant Health and Animal Welfare

Inputs – Financial & Human Resources							
	2019 Estimate*			2019 Outturn			
	Current	Capital	Total	Current	Capital	Total	
	€000	€000	€000	€000	€000	€000	
A.1 ADMINISTRATION – PAY	103,175	0	103,175	102,764	0	102,764	
A.2 ADMINISTRATION – NON-PAY	42,403	32,131	74,534	40,949	31,017	71,966	
A.3 Food Safety, Animal and Plant Health and Animal Welfare	95,412	720	96,132	92,668	371	93,039	
Programme Total:						€267,769	

*2019 Estimate as amended by Supplementary Estimate

Context and Impact Indicators			
Programme A	2017	2018	2019
1 Number of major food safety incidents	0	0	
2 Number of tests accredited under the National Reference Laboratory function.*	145	148	155
3 Number of new trade areas opened or re-opened	3	3	
4 Animal Disease and welfare measurements as reported to OIE (Organisation International des Epizooties) data on	Retained high disease status and OBF	Retained high disease status and OBF	Retained high disease status and OBF
a. Exotic diseases incidents	nil	nil	nil
b. Brucellosis cases,	nil	nil	nil
c. TB herd incidence	3.47%	3.51%	3.72%
d. BSE cases.	1	0	0

**These figures are in respect of accredited test methods currently in use in DAFM Laboratories, some of which may be used for multiple analyses and/or with multiple matrices”.

Staff Numbers
Department of Agriculture,
Food and the Marine

2019 Estimate
1,907

2019 Actual
1,950

146

Appendix D - Performance Budgeting

Strategic Goal

“Provide income and market supports to underpin the rural economy and the environment”

Objective 2: Farm/Sector Supports and Controls

Inputs – Financial & Human Resources							
	2019 Estimate*			2019 Outturn			
	Current €000	Capital €000	Total €000	Current €000	Capital €000	Total €000	
B.1 ADMINISTRATION - PAY	53,604	0	53,604	53,389	0	53,389	
B.2 ADMINISTRATION – NON-PAY	19,106	1,237	20,343	17,929	1,165	19,094	
B.3 Agri-environmental Schemes	235,250	1,250	236,500	235,365	1,135	236,500	
B.4 Areas of Natural Constraint Scheme	250,000	0	250,000	248,552	0	248,552	
B.5 Development of Agriculture and Food (Farm)	865	84,530	85,395	768	82,882	83,650	
B.6 Beef Data & Genomics Programme	84,650	1,150	85,800	86,218	890	87,108	
B.7 Knowledge Transfer	25,000	0	25,000	22,167	0	22,167	
B.8 Animal Welfare Scheme for Sheep	18,000	0	18,000	17,382	0	17,382	
B.9 Early Retirement Scheme	220	0	220	187	0	187	
B.10 Forestry and Bio Energy	3,250	100,178	103,428	2,945	86,787	89,732	
B.11 Control & Other Support Scheme Costs	12,351	0	12,351	14,213	0	14,213	
B.12 Other Schemes	2,825	0	2,825	2,090	0	2,090	
Programme Total:						€874,064	

*2019 Estimate as amended by Supplementary Estimate

Staff Numbers
Department of Agriculture,
Food and the Marine

2019 Estimate
978

2019 Actual
964

Appendix D - Performance Budgeting

Context and Impact Indicators			
Programme B	2017	2018	2019
1 Gross Value added of the sector (€m) Primary Sector (Agriculture, Forestry & Fishing)	5,051	€4,624	Not yet available
2 Change in annual area of new forests created (ha) (% change over previous year)	+5,538 (-15%)	+4,025 (-0.27%)	+3,550 (-12%)
3 Area of land farmed organically (ha) (% change over previous year)	72,000 (0%)	72,000 (0%)	74,000 (+2.77%)
Absolute emissions expressed as MtCO ₂ eq as reported by the EPA using revised emission metrics (1990 baseline: 20.40Mt CO ₂ eq)	20.25 Mt CO ₂ eq	20.63 Mt CO ₂ eq	Not yet available
Change in absolute agricultural GHG emissions from 1990 baseline of: 20.40Mt CO ₂ eq (% change)	-0.15 (-0.73%)	+0.23 (+1.13%)	Not yet available
Change in absolute agricultural GHG emissions from 2005 baseline of 19.829Mt CO ₂ eq (% change)	+0.42 (+2.12%)	+0.8 (+4.03%)	Not yet available
Agricultural ammonia (NH ₃) emissions as reported to EU (kt NH ₃)	117.00	118.3	Not yet available
Family Farm Income (FFI) in Disadvantaged areas (as % of FFI in Non- Disadvantaged Areas)	€28,747 76%	€21,593 78%	Not yet available
% payments made within targets (a) direct payment schemes (b) other schemes	98% 75 -100%	98% 75-100%	
Retain EU Paying Agency status and secure draw down of EU funding Achieved	Achieved €1,397m	Achieved €1,610m	Achieved €1,492m

Appendix D - Performance Budgeting

Strategic Goal

“Provide the optimum policy framework for the sustainable development of the agri-food sector.”

Objective 3: Policy and Strategy

Inputs – Financial & Human Resources							
	2019 Estimate*			2019 Outturn			
	Current	Capital	Total	Current	Capital	Total	
	€000	€000	€000	€000	€000	€000	
C.1	ADMINISTRATION - PAY	15,277	0	15,277	15,216	0	15,216
C.2	ADMINISTRATION – NON-PAY	5,026	241	5,267	4,552	219	4,771
C.3	Research Quality & Certification	25,561	0	25,561	25,161	0	25,161
C.4	Development and Promotion of Agriculture and Food (Non Farm)	3,810	9,630	13,440	3,368	4,182	7,550
C.5	Teagasc Grant	132,082	6,150	138,232	130,373	4,300	134,673
C.6	An Bord Bia Grant	46,619	0	46,619	44,844	0	44,844
C.7	Horse and Greyhound Racing Fund	72,856	11,144	84,000	72,856	11,144	84,000
C.8	CEDRA Rural Innovation & Development Fund	1,500	0	1,500	1,486	0	1,486
C.9	Food and Donations – World Food Programme	23,000	0	23,000	25,300	0	25,300
C.10	Brexit Response Loan Scheme	0	0	0	0	0	0
C.11	Other Services	13,804	520	14,324	12,651	1,020	13,671
Programme Total:						€356,672	

*2019 Estimate as amended by Supplementary Estimate

Appendix D - Performance Budgeting

Context and Impact Indicators		2017	2018	2019
Programme C				
1	Value (€000m) of agri food exports – total,	13,846	13,705	14,530
2	Value (€000m) of primary production – total	7,175	6,960	6,605

* 2019 figures are DAFM/CSO figures. 2017 Bord Bia.

Staff Numbers	2019 Estimate	2019 Actual
Department of Agriculture, Food and the Marine	253	285
Teagasc	1,065	1,030
Bord Bia	146	139

Appendix D - Performance Budgeting

Objective 4: Seafood Sector

Strategic Goal

“Deliver a sustainable, growth driven sector focussed on competitiveness and innovation driven by a skilled workforce delivering value added products in line with market demands.”

Inputs – Financial & Human Resources							
	2019 Estimate*			2019 Outturn			
	Current €000	Capital €000	Total €000	Current €000	Capital €000	Total €000	
D.1	ADMINISTRATION - PAY	9,021	0	9,021	8,986	0	8,986
D.2	ADMINISTRATION – NON-PAY	4,184	287	4,471	3,572	244	3,816
D.3	Fisheries	12,461	28,427	40,888	11,730	29,831	41,562
D.4	Marine Institute Grant	22,929	12,000	34,929	22,926	12,000	34,926
D.5	Bord Iascaigh Mhara Grant	26,193	12,100	38,293	26,095	12,100	38,195
D.6	Sea Fisheries Protection Authority	13,395	400	13,795	12,660	345	13,005
D.7	Haulbowline Remediation Project	0	2,500	2,500	0	2,113	2,113
Programme Total:						€142,603	

*2019 Estimate as amended by Supplementary Estimate

Appendix D - Performance Budgeting

Context and Impact Indicators		2017	2018	2019
Programme D				
1	Value of Total Seafood Sales	€1,151m	€1,137m	€1,136m
2	Value of Seafood Exports	€618m	€576m	€578m

Staff Numbers	2019 Estimate	2019 Actual
Department of Agriculture, Food and the Marine	173	177
Marine Institute	142	131
Bord Iascaigh Mhara	149	115
Sea Fisheries Protection Authority	145	127

Appendix E - EAGF/EAFRD Guarantee Receipts 2019

The following shows the payments made in Ireland from the EAGF fund and EAFRD & other EU receipts during the 2019 financial year

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

EU-funded expenditure managed by the Department of Agriculture, Food and the Marine		
	2018	2019
	€m	€m
EAGF		
Direct Payment/Single Payment Scheme	1,208	1,204
Intervention/Aid to Private Storage**	19.5	(12)
Other market supports***	4.5	61.8
Other	(3)	(3)
Co-funded receipts (measures co-funded by EU) - a note below	2018	2019
	€m	€m
Agriculture		
EAFRD Rural Development Programmes	387	299
Veterinary fund	10	9
Other co-financing receipts	1	1
Fisheries		
EMFF and EFF Fisheries Programme*	163	23
	1,643	1,583

*EMFF advance funding of €8.6m received are not receipted to A&A

** €-12.6 million was as a result of sales of skimmed milk powder in stock

***Increase due to Beef Exceptional Aid Measure BEAM of €48.3m

a - Only the EU Co-funding on these programmes is shown in this table.



**An Roinn Talmhaíochta,
Bia agus Mara**
Department of Agriculture,
Food and the Marine

