

Origin Green IRELAND

Working with nature

SUSTAINABILITY REPORT 2015

Growing the success of Irish food & horticulture

Bord Bia
Irish Food Board

Working with nature

Launched in 2012, Origin Green is the national sustainability programme for the Irish food and drink industry. It is the only sustainability programme in the world which operates on a national scale, uniting government, the private sector and food producers, through Bord Bia, the Irish Food Board.

Independently verified at every stage, Origin Green enables Ireland's farmers and food producers to set and achieve measurable sustainability targets, reduce environmental impact and serve local communities more effectively. The overall ambition of the programme is that every farm and food manufacturing business throughout Ireland will be on the road to sustainable production by the end of 2016.

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DISCLAIMER

Bord Bia does not carry out monitoring or measurement of actual emissions into the environment. Information on inputs and processes is gathered from various sources and used in models to calculate relevant emissions, for example, Bord Bia's carbon footprint calculation model, which has been accredited to PAS 2050 by the Carbon Trust. The success of Origin Green is dependent on the voluntary and active participation of its members and their willingness to provide information on a confidential basis for the purpose of carrying out assessments and audits.

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INVESTING IN A SUSTAINABLE FUTURE THROUGH ORIGIN GREEN

INTRODUCTION

Since 2009, Irish food and drink exports have experienced a period of continuous and unparalleled growth, reaching a new high of €10.5 billion in 2014. This marked a cumulative increase of 45% over a five year period. With the longstanding quality and reputation of our food production systems, Ireland is demonstrating its ability to not only compete, but to thrive in the global marketplace.

The growth which we are currently experiencing arises at a time when the world is facing extraordinary pressure with regards to land availability, water scarcity and climate change. This is being exacerbated by the expected increase of a further 2.4 billion people on the planet by the year 2050.

With greater levels of demand from a growing population, this represents a significant opportunity for Irish food and drink producers to maintain the growth of our industry. However, we must remain cognisant of our responsibility to expand in a manner which will not lead to the long-term degradation of our natural resources. To simultaneously mitigate the onset of climate change through the reduction of greenhouse gas emissions, while meeting the ever-increasing demand for food, remains one of the great challenges of the modern era and one in which everyone must play their part.

It was this motivation which led Bord Bia to undertake initial research in 2008 to gain a greater understanding of the sustainability requirements of trade customers. With the inclusion of sustainability as a key long term priority for the Irish food and drink industry in Bord Bia's Statement of Strategy 2009-2011, this culminated in the development and launch of the Origin Green sustainability programme in the summer of 2012.



Origin Green was developed by Bord Bia to provide a structure for Irish farmers and food and drink manufacturers to demonstrate their commitment to sustainably produce the highest quality food, drink and ingredients. It also provides a framework to deliver long-term continuous improvements in key areas such as emissions, energy, waste, water, biodiversity and social sustainability.

Three years since the launch of the programme, our first Origin Green Sustainability Report outlines the scale of what has been achieved over a relatively short period of time. The aforementioned period has seen 90,000 farms audited and carbon footprinted, a world first. At manufacturing level, over 470 food and drink manufacturers, which represent almost 95% of our total food and drink exports, have registered to take part in Origin Green.

The overall ambition of the Origin Green programme is that every farm and food manufacturing business throughout Ireland signs up to the sustainability agenda, making measurable commitments to producing in a sustainable manner, with progress independently assessed and verified at each and every stage. Our first Origin Green report highlights what can be achieved when an industry collectively invests in a sustainable future as we strive to fulfil our ambition of becoming a world leader in sustainably produced food and drink.

Michael Carey
Chairman, Bord Bia

Aidan Cotter
Chief Executive, Bord Bia

95%

AT MANUFACTURING LEVEL, OVER 470 FOOD AND DRINK MANUFACTURERS, WHICH REPRESENT ALMOST 95% OF OUR TOTAL FOOD AND DRINK EXPORTS, HAVE REGISTERED TO TAKE PART IN ORIGIN GREEN.

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Section 1

ORIGIN GREEN TO DATE

KEY FACTS

6.9m

THE LAND AREA OF IRELAND IS 6.9 MILLION HECTARES, OF WHICH 4.5 MILLION HECTARES IS USED FOR AGRICULTURE AND A FURTHER 760,000 HECTARES FOR FORESTRY.

175

IRISH FOOD AND DRINK IS EXPORTED TO OVER 175 GLOBAL MARKETS.

€10.5bn

IN 2014, THE VALUE OF IRISH FOOD AND DRINK EXPORTS HIT A RECORD HIGH OF €10.5 BILLION.



BACKGROUND

With the global population projected to increase by more than 2.4 billion people by 2050, the world will need to produce up to twice as much food from increasingly limited resources. This is leading to long term fears over the security of food supplies in many parts of the world.

Sustained pressure on the world's already strained resources is also being exacerbated by the ongoing challenges presented by climate change and increasing greenhouse gas emissions. In order to meet these challenges, it will require everyone involved in the food industry to produce more from less, which necessitates the adoption of more sustainable practices.

This is the backdrop that has shaped Origin Green, which places sustainability at the core of the Irish food and drink industry.

Scope

At the launch of Origin Green in June 2012, Bord Bia outlined its aim to have every farm and food manufacturing business in Ireland working each year to lower their carbon footprint while playing a proactive role in the wellbeing of their local community.

Ireland enjoys a strong reputation as a source of natural, high quality food, drink and ingredients. With our temperate climate and our lush green countryside, Ireland is a country which, perhaps, could be seen as relatively unthreatened by some of the aforementioned global environmental issues.

In terms of our carbon footprint, Ireland's dairy industry has the joint lowest carbon footprint in Europe, while our beef industry is among the top five performing Member States in Europe, highlighting the natural advantages of our grass based production system.

However, despite these natural advantages, it is the proper management of these resources into the future that matters.

Reflecting this, the scope of Origin Green involves ongoing measurement throughout both food manufacturing and on farm. Participating farms are assessed on measures ranging from their carbon footprint to water and energy to biodiversity. At manufacturing level, companies develop multiannual sustainability plans, setting measurable targets in the areas of raw material sourcing, the manufacturing process and social sustainability. These targets and progress towards reaching them are independently assessed and verified on an annual basis.

Ambition

The overall ambition of the Origin Green programme is to have every farm and every food manufacturing business demonstrate their commitment to operating in the most sustainable manner possible. This commitment is being independently certified and verified at every stage.

At farm level, delivery on this ambition is made possible by utilising Bord Bia's quality assurance infrastructure. Since 2011, Bord Bia's Quality Assurance schemes have begun to incorporate carbon footprint measurement, initially beginning with our beef industry, followed by dairy and it is currently being developed for lamb, poultry, pigmeat and grain.

This measurement is being conducted on a national scale, routinely on an 18 month cycle, and doing so in a process of measurement, feedback and continuous improvement.

Three years on since the launch of Origin Green, over 470 food and drink manufacturers, accounting for almost 95% of Ireland's food and drink exports, have registered to take part in the programme.

The Irish food and drink sector is moving, as an industry, to deliver the ambition of having all of its farmers and food and drink producers on the journey to sustainable production by 2016.

TRANSFORMING AN INDUSTRY

2008

In conjunction with PwC, Bord Bia undertakes initial research to assess customer perceptions of the sustainability credentials of Irish food and drink products. This highlighted the need for the industry to be able to prove its credentials.

Bord Bia's Statement of Strategy 2009-2011 is launched with sustainability highlighted as a key long-term priority for the Irish food and drink industry.

Through the launch of Food Harvest 2020, Ireland develops a strategic plan to grow the value of Irish food and drink exports by 50% over a ten year period, with the vision of becoming a world leader in sustainably produced food and drink

2009

Bord Bia undertakes initial carbon footprinting training with the Carbon Trust.

2010

Bord Bia engage Mary Shelman and David Bell from the Harvard Business School to conduct a high-level assessment of the Irish food and drink industry. Results of this study are presented in Pathways for Growth: Building Ireland's largest indigenous industry with key elements incorporated into Food Harvest 2020.

Initial work undertaken with the Carbon Trust to develop PAS 2050 accredited carbon footprint models, starting initially with beef.

2011

Bord Bia researches fully the sustainability needs of consumers and trade customers internationally to inform the early development of Origin Green with all relevant stakeholders.

Carbon Trust - Bord Bia receives accreditation from The Carbon Trust for the Dairy carbon footprinting model.

Origin Green Programme launched to Irish Industry with target of 75% of exports coming from verified members by end of 2014 and 100% by the end of 2016.

2012

Bord Bia pilots new sustainability charter based on global best practice.

Research is undertaken by Cranfield University, UK, in conjunction with Bord Bia, to establish the water footprint for Irish Beef & Dairy produce.

300 companies register their interest in Origin Green, representing 60% of Irish food and drink exports.

Origin Green formally launched to trade customers at the SIAL Global Food Marketplace in Paris, France

2013

Bord Bia hosts an inaugural Global Sustainability Conference attended by 750 delegates from around the world.

Commencement of Origin Green sustainability plan development workshops for registered companies, accompanied with the launch of the Origin Green Step-by-Step Plan Development Guide.

Bord Bia Sustainable Dairy Assurance Scheme launched.

Bord Bia in partnership with Teagasc, develop the Carbon Navigator to monitor carbon footprint at farm level on a national scale.

2014

43,500 beef farms are audited and carbon footprinted on an eighteen month cycle, accounting for 90% of Ireland's beef production.

10 Origin Green Ambassadors are recruited by Bord Bia to help share the Origin Green story globally.

128 sustainability plans have been submitted and 71 companies have had their plan independently verified by the SGS group.

The Origin Green Ambassadors complete their first round of placements with leading global organisations including the World Wildlife Fund, Starbucks, Coca-Cola and Walmart.

Over 360 food and drink manufacturers have registered their interest with Origin Green, representing 85% of Irish food & drink exports.

9,000 dairy farms, accounting for more than 50% of dairy farms in Ireland, are signed up to the Sustainable Dairy Assurance Scheme.

800 farms are being carbon footprinted each week by Bord Bia.

2015

The Carbon Trust - Carbon footprinting models being integrated into Bord Bia Quality Assurance Schemes for lamb, pigs and poultry

474 companies have signed up to Origin Green, representing almost 95% of Ireland's food and drink exports. This includes 122 verified members and a further 157 companies with draft plans submitted.

2016

Our Aim: by the end of 2016, all farmers and food & drink manufacturers in Ireland are on the road to sustainability through Origin Green.

An Taoiseach (Prime Minister of Ireland), Enda Kenny and former CEO of McDonalds, Don Thompson, reference Origin Green at the UN Global Climate Summit.

Origin Green is the theme for the Ireland pavilion at Milan Expo 2015 - the overall theme of the event is 'Feeding the Planet, Energy for Life'.

Bord Bia launches the first Origin Green Sustainability Report showcasing the results to date and commitments made by the food and drink sector in Ireland.

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Section 2

WHAT IS ORIGIN GREEN?

KEY FACTS

1st

IRELAND IS THE FIRST COUNTRY IN THE WORLD TO INTRODUCE A SUSTAINABILITY PROGRAMME FOR ITS ENTIRE FOOD AND DRINK INDUSTRY.

470

OVER 470 FOOD AND DRINK MANUFACTURERS, ACCOUNTING FOR ALMOST 95% OF IRELAND'S FOOD AND DRINK EXPORTS, HAVE REGISTERED TO TAKE PART IN ORIGIN GREEN.

90,000

NINETY THOUSAND FARMS HAVE BEEN AUDITED AND CARBON FOOTPRINTED AS PART OF ORIGIN GREEN.



WHAT IS ORIGIN GREEN?



Origin Green offers a clear and defined structure for Irish farmers and food manufacturers to demonstrate their sustainability performance and implement plans for further improvements.

The ambition of the programme is that every farm and food manufacturing business throughout Ireland makes measurable commitments to producing in a sustainable manner, with progress independently assessed and verified at every stage.



800

BORD BIA'S QUALITY ASSURANCE INFRASTRUCTURE SEES MORE THAN 100 FARM AUDITORS UNDERTAKE ALMOST 800 INDEPENDENT FARM AUDITS EACH WEEK.

Farm Level

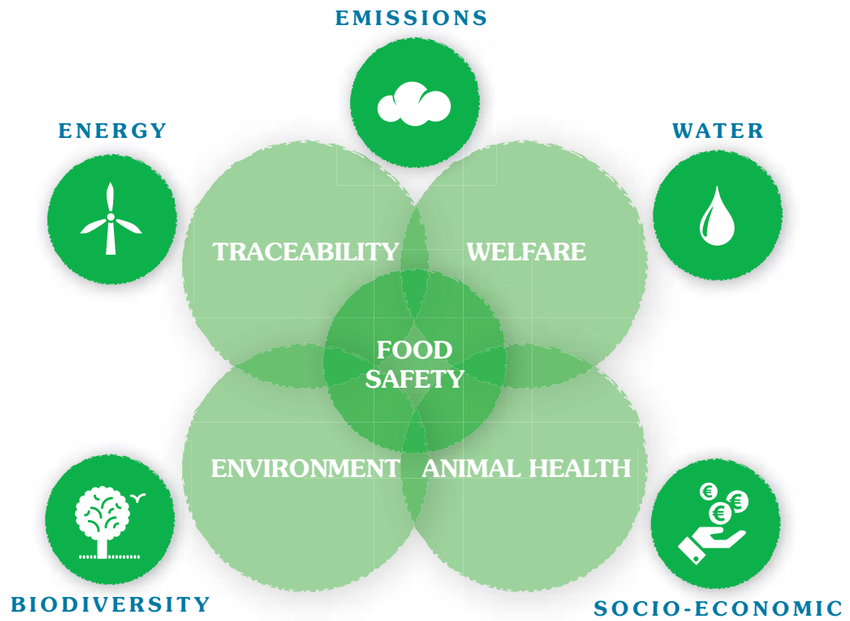
On farm assessments constitute a key component of the Origin Green programme. The roll out of sustainability assessments at farm level has been made possible by Bord Bia's pre-existing Quality Assurance infrastructure, which has been in place for over twenty years. This infrastructure sees more than 100 farm auditors undertake almost 800 independent farm audits each week. In 2014, a total of just over 38,000 farm assessments were undertaken as part of the eighteen month audit cycle.

Traditionally, these assessments have focused on traceability, animal remedies, health & welfare, and general environmental issues, with an overarching focus on food safety. All of these elements are relevant from a sustainability perspective.

Origin Green expands the scope and depth of sustainability measures tracked, in order to ensure that the programme delivers an assessment system which measures what matters. Bord Bia is adapting or has adapted its existing suite of Quality Assurance Schemes so that these criteria can be assessed for each farming enterprise.

The additional sustainability measures incorporated as part of Origin Green are outlined overleaf and include greenhouse gas emissions; biodiversity; water conservation; energy efficiency; and socio-economic factors.

Origin Green Sustainability Measures



Manufacturing Level

The focus of Origin Green at food manufacturing level is the development of a sustainability plan with clear, measurable targets in accordance with the Origin Green Sustainability Charter. Only senior management from interested companies are allowed to register their participation in the programme. As part of the registration process, each company commits to developing a multiannual plan for its business which is at least three years in duration. This plan outlines robust, measurable targets which are relevant to their business in the areas of raw material sourcing, manufacturing processes, and social sustainability, with each plan being approved following independent verification by the SGS group.

Once the sustainability plan has been approved, the company becomes a verified member of the Origin Green programme. Ongoing membership of the programme is subject to the submission of an annual progress report that is also independently verified. This allows Bord Bia to track cumulative commitments and progress made by Origin Green members. The cumulative progress made by these companies is detailed in Section 4 of this report.





Bord Bia | Irish Food Board

ORIGIN GREEN PROCESS AT MANUFACTURING LEVEL

1 **Register online**

2 **Attend planning workshops**

3 **Prepare draft sustainability plan**

4 **Bord Bia feedback and plan refinement**

5 **Formal review by SGS**

Submission of Annual Progress Report

6 **Verified membership of Origin Green**

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COLLABORATION

Bord Bia's roll out of Origin Green would not be possible without the assistance and collaboration of a host of stakeholders. The involvement of the collaborators outlined below helps greatly to ensure the successful delivery and ongoing implementation and development of the programme.



Animal Health Ireland (AHI)

Animal Health Ireland (AHI) functions as a partnership between private sector organisations and businesses in the agri-food sector and the Department of Agriculture, Food and the Marine. AHI offers the knowledge, education and coordination required to establish effective control programmes for non-regulated diseases of livestock.

Bia Food Initiative

Bia Food Initiative is an Irish charity formed in June 2012 to provide a socially responsible, environmentally sensitive, business friendly alternative to wasting good food. The focus of the Bia Food Initiative is to reduce volumes of mismanaged food and make it available to those in need.

BirdWatch Ireland

BirdWatch Ireland is a voluntary conservation organisation devoted to the conservation and protection of wild birds and their habitats. Bord Bia has teamed up with BirdWatch to assess the biodiversity present on Quality Assured farms and identify potential biodiversity actions that can be implemented as part of Origin Green.

Bord Iascaigh Mhara (BIM)

Bord Iascaigh Mhara (Irish Sea Fisheries Board) is the State agency responsible for developing the Irish seafood industry. BIM assists participating Origin Green seafood companies through its Green Seafood Business programme, which helps to deliver greater resource efficiency measures and optimise environmental performance.

Department of Agriculture, Food and the Marine (DAFM)

The Department of Agriculture, Food and the Marine is the government department for the regulation and development of Ireland's agri-food and marine sectors. This includes the execution of Ireland's national traceability system through the Animal Identification and Movements (AIM) database. With the written consent of farmers, this data is used by Bord Bia in the calculation of each farm's carbon footprint.

Enterprise Ireland

Enterprise Ireland is the government organisation responsible for the development and growth of Irish enterprises in world markets. Through its GreenStart and GreenPlus programmes, Enterprise Ireland provides grant funding and expertise to companies wishing to integrate environmental sustainability measures into their businesses.

Environmental Protection Agency (EPA)

The EPA is an independent public body established under the Environmental Protection Agency Act, 1992. Its Green Business programme offers a range of no cost supports to help businesses identify potential resource efficiency savings. It also operates the Smart Farming programme in conjunction with the IFA.

Food Safety Authority of Ireland (FSAI)

The Food Safety Authority of Ireland (FSAI) works to ensure that food produced, distributed or marketed in Ireland meets the highest standards of food safety and hygiene reasonably available. It also ensures that food complies with legal requirements, or where appropriate, with recognised codes of good practice.

Irish Cattle Breeding Federation (ICBF)

The ICBF is Ireland's cattle breeding organisation which provides a central database that allows farmers and industry partners to make the best breeding decisions for the Irish livestock sector. ICBF provides access to farm productivity information for farm assessments.

Irish Co-operative Organisation Society (ICOS)

The Irish Co-operative Organisation Society (ICOS) is the co-operative umbrella organisation that serves and promotes commercial co-operative businesses and enterprise, across multiple sections of the Irish economy.

Irish Creamery Milk Suppliers Association (ICMSA)

The ICMSA represents farmers, particularly dairy and livestock farmers to help ensure that the family farm structure is preserved, alongside the rights and incomes of farm families.

Irish Dairy Industries Association (IDIA)

The Irish Dairy Industries Association (IDIA) represents Ireland's primary and secondary dairy processors. IDIA represents its members at national, EU and international level and provides comprehensive information, advice and representation services to its members.

Irish Farmers Association (IFA)

The Irish Farmers Association is a national organisation which represents over 88,000 farm families across all sectors of farming in Ireland. The IFA operates the Smart Farming programme with the EPA, which focuses on resource efficiency at farm level.

Meat Industry Ireland (MII)

Meat Industry Ireland (MII) is the representative body for the meat processing sector in Ireland. MII represents its members by interfacing with Government Departments, State Agencies and European Institutions on policy formation and other issues.

National Biodiversity Data Centre

The National Biodiversity Data Centre is a national organisation for the collection, collation, management, analysis and dissemination of data on Ireland's biological diversity. Bord Bia is actively supporting the *All-Ireland Pollinator Plan 2015-2020* and will be working with Biodiversity Ireland to play our part in its implementation.

Repak

Repak is an industry funded organisation whose aim is to facilitate and grow packaging recycling. Repak's Prevent and Save programme is dedicated to optimising all packaging placed on the market. Repak also offers advice to companies on how to minimise packaging waste.

Smile Resource Exchange

The Smile Resource Exchange manages a network of businesses that reuse each other's surplus products, by-products and reusable items in order to save money and help the environment by diverting waste from landfill.

Sustainable Energy Authority of Ireland (SEAI)

SEAI's mission is to play a leading role in transforming Ireland into a society based on sustainable energy structures, technologies and practices. To fulfil this mission, SEAI delivers a range of programmes that help Irish industry plan and implement efficient and green energy technologies.

Teagasc

Teagasc is a public body whose mission is to support science-based innovation, knowledge transfer and education in the agri-food sector. Bord Bia has partnered with Teagasc in the development of carbon footprinting models and the Carbon Navigator tool.

University College Dublin (UCD)

University College Dublin (UCD) is Ireland's largest university with Ireland's only dedicated School of Agriculture and Food Science and works with Ireland's agricultural sector to protect our natural resources to ensure sustainability and global competitiveness. Its Michael Smurfit Business School is Ireland's leading business school, successfully pioneering Bord Bia's Origin Green Ambassador programme, while UCD's Institute of Food and Health, led by its Director Professor Dolores O' Riordan, works with Bord Bia to help integrate strategies for a healthier food chain.

INTERNATIONAL COLLABORATION



Carbon Trust

Bord Bia had been closely collaborating with The Carbon Trust well in advance of the development and launch of the Origin Green programme. Our initial engagement in 2009 involved learning the principles of product carbon footprinting. In the interim, we have developed certification models for measuring greenhouse gas emissions from beef, dairy, pigmeat, poultry, lamb and grain farming. We have also developed similar models for the beef, lamb, pigmeat and poultry meat processing stages. The Carbon Trust has shared a number of achievements with us, with many of these models being the first of their kind to achieve PAS2050 accreditation.

These milestones were important for Bord Bia in delivering on the principle of measuring scientifically and using independent certification and verification. The Carbon Trust innovated in developing the certification that was awarded for the measurement and feedback programme which operates as part of the Bord Bia Beef and Lamb Quality Assurance Scheme and the Sustainable Dairy Assurance Scheme. Similar work is ongoing for other primary agricultural sectors.

SGS

SGS is internationally recognised and respected for its work as a conformity assessor and verifier. This position has lent credibility to the Origin Green programme's requirement for independent verification. SGS has also assisted participating companies to appreciate that their plans and goals, which have been developed under the Origin Green Sustainability Charter, must achieve an appropriate level in order to be accepted. In so doing and with the backing of SGS, progress made under Origin Green can be corroborated through independent verification.

In developing this report, we have worked with SGS to configure a database and associated software that enables each Origin Green member company to record its targets and progress so that we can in aggregate demonstrate the commitments and progress being made by verified members.

Sustainable Agriculture Initiative Platform

The Sustainable Agriculture Initiative (SAI) Platform was formed in 2002 by Nestlé, Unilever and Danone. It acts as a non-profit organisation to facilitate sharing, at a precompetitive level, of knowledge and best practice to support the development and implementation of sustainable agriculture for stakeholders throughout the food value chain.

Today, the SAI Platform has over 80 members, including some of the world's largest food and drink companies. The SAI Platform develops (or co-develops) tools and guidance to support global and local sustainable sourcing and agriculture practices.

Bord Bia has been a member of the SAI Platform since 2011 and is a member of its beef and dairy working groups, being actively involved in the development of the SAI Platform principles for sustainable beef and dairy production. We are currently part of the team tasked with developing a Farm Sustainability Assessment tool for European beef production.

Dairy Sustainability Framework

The Dairy Sustainability Framework (DSF) is a programme developed by the Global Dairy Agenda for Action in collaboration with organisations such as the International Dairy Federation and SAI Platform. It is designed to provide a structure to align and connect sustainability initiatives across the global dairy sector and demonstrate the progress being made.

The DSF is focused on eleven key sustainability criteria, covering environmental, economic and social sustainability factors. The Framework will capture current initiatives and provide a structure for regional programmes to plan, execute, measure and report on the impact of new initiatives.

Bord Bia joined the DSF in 2014. During 2015 a series of global DSF pilots are being undertaken. Ireland has been chosen as one of the five pilot regions. The focus of the Irish pilot in 2015 will be to report on the development of the Sustainable Dairy Assurance Scheme, its expected impact and the identification of priority action areas within the 11 DSF criteria for 2016 onwards.

SUPPORTING COMPANIES TO BECOME PART OF ORIGIN GREEN

For food and drink companies participating in the Origin Green programme, the requirement to develop a target driven and independently verified multi-annual sustainability plan can pose a significant challenge. To assist companies through the process of plan development and implementation, Bord Bia offers an extensive network of support and mentorship.

Origin Green Plan Development Workshops

Following registration to the Origin Green programme, the first step for companies is to attend a plan development workshop. Plan development workshops take place every month on average. The proactive workshops are run over a half-day session and offer a full briefing to companies on the rationale for the development of the Origin Green programme and the steps involved in developing a sustainability plan for their company. This involves an in depth discussion on the different elements of the Origin Green Charter.

Workshops provide companies with the opportunity to pose questions throughout interactive sessions, ensuring a thorough understanding of the plan development process and the various supports available.

Bord Bia also runs Origin Green refresher workshops to help participating companies address specific challenges in the finalisation of their sustainability plan. Over an intensive half-day session, delegates are re-introduced to the plan development process and work alongside their peers to establish and pinpoint potential targets for their sustainability plans. Refresher workshops are run with a reduced number of attendees to ensure shared learning.

Origin Green Sustainability Plan Template

Bord Bia developed the *Origin Green Sustainability Plan Template* to provide a clear structure to companies developing their sustainability plans. Within the document, guidance is provided throughout each of the six sections of the template, to ensure that plans include the essential requirements necessary to fulfil the criteria for verified membership of Origin Green.



Step-by-Step Guide to Developing your Origin Green Plan

The *Step-by-Step Guide to Developing your Origin Green Plan* was created by Bord Bia to assist companies to progress their sustainability plans following the Origin Green workshop. The guidebook breaks down the development of the sustainability plan into eight key steps, providing material and examples to guide companies through the plan development process. It also offers suggestions and case studies for how plans can be integrated into the overall business strategy, as well as outlining a host of useful references and key industry contacts. The guidebook is designed to help all companies, regardless of size, to finalise their sustainability plans.



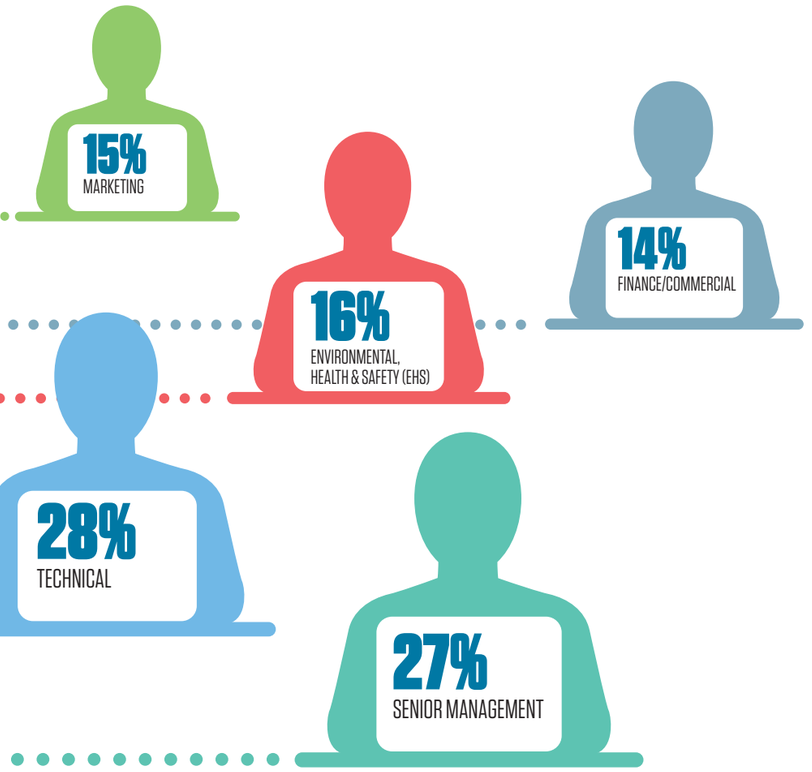


52

THE NUMBER OF WORKSHOPS SINCE THE ORIGIN GREEN PROGRAMME WAS LAUNCHED.



ORIGIN GREEN PLATFORM – MEMBERSHIP BREAKDOWN



Origin Green Platform

The Origin Green Platform was developed by Bord Bia to enable participating companies to access a dedicated and confidential online network of interactive and continuing support, regardless of what stage of progression a company may have reached. The platform is a community for Irish food and drink producers designed to assist with the development and implementation of their sustainability plans through discussions, webinars, case studies, guides and events, effectively serving as a single reference point for their Origin Green needs.

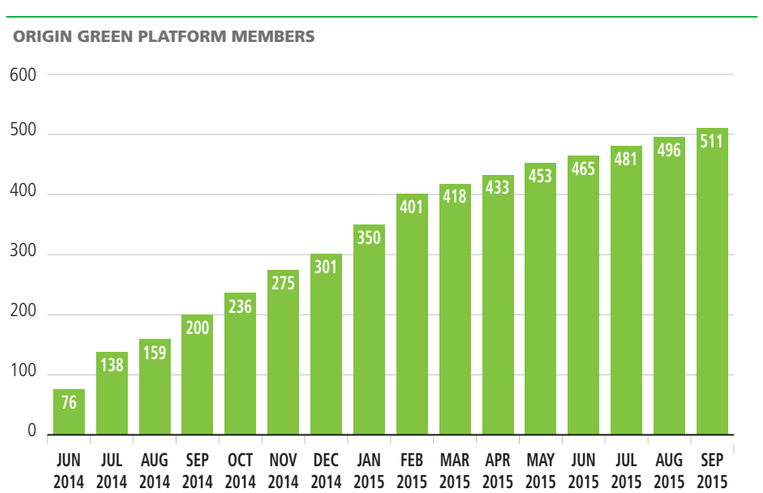
One of the most important features of the platform is that members have the ability to communicate and share best practice knowledge with one another, as well as having the opportunity to ask questions on a particular topic and gain direct access to relevant experts.

Industry experts are also present on the Origin Green Platform through a dedicated support channel. They are available to answer queries or provide support as appropriate.

The Origin Green Platform was launched in June 2014 and to date, more than 500 Individuals have signed up to the network, accessing almost 10,000 resources since its inception.

HELP AND SUPPORT

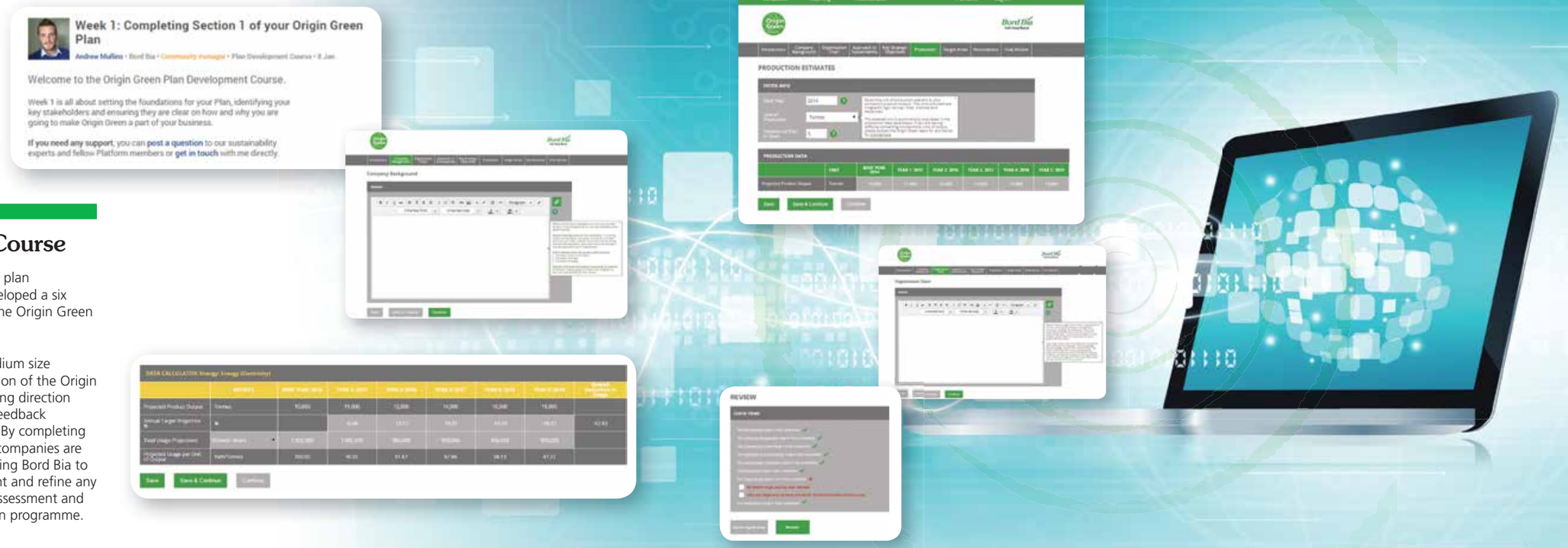
- BIA FOOD INITIATIVE
- BIM GREEN SEAFOOD BUSINESS
- ENTERPRISE IRELAND
- GREEN BUSINESS
- REPAK / PACKAGING
- SMILE RESOURCE EXCHANGE





500

THE ONLINE ORIGIN GREEN PLATFORM HAS OVER 500 MEMBERS FROM PARTICIPATING COMPANIES.



Origin Green Online Course

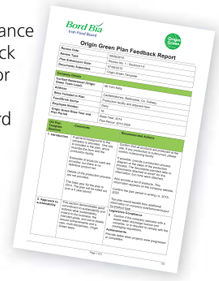
In an effort to simplify the sustainability plan development process, Bord Bia has developed a six week online course delivered through the Origin Green Platform.

Directed primarily towards small to medium size enterprises, companies complete a section of the Origin Green plan template each week following direction from Bord Bia and receive continuous feedback throughout the duration of the course. By completing the curriculum over a six week period, companies are left with a strong draft plan, thus enabling Bord Bia to work alongside the company to pinpoint and refine any remaining areas prior to independent assessment and verified membership of the Origin Green programme.

Feedback Reports

Following the submission of their draft sustainability plan, Bord Bia prepares a customised feedback report for each company, highlighting the key areas that require further refinement within their Origin Green plan. Generally, companies may complete a number of drafts prior to becoming full members of the programme. The feedback reports act as a key tool in ensuring that all plans are up to the standard required for independent verification by SGS.

Following their initial acceptance as verified members, feedback reports are also generated for companies completing their annual progress reviews. Bord Bia works with companies to ensure that plans remain robust, challenging and relevant throughout the implementation period.



1,000+

THE NUMBER OF FEEDBACK REPORTS SENT TO ALL PARTICIPATING COMPANIES.

Origin Green One-to-One Support Sessions

As part of Bord Bia's support during the plan development phase, we offer companies one-to-one support sessions at various locations across the country. This involves a face-to-face review of the feedback report and a discussion on how companies can refine the plan prior to preparing it for formal verification by SGS. In addition, Bord Bia undertakes on-site meetings with companies. These meetings usually involve all staff with a role to play in the development of the plan.

The one-to-one support sessions offered by Bord Bia have proven popular as they enable companies to openly discuss any issues they may be facing within their plans and to remedy such issues prior to independent verification by SGS.

15 hours

THE AVERAGE NUMBER OF DEDICATED SUPPORT HOURS GIVEN TO EACH COMPANY PRIOR TO BECOMING VERIFIED MEMBERS OF ORIGIN GREEN.

Origin Green Plan Database

As part of the ongoing development of Origin Green, Bord Bia has developed a secure Plan Development Database to help streamline the process for companies to submit and manage their sustainability plans.

Following a simple registration process, companies are granted access to an online version of the Origin Green Sustainability Plan Template, which is broken down into eight sections. Within each section there is an option to save or continue, which enables companies to save their work and return at a later time to complete their plan. The database also includes a live help and support tool to ensure the plan development process is as straightforward as possible. This includes an option to click a button to alert Bord Bia who will then contact the company directly to offer assistance.

One of the most important features of the database is its ability to automatically calculate data for a company. When a company enters its production output and current usage levels for a particular target, the database converts the data automatically to populate the 'usage per unit of output' fields.

Upon completion of all sections of their plan within the database, companies are taken to a final review page, where any outstanding items yet to be completed within their plan are presented, giving the user the option to amend them prior to submission for review.

All reviews and feedback are provided via this online system, making it easier for companies to identify issues to be addressed before the plan can be approved.

100

SINCE NOVEMBER 2014, OVER 100 COMPANIES HAVE UNDERTAKEN THE ORIGIN GREEN ONLINE COURSE.

Help & Support

THE DATABASE INCLUDES A LIVE HELP AND SUPPORT TOOL TO ENSURE THE PLAN DEVELOPMENT PROCESS IS AS STRAIGHTFORWARD AS POSSIBLE.

ORIGIN GREEN AMBASSADORS

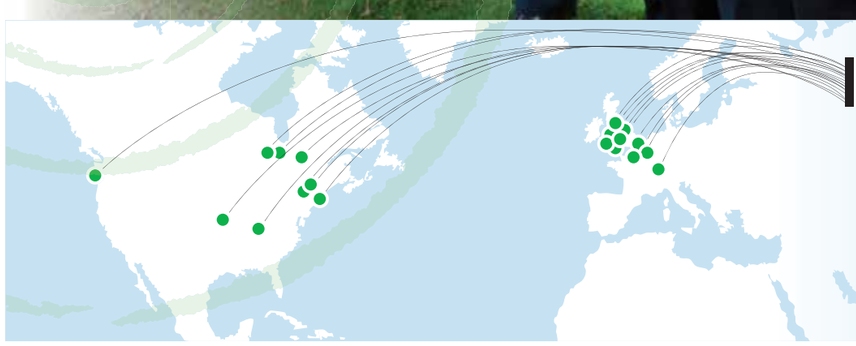


The Origin Green Ambassador programme is a bursary for ten full time students to obtain a postgraduate degree in Business Sustainability from the UCD Michael Smurfit Graduate School of Business. The programme is designed to help develop expertise and understanding of sustainability in the global food market and how it relates to the Irish food and drink industry. The programme is co-funded by eight Irish food and drink companies and Bord Bia.

The twenty-three month programme, the first round of which commenced in September 2013, comprises both academic modules and placements in companies and markets. The formal learning modules at the UCD Michael Smurfit Graduate School of Business include guest lecturers from Harvard Business School, IMD Lausanne, INSEAD and Ivey Business School.

During their 18 months of work placements, the Origin Green Ambassadors experience the development and implementation of sustainability programmes in leading commercial and related organisations. These placements allow the Ambassadors to engage with their host organisations in a dialogue about sustainability challenges facing their business, educate them about Origin Green and share learnings with the sponsoring organisations and the wider Irish food and drink sector. In many instances, senior executives from host organisations have subsequently visited Ireland to meet with the companies and producers directly involved in the Origin Green Programme. This has helped secure strong relationships with some of the world's leading food and drink companies and organisations.

As the Origin Green Ambassadors complete their qualification, it is anticipated that many will join the Irish food and drink sector to enrich the existing talent in our sector and further embed better sustainability practice. A second intake of students have been recruited and began a new programme in September 2015.



HOST ORGANISATIONS

ABBOTT NUTRITION, USA	MCDONALD'S, UK & USA	SUSTAINABLE AGRICULTURE INITIATIVE PLATFORM, BELGIUM
AHOLD, THE NETHERLANDS	METRO, GERMANY	TESCO, UK
ASDA, UK	NESTLE, SWITZERLAND	UNILEVER, UK
BUNGE, USA	PEPSICO, UK	WALMART, USA
DANONE, THE NETHERLANDS	STARBUCKS, USA	WORLD BANK, USA
THE COCA COLA COMPANY, USA	SUBWAY (EIPC), UK	WORLD WILDLIFE FUND, USA
FAIROAK FARMS, USA		

ABP is one of Europe's largest privately owned beef processors and is also involved in petfood, protein and renewables.

Dawn Farm Foods is a leading European supplier of cooked and fermented meat ingredients to the foodservice and manufacturing sectors

Dawn Meats is a family owned business supplying beef, lamb and ready to eat meat products with production facilities in Ireland, Britain and France.

Kepak produces meat, convenience and frozen food from a number of manufacturing sites in Ireland and Britain.

Kerry Group is a world leader in food ingredients and flavour technologies, serving the food, beverage and pharmaceutical industries, and also a leading consumer foods processor and supplier in selected EU markets.

Glanbia Ingredients Ireland (GII) is the largest dairy processor in Ireland. Its products, the large majority of which are exported, include milk powders, butter, cheese, whey protein, milk protein and casein.

Irish Distillers Pernod Ricard operates as a brand company responsible for Jameson and other Irish Whiskey brands as well as acting as a distribution company handling the sales and marketing of Pernod Ricard's premier brands in Ireland.

Ornua is an agri-food commercial co-operative which markets and sells dairy products on behalf of its members, Ireland's dairy processors and Irish dairy farmers.

COMMUNICATING ORIGIN GREEN

Following the launch of Origin Green, Bord Bia developed an integrated business to business (B2B) marketing and communications campaign targeting overseas trade customers in key European markets.

Through partners and industry events, Bord Bia works to build awareness and understanding of Origin Green and enhance Ireland's reputation as a producer of sustainably produced food and drink.

800,000

THE NUMBER OF PROSPECTIVE VISITORS AT ORIGIN GREEN BRANDED TRADE FAIRS EACH YEAR.





IRELAND'S FOOD AND DRINK INDUSTRY IS REPRESENTED AT OVER 25 TRADE FAIRS INTERNATIONALLY EACH YEAR. THESE EVENTS FALL UNDER THE UMBRELLA OF ORIGIN GREEN BRANDING, ATTRACTING HUNDREDS OF THOUSANDS OF PROSPECTIVE VISITORS ANNUALLY.



IN MARCH 2015, BORD BIA HOSTED THE ORIGIN GREEN BRANDED MARKETPLACE INTERNATIONAL, ONE OF THE LARGEST EVENTS EVER HELD IN THE IRISH FOOD AND DRINK INDUSTRY. THE EVENT BROUGHT TOGETHER 507 FOOD BUYERS FROM 43 COUNTRIES TO MEET WITH 184 IRISH FOOD AND DRINK COMPANIES.

5,011

THE NUMBER OF MEETINGS BETWEEN IRISH FOOD & DRINKS SUPPLIERS AND BUYERS AT MARKETPLACE INTERNATIONAL 2015.

In 2015, Origin Green was selected as the underpinning theme of the Ireland Pavilion at Expo Milan, a quadrennial global showcase where more than 140 participating countries showcase the best of technology, exchange ideas and share solutions on the theme of food, stimulating each country's creativity and promoting innovation for a sustainable future. Origin Green aligned closely with the universal theme of the event, 'Feeding the Planet, Energy for Life', highlighting the challenge the world faces in providing the growing population with safe, high quality, sustainable food. Over the course of six months, Bord Bia hosted over 50 business events from the Ireland Pavilion.



President of Ireland Michael D. Higgins launches the festivities at the designated National Day for Ireland at Expo Milan 2015.

25m

THE NUMBER OF VISITORS THAT ATTENDED EXPO MILAN 2015 THROUGHOUT THE SIX MONTH EVENT.

Through Bord Bia's network of eleven overseas offices, over 1,100 buyer presentations and meetings annually ensure that the sustainability credentials of the Irish food and drink industry are communicated to an international audience on a continual basis.







Expo Milan in Pictures – left to right: Bord Bia CEO, Aidan Cotter, welcomes An Taoiseach Enda Kenny TD, to Expo Milan 2015; Bord Bia CEO, Aidan Cotter, and Minster for Agriculture, Simon Coveney TD, welcome Bono to Expo Milan 2015; The Ireland Pavilion at Expo Milan 2015.







Origin Green IRELAND

Press coverage in leading international broadsheet and various sector trade publications, journalist visits to Ireland, speaker platforms and advocacy through international trade missions help to build the profile of Origin Green.

The bought media campaign for Origin Green focuses on online display advertising and media partnerships, B2B community management on social media and Google search campaigns.

'Influencing the influencer' through integrated communication channels forms one of the primary marketing objectives for the Origin Green programme.

One such collaboration was formed with The Guardian through its Sustainable Business Network. With Origin Green acting as a sponsor of The Food Hub, this partnership delivers a combination of written and interactive content including live Q&A's, podcasts, videos, social media and round table events to an audience of over 300,000 unique monthly users, as well as access to a global international online business community.

Origin Green also has a strong online community presence across platforms such as YouTube, Twitter and LinkedIn, which continuously support media content and drive awareness of Origin Green amongst key influencers and their networks. With Origin Green firmly a part of this global conversation on sustainability, it further heightens the awareness of Ireland's sustainability credentials internationally.



300,000

ORIGIN GREEN ACTS AS A SPONSOR OF THE GUARDIAN'S SUSTAINABLE BUSINESS FOOD HUB. THIS PARTNERSHIP DELIVERS AN AUDIENCE OF OVER 300,000 UNIQUE MONTHLY USERS, AS WELL AS ACCESS TO A GLOBAL INTERNATIONAL ONLINE BUSINESS COMMUNITY.

ORIGIN GREEN VERIFIED MEMBERS

122 VERIFIED MEMBERS AND GROWING...

Origin Green IRELAND Working with nature

Section 3

FARM ASSESSMENT

KEY FACTS

140,000

THERE ARE APPROXIMATELY 140,000 FAMILY FARM HOLDINGS IN IRELAND WITH AN AVERAGE SIZE OF 32.7 HECTARES.

40,000

A TOTAL OF 40,000 FARM ASSESSMENTS ARE EXPECTED TO BE UNDERTAKEN AS PART OF ORIGIN GREEN IN 2015.

800

BORD BIA'S QUALITY ASSURANCE INFRASTRUCTURE SEES MORE THAN 100 FARM AUDITORS UNDERTAKE 800 INDEPENDENT FARM AUDITS EACH WEEK.

FARM ASSESSMENT

As part of the development of on-farm sustainability assessments for Origin Green, Bord Bia undertook a number of pilot programmes to develop an approved methodology and calculation model for the assessment of the carbon footprint of Irish cattle, dairy, pig, poultry, lamb and grain farms. All of this work has been accredited to the PAS 2050 standard through The Carbon Trust. The work in relation to beef and dairy was undertaken in partnership with Teagasc to ensure that the methodology was relevant for Irish farming conditions.



38,000

IN 2014, MORE THAN 38,000 LIVESTOCK FARMS WERE ASSESSED AS PART OF THE 18 MONTH AUDIT CYCLE FOR BORD BIA'S QUALITY ASSURANCE SCHEMES.

45,000

OVER 45,000 BEEF FARMS, ACCOUNTING FOR OVER 90% OF IRELAND'S TOTAL BEEF OUTPUT, HAVE BEEN AUDITED AND CARBON FOOTPRINTED.

Origin Green Farm Assessments



The aforementioned pilot programmes enabled Bord Bia to identify the key drivers of the carbon footprint for the different species in question. Prior to the roll out of on-farm assessments across farms that were part of our existing Quality Assurance Schemes, Bord Bia examined the essential core data required and sought to identify any potential national sources of information that would reduce the amount of data being gathered from each farmer directly.

Two key national sources of information were identified, namely:

Department of Agriculture, Food and the Marine (DAFM)

Through the Animal Identification & Movement (AIM) database, DAFM holds a complete real-time profile for every animal in every herd for their lifetime.

Irish Cattle Breeding Federation (ICBF)

ICBF holds a significant amount of valuable technical information on Irish farms. This ranges from calving rate, calving interval, and weight for age, to mortality levels and replacement rates.

Bord Bia identified the potential for both of these sources to streamline data collection on farm. As part of the farm audit, participating farmers give their permission to allow Bord Bia to access AIM and ICBF data for their herd, thus enabling Bord Bia to calculate the carbon footprint of their enterprise.

This allows the on-farm data collection to focus on information that cannot be accessed elsewhere. This includes:

- **Grazing season length**
- **Fertiliser usage**
- **Animal housing**
- **Health & welfare**
- **Chemical/pesticide usage**
- **Animal feeds**
- **Manure management**
- **Energy usage**
- **Water conservation**
- **Biodiversity measures**
- **Farms contribution to local economy**

All of this information is directly recorded on a handheld device that synchronises with Bord Bia's central database, transferring data in real time. The handheld device also allows Bord Bia to track the GPS location of each farm.

FARM INFORMATION COLLECTED

Collected on farm

During the farm assessment, information is collected on handheld devices which are linked to a centralised database in real time. The assessment focuses on areas that have the greatest impact on the carbon footprint of the farm, including grazing season length, manure management, animal diets, and fertiliser use.

Animal Identification Movement (AIM)

With the consent of participating farmers, Bord Bia accesses the Animal Identification and Movement (AIM) database, which is managed by the Department of Agriculture, Food and the Marine. This online real time database provides a full profile of every animal in every herd. It shows full details of births, deaths, sales, and purchases and accurately records the length of time each animal has spent on the farm.

Irish Cattle Breeding Federation

The Irish Cattle Breeding Federation (ICBF) supplies detailed production related data for each farm. This information ranges from calving dates and intervals to replacement rates and daily liveweight gain.



A core element of the Origin Green programme is the feedback and advice which is provided to each individual farm.

Following the on-farm assessment, each participating farmer receives an individual feedback report that outlines their current performance relative to their peers. It also outlines how they rank in terms of the practices that influence the carbon footprint.

The feedback report also outlines the potential environmental and economic benefits from improving performance in any areas that offer scope for further development.

The main focus of the message to participating farmers is that sustainable and efficient production work hand in hand.

ORIGIN GREEN FARM ASSESSMENT



Farm info collected on auditor handheld device

Bord Bia Database

Herd profile from DAFM AIM Database

Production information from ICBF system

Feedback report sent to each farmer

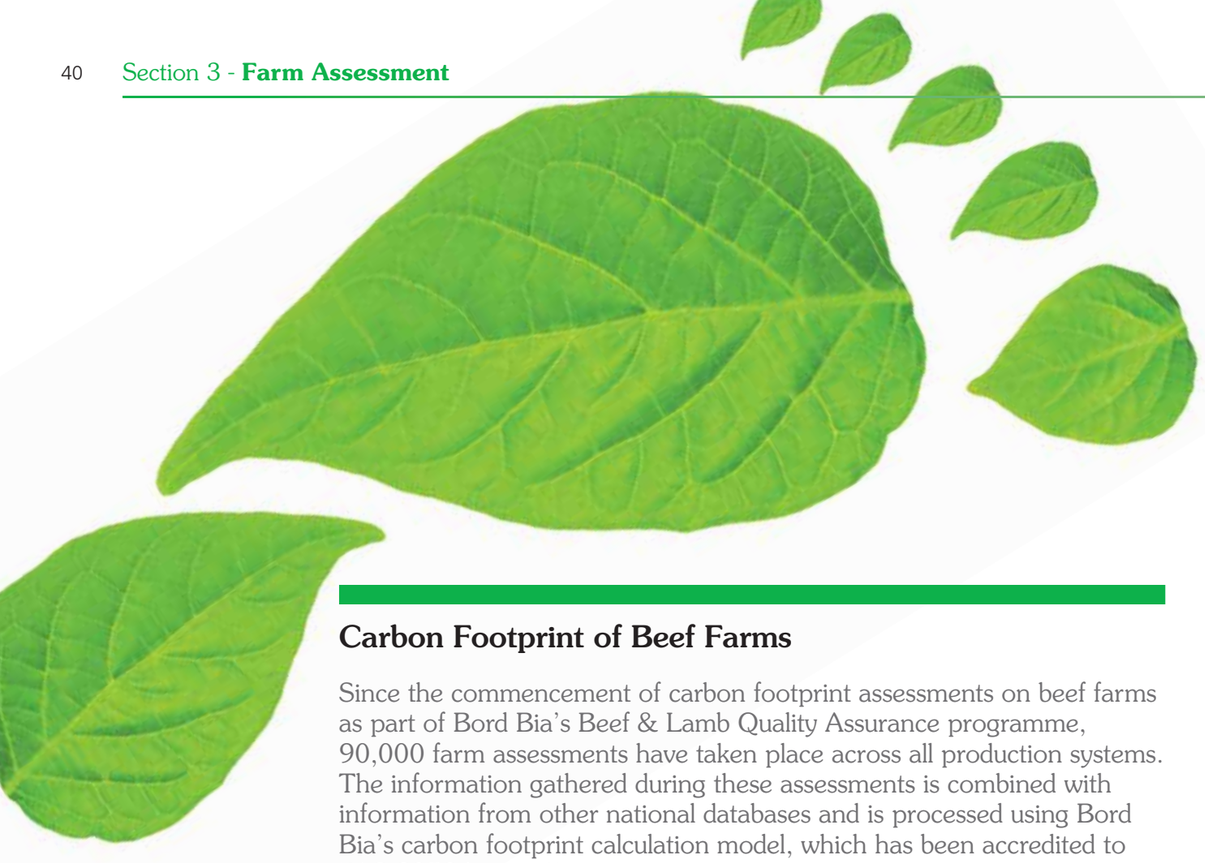


ROLL OUT OF FARM ASSESSMENTS BY SECTOR

Beef	Commenced May 2011
Dairy	Commenced in January 2014
Grain	Pilot programmes started in 2014

Poultry	Revised Scheme in 2016
Lamb	Sustainable Beef & Lamb Assurance Scheme (SBLAS) due to launch in 2016
Horticulture	Industry pilot in 2015
Pigs	Criteria in development, launch 2016

Origin Green Sustainability Report 2015



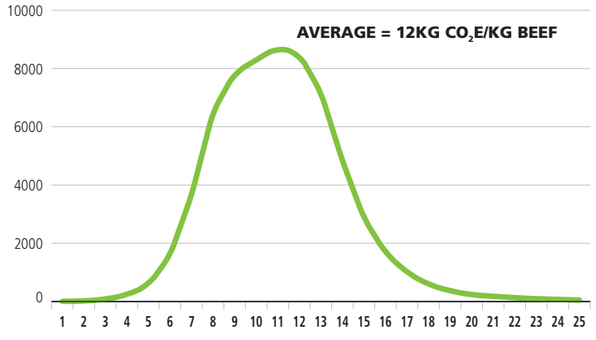
Carbon Footprint of Beef Farms

Since the commencement of carbon footprint assessments on beef farms as part of Bord Bia's Beef & Lamb Quality Assurance programme, 90,000 farm assessments have taken place across all production systems. The information gathered during these assessments is combined with information from other national databases and is processed using Bord Bia's carbon footprint calculation model, which has been accredited to PAS 2050 by the Carbon Trust.

The average carbon footprint across participating farms stands at 12 kilograms of carbon dioxide equivalent (CO_2e) per kilogram (kg) of beef liveweight. This is broadly comparable to the results of the EU Commission's Joint Research Centre report in 2011, which examined the carbon footprint of livestock systems across Member States. This showed that Ireland had the fifth lowest carbon footprint for beef across the European Union. This is despite the fact that Ireland has a dedicated beef cow herd whereas most of the beef produced in other Member States is a by-product of the dairy sector.

The results of the assessments to date show a considerable level of variation across farms. Allowing for outliers, the range of carbon footprint results varies from 5kg to 25kg CO_2e/kg beef produced.

DISTRIBUTION OF BEEF CARBON FOOTPRINT RESULTS (KG CO_2E/KG BEEF LIVE WEIGHT)



Some of this variation is explained by the different production systems evident on Irish farms.

The results to date highlight the fact that a considerable proportion of farms already have practices in place that perform very strongly when it comes to greenhouse gas emissions. The challenge is for farms that are currently weaker than average to adopt the practices of the best performing farms. Achieving this goal could help to significantly reduce the emissions intensity of beef production in Ireland.

To illustrate this, if those farms participating in the Beef and Lamb Quality Assurance Scheme (BLQAS) that are currently behind the average for their production system moved to the average footprint figure, it could potentially reduce emissions by 500,000 tonnes CO_2 equivalent annually. This would reduce Ireland's greenhouse gas emissions from agriculture by almost 3% based on the figures published in the EPA's National Inventory Report 2014.

It is clear that achieving this level of improvement presents a very significant challenge and is something that could only be addressed over a considerable period of time. However, it is worth noting that every 5% improvement in BLQAS farms behind the average would help reduce greenhouse gas emissions by almost 175,000 tonnes CO_2 equivalent.

For all BLQAS farms, every 5% improvement results in a drop of almost 350,000 tonnes CO_2 equivalent.

550,000

EVERY 5% FOOTPRINT REDUCTION ON BEEF AND DAIRY FARMS THAT ARE PART OF ORIGIN GREEN WOULD POTENTIALLY REDUCE EMISSIONS BY OVER 550,000 TONNES CO_2 EQUIVALENT ANNUALLY.

1m tonnes

BRINGING BEEF AND DAIRY FARMS CURRENTLY RUNNING BEHIND UP TO THE AVERAGE WOULD POTENTIALLY REDUCE EMISSIONS BY ALMOST 1M TONNES CO_2 EQUIVALENT ANNUALLY. THIS EQUATES TO 6% OF TOTAL EMISSIONS FROM AGRICULTURE.

Carbon Footprint of Dairy Farms

Origin Green involves a similar programme of assessment for the dairy sector, which is being rolled out through the Sustainable Dairy Assurance Scheme (SDAS). The Scheme, which was launched in December 2013, has to date seen almost 13,000 of Ireland's 18,000 dairy farms apply to take part. By the end of October 2015, 8,600 farms were certified members of the scheme. These certified farms account for almost 50% of Ireland's dairy farms.

Farms taking part in the SDAS undergo a carbon footprint assessment. The results of these assessments to date show the average carbon footprint result stands at 1.18kg CO_2e/ kg of fat & protein corrected milk*. As with beef, quite a wide level of variation exists across farms. When outliers are removed, the general range tends to run from 0.8kg – 1.6kg CO_2e/ kg fat & protein corrected milk.

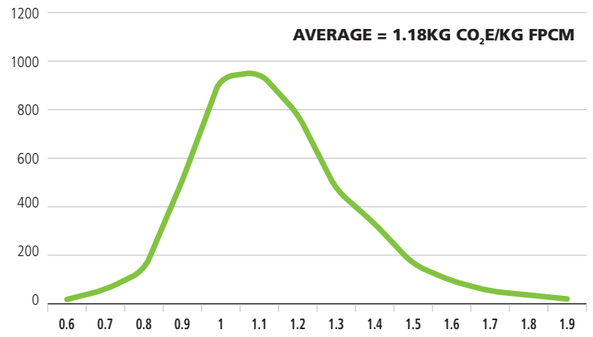
As with beef, there is significant potential to adopt practices already in place across a high proportion of dairy farms more widely. This could play a significant role in contributing to the reduction of emissions in Irish milk production.

If SDAS member farms currently behind the average progressed to the average footprint figure, it could potentially reduce emissions by 240,000 tonnes CO_2 equivalent. Extrapolating these figures to include the remaining dairy farms that are expected to become a part of the SDAS over the next 12 months, it would result in a potential reduction of 460,000 tonnes CO_2 equivalent.

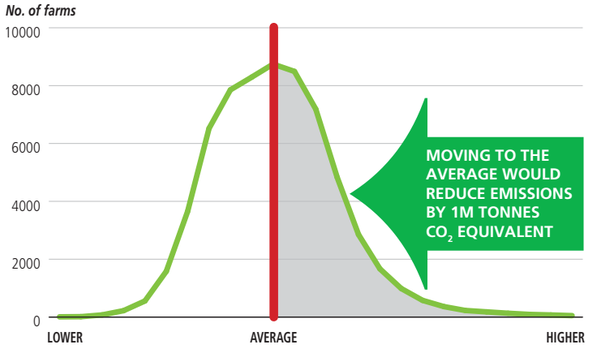
Every 5% improvement in SDAS farms behind the average would reduce greenhouse gas emissions by 95,000 tonnes CO_2 equivalent. For all SDAS farms, every 5% improvement results in a drop of almost 210,000 tonnes CO_2 equivalent.

**Fat & Protein Corrected Milk: This is the functional unit used for carbon footprinting purposes. It adjusts litres of milk to allow for the level of milk solids produced.*

DISTRIBUTION OF MILK CARBON FOOTPRINT RESULTS (KG CO_2E/KG FPCM)



RANGE OF CARBON FOOTPRINT RESULTS ACROSS BEEF AND DAIRY FARMS





Feedback & Advice

A key focus of the roll out of Origin Green at farm level is providing participating farmers with feedback and advice that can help reduce their carbon footprint while also boosting the farms financial performance as typically there is a close correlation between the two.

This led to the launch of The Carbon Navigator, a software tool developed by Teagasc and Bord Bia, to help beef and dairy farmers engage with measures that can drive farm profitability while at the same time enhancing environmental performance.

The Carbon Navigator tool looks at practical day to day management practices that are relevant to farmers as they run their enterprise and helps identify the potential impact both financially and environmentally from further improving performance. Examples of areas covered by the Navigator tool include;

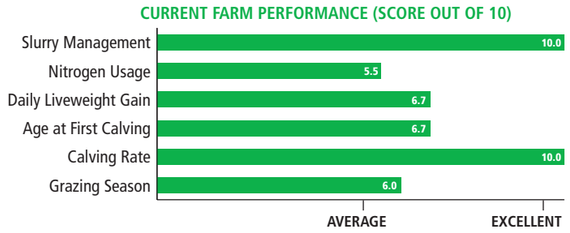
- **The length of the grazing season**
- **Age at first calving**
- **Calving rate**
- **Daily live weight gain**
- **Fertiliser usage**
- **Slurry management**
- **EBI**
- **Energy efficiency**

Research data from Teagasc clearly shows the close correlation between environmental and economic performance for the measures that are included in the Beef and Dairy Carbon Navigators. Examples of the potential benefits for some of the key measures include:

Measure	Potential Impact
10 day increase in length of the grazing season	Cut emissions by 1.7% and boost performance by up to €27 per cow.
A reduction in N fertiliser of 10kg per hectare	Reduce farm emissions by 1% and improve income by €10/ha.
20% shift to spring slurry application	Reduce farm emissions by 1.3% and reduce fertiliser costs.
Improving the calving rate by 5%	Reduce emissions by 5% and boost income by over €40 per cow.
Increase lifetime average daily weight gain by 100g	Reduce emissions by 1% and boost income by around €63 per head.

Source: Teagasc

HOW THE CARBON NAVIGATOR WORKS

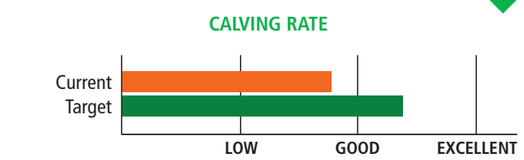


THE FEEDBACK REPORT RECEIVED BY EACH FARMER OUTLINES THEIR CURRENT PERFORMANCE IN EACH OF THE MANAGEMENT AREAS COVERED BY THE CARBON NAVIGATOR TOOL.

Improving your current farm performance in the areas shown above, to a minimum target of 7 (or if you are already achieving this, a half point improvement in each area), could help boost your farm's financial performance by €5,231 and decrease the greenhouse gas emissions from your beef enterprise by 4%.



EACH FARMER WORKS WITH THEIR ADVISOR TO IDENTIFY AREAS OFFERING SCOPE FOR FURTHER IMPROVEMENT. THEY INPUT 3/5 YEAR TARGETS INTO THE CARBON NAVIGATOR.



THE TOOL RANKS THEIR CURRENT PERFORMANCE OUT OF 10 AND HOW THIS COULD POTENTIALLY IMPROVE IF THEY REACH THEIR TARGET.

GHG change	€ benefit
-1.5%	+€576

MOST IMPORTANTLY IT PROVIDES AN INDICATION OF THE POTENTIAL GHG AND FINANCIAL IMPACT OF ACHIEVING THE TARGET UNDER EACH MANAGEMENT AREA.

Rollout of the Carbon Navigator

The Carbon Navigator is now part of the Beef Data Genomics Programme and Knowledge Transfer activities under the new Rural Development Programme for 2015 to 2020. This will see around 50,000 livestock farmers using the tool in conjunction with their advisor over the period.

The farmer case studies that follow all demonstrate how focusing on practical areas around the farm can help boost performance.



Farm Case Studies



William Morrow, Co. Donegal





Bord Bia Sustainable Beef Producer Winner, 2014: Dairy Calf to Beef

William Morrow runs a dairy calf to beef enterprise on 60 hectares in Raphoe, Co. Donegal, purchasing approximately 300 dairy-bred calves from February to April and bringing them to slaughter off grass at 16 to 20 months of age.

Joining the Angus Producer Group Scheme three years ago, William purchases predominantly Angus bull and heifer calves, although for the last two years Hereford calves have also been purchased. The calves are purchased over a six-week period from mid-February through to April.

Excellent stock management and health controls have led to little or no mortality on the farm. No meal is generally fed once calves go to grass, with grassland management a major strength on the farm.

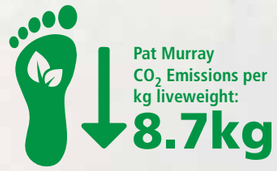
Paddocks are divided evenly and grazed in rotation. Maintaining P and K level soils at Index 3 and 4 is also vital to growing high quality grass. Calves are housed from mid-October to November on silage and 1.5kg meals.

Year and a half steers and heifers are supplemented at grass from August and slaughtered from September to November. Steers average 255kg carcase weight and heifers 230kg at 18-19 months of age.

A focus on stock management, health controls and strong grassland management ensure that the carbon footprint on the farm is a third lower than the average for this production system.



Pat Murray, Co. Wexford





Bord Bia Sustainable Beef Producer Winner, 2014: Weanling/Store to Beef

Pat Murray runs an 89 hectare mixed beef and tillage farm in Pallas, Gorey, Co. Wexford. The tillage enterprise totals 49 hectares, with barley, maize silage and fodder beet the main crops grown.

Pat buys in 200 cattle per year, which are well-bred continental weanlings or yearlings. Cattle finished are top quality, with over 60% on average grading U, 30% R and the remainder grading E. Average carcase weight for steers is 420kg at 25 months, with heifers 370kg at 22 months. Pat prefers high-quality cattle due to their potential for a high kill-out and performance on a high-energy grass or finishing diet.

Pat prefers to buy direct from the same suckler farms each year. A local farmer supplies the majority of stock from his spring- and autumn-calving herds. Animals settle quickly, with little setback in performance while autumn and spring calving suits finishing out of the shed or off grass. Furthermore, the background breeding, health status and previous veterinary treatments are known.

Some cattle are finished with supplementation at grass in June/July, and the rest indoors over the winter.

Pat was previously in dairying and has a keen focus on grassland, soil nutrients and making use of slurry. Performance at grass is aided by rotational grazing. Soil fertility is monitored closely and a reseeding programme, incorporating high clover content, is in place. Good use is made of slurry with paddocks low in P and K in particular targeted with slurry. Slurry is applied to a percentage of paddocks late in the year to help develop a good cover of grass for the following spring.

The level of animal performance combined with excellent utilisation of grass and stock management ensure an efficient production system. This is reflected in the fact that the carbon footprint of the beef enterprise is almost 30% lower than the average for this production system.



Tim Joyce, Co. Galway





Bord Bia Sustainable Beef Producer Winner, 2014: Suckler to Weanling/Store

Tim Joyce and his father Jackie, run a 48 suckler herd on approximately 39 hectares of land. The aim is to expand this to 60 cows. A breeding focus on calf quality and an ability to produce milk are key on this farm. The selection criteria for the replacement stock is based upon purchasing calvers with a calf already at foot, as this allows Tim to already have a good idea of the quality of the calf and the milk yield from the calver. Breeding is 100% AI.

The health of all animals on the farm is a priority for Tim, so as each new animal is brought into the farm, it is quarantined for over 6 weeks and screened for disease. The herd also regularly receives various vaccinations and checks to maintain their health.

The aim is that heifers calve down at 2 years. Calving difficulties are avoided by correct sire selection, having animals in fit condition and by only feeding hay in the last four weeks of gestation. Calves suckle twice daily while housed at 6pm and 6am. They are then either given access to grazing or the creep areas.

The farm has an average weaning rate of 0.96 calves per cow.

Regular weighing of calves is a key tool used to monitor performance. Weanling bulls average 440kg with heifers coming in at 420kg at 8-9 months with a focus on producing U+/E grade weanlings for the Italian market.

As expected given the focus on delivering high weaning rates, consistently good growth levels and high health status, the carbon footprint on the farm is 30% lower than the average for the production system.



Jonathan Greene, Co. Kildare





Bord Bia Sustainable Beef Producer Winner, 2014: Suckler to Beef

Jonathan Greene's suckler to beef (53ha) enterprise is run alongside a tillage enterprise operated in partnership with his father Nassau.

Straw is used to bed cows and progeny in the 90-cow spring-calving suckler herd and as such helps maintain organic matter, soil fertility and crop yields in tillage ground while home-grown cereals are used to finish male progeny as bulls and supplement the suckler herd.

The herd has achieved a calving interval of less than 365 days and 0.99 calves, or more, produced per cow in the last three years. A key contributing factor to good breeding performance is zero tolerance for under-performing animals.

Breeding in recent years is with Salers and Charolais stock bulls. Male progeny are slaughtered as bulls, while all female progeny are bred as the farm partakes in Dawn Meat's once-calved heifer scheme. Replacement heifers are bred to calve at 24 months of age.

Male progeny from mature cows are weaned in September with a focus on getting calves transferred onto a high plane of nutrition to avoid a store period and achieve an adequate fat cover (2+ or greater) for finishing under 16 months of age. The finishing diet includes home-grown feeds as much as possible.

Future plans in the herd include a breeding strategy that focuses on easy calving to help reduce labour requirements around calving time. Other plans to combine the tillage and suckler enterprises to greater effect include sowing catch crops that will prevent nitrogen leaching, but also extend the grazing season for heifer weanlings or in-calf heifers.

This strong performance is reflected in the carbon footprint for the enterprise, which is 25% lower than the average for this production system.

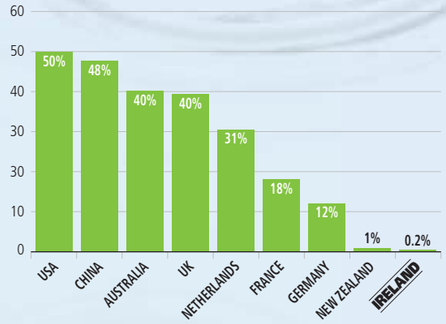


Water Conservation on Farms

According to figures from the United Nations, half of the world's population could be living under water stress by 2030. Agriculture uses 70% of the world's fresh water supplies through irrigation to grow and mature crops. Water availability continues to be a major challenge facing the global food chain.

Ireland is fortunate in that our mild temperate climate - with an average annual rainfall of over 1000mm, provides abundant water for our rain-fed agriculture. Figures from Yale University and Growing Blue, which calculate the water stress of countries across the world, show that Ireland has amongst the lowest levels of water stress in the world at just 0.02, effectively signifying zero water stress.

PERCENTAGE OF TERRITORY UNDER WATER STRESS (BY COUNTRY)



Source: Growingblue.com

As part of the development of Origin Green, Bord Bia commissioned Cranfield University to assess the water footprint associated with Irish beef and milk production in 2011/12. This report examined the footprint associated with different beef and dairy systems across various locations in Ireland using the Cranfield Life Cycle Assessment systems model, which included direct water consumption, as well as virtual water in the diet.

The results from this examination were partitioned into water that is abstracted from rivers and groundwater or mains supplies, known as "blue" water, and rainwater used by growing plants at the place where the rain falls, which is known as "green" water. Green water is deemed to have little, if any, environmental impact.

The study found that Ireland's water use per unit of output was reduced because of relatively high grass yields, which reduce the level of concentrate feeds used in Ireland.

Some of the main findings of this work were as follows:

BEEF

- Water consumption averaged 8,700 litres per kg cwe. This is significantly below the international quoted figure of 16,000 litres.
- "Green" water accounted for 99.5% of total water consumption

DAIRY

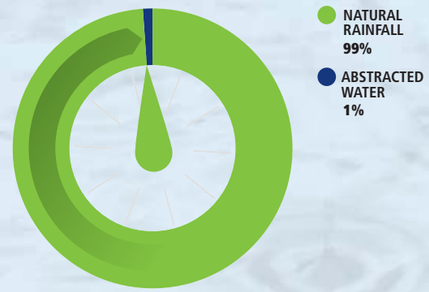
- Water consumption averaged 600 litres per kg of fat & protein corrected milk.
- "Green" water accounts for almost 99% of the total water consumption.

In summary the research shows that the absolute level of water use in beef and dairy production in Ireland is low (up to 20% lower than other European countries) and utilises rainfall that would occur regardless of whether animals were grazing the fields or not. Irish agriculture has a unique advantage in relation to water when it comes to livestock production.

The study also considered the potential impact of water consumption for beef and dairy production on water stress levels. Given the absence of water stress in Ireland, the report demonstrates that Ireland's 'normalised water footprint' (takes water stress levels into account) was extremely low by international standards.



WATER CONSUMPTION OF IRISH BEEF & DAIRY SYSTEMS



The results of the Cranfield research clearly highlighted that almost all of the water used in beef and milk production in Ireland comes from natural rainfall. While water is in abundant supply, it doesn't provide a licence to waste what is a highly valuable resource. In addition, the abstraction of water from the ground costs farmers money. Through Origin Green, Bord Bia has focused on encouraging water conservation on farms. The sustainability assessment undertaken on participating farms focuses on the following areas:

- **Source of water used on farm**
- **Monitoring of water use**
- **Steps taken to minimise water use**
- **Level of rainwater harvesting & water recovery**
- **Focus on steps to minimise leakages**

The main purpose of this data collection is to build awareness of the importance of water conservation on farms. It also enables Bord Bia to focus on areas that require additional information, thus further facilitating farmers in their adoption of water conservation measures.

This focus is further supplemented by programmes such as Smart Farming, which is a farm resource efficiency programme co-ordinated by the Irish Farmers Association & the Environmental Protection Agency. This programme highlights the business case for water conservation through better leak detection, installation of water meters to monitor usage and the recycling of water.

The impact of farming on water quality is also a very important issue. Figures published by the Environmental Protection Agency to monitor water quality under the Water Framework Directive, suggests that water quality in Ireland compares relatively well with that of other European countries. However, meeting the targets outlined within the Water Framework Directive remains a challenge.

The Water Quality in Ireland Report 2010 – 2012 from the EPA indicates that the quality of surface waters has shown some improvement. The main findings of the report can be summarised as follows:

- **99% of groundwater was at high or good status.**
- **93% of coastal water area assessed was at high or good ecological status.**
- **53% of monitored water bodies were at satisfactory ecological status.**
- **45% of transitional waters were at high or good status.**
- **43% of lakes examined were at high or good status.**

In addition to the National Water Framework Directive, programmes such as the Agricultural Catchments Programme from Teagasc are focused on evaluating policies on nutrient management and water quality at the catchment scale. Funded by the Department of Agriculture, Food and the Marine, the programme works with 300 farmers across six catchments to evaluate the environmental and economic effects of measures implemented under the Nitrates Directive.

As part of farm assessments under Origin Green, farms are monitored under the following areas:

- **Protection of watercourses**
- **Nutrient management plans**
- **Management of timing and rate of application of fertilisers and chemicals**
- **Maintenance of water sources**



Biodiversity on Farms

While significant progress has been made nationally in the designation of protected areas, many challenges remain in relation to biodiversity. This is particularly the case in relation to important habitats. A BirdWatch assessment of the status of Ireland's countryside bird species indicates that of the 199 species assessed, 25 were placed on the red list with some species still undergoing significant declines. However, more common breeding birds are reported to have fared well over the last decade. Bee species, the population of which is used as an indicator for the broader pollinator population, remain under considerable pressure.

In 2011, the European Union adopted its 2020 Biodiversity Strategy (EC, 2011) following recognition that the EU had missed its 2010 target of halting biodiversity loss. The National Biodiversity Plan 2011-2016 is the main tool by which Ireland seeks to meet its commitments under the EU Biodiversity Strategy.

Agri-Environmental Schemes such as the Rural Environment Protection Scheme (REPS), Agri-Environment Options Scheme (AEOS) and most recently the Green Low-Carbon Agri-Environment Scheme (GLAS), together with Natura 2000, are designed to help maintain and enhance biodiversity throughout Ireland.

The National Biodiversity Data Centre continues to drive a range of projects to help boost Ireland's biodiversity status.

The publication of the *All-Ireland Pollinator Plan 2015-2020* outlines the challenges that need to be overcome in order to reverse the decline in the pollinator population. The Plan outlines a series of practical actions that could make a real difference over time.



Bord Bia will work with the National Biodiversity Data Centre and other relevant organisations to support the implementation of this plan through Origin Green both at farm and food company level. The initial focus will be on building awareness of the steps that can be taken to help ensure that pollinators can survive and thrive.

Bord Bia recognises the importance of driving the awareness of biodiversity across the agriculture and food sectors and has included a number of biodiversity criteria as part of the on-farm sustainability assessments under Origin Green.

The range of areas covered in this assessment includes the following:

- **Participation in Environmental Schemes**
- **Measures in place to maintain & improve existing habitats**
- **Hedgerow management**
- **Tree planting**
- **Special areas of conservation**
- **Wildlife habitat area**
- **Changes in habitats between assessments**
- **Soil health & soil erosion**
- **Protection of field margins**

The assessments undertaken to date have helped us identify the practices in place across farms that are part of the Origin Green programme. This is allowing us to identify areas for further assessment with a view to providing practical guidance to participating farms as to how they can further improve the biodiversity performance of their farm. Bord Bia will work with relevant organisations to help identify how we can best play our role in emphasising the importance of biodiversity on Irish farms.

Over recent months Bord Bia has been working with Teagasc to outline a pilot project to develop and test a sustainability tool for remote assessment of wildlife habitats on farms that are part of the Origin Green programme. Starting in early 2016, this project will involve the assessment of 200 farms. The project will involve an ecologist undertaking an initial assessment of potential wildlife habitats on farms using digitised farm maps. Photos will be taken of these areas to confirm the type and quality of habitat present. Each farm will receive an individual feedback report to provide guidance and recommendations on how they can maintain and improve the quality of habitats on their farm. It is intended to complete this pilot in 2016 and apply the learnings to an increased number of farms from 2017.

Biodiversity Assessment of livestock farms

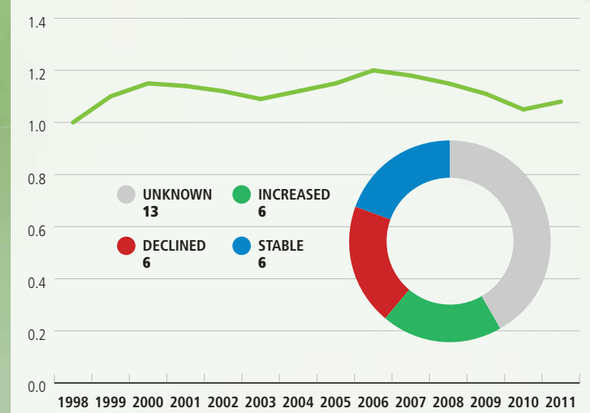
With farmland bird populations in Ireland and across Europe in decline, Bord Bia teamed up with BirdWatch Ireland to undertake an assessment of the wildlife habitats and flora and fauna present on Quality Assured livestock farms across the country. This involved the assessment of 30 farms with beef, dairy and sheep enterprises present in different regions of the country.

The findings of this research are feeding into the future direction of the on-farm biodiversity measures captured as part of the Origin Green programme. The objective is to enhance the range and depth of biodiversity actions being captured across Irish farms over the next 3 – 5 years.

Some of the areas being examined include:

- **Farm biodiversity maps**
- **Bird nesting sites**
- **Hedgerow habitat management**

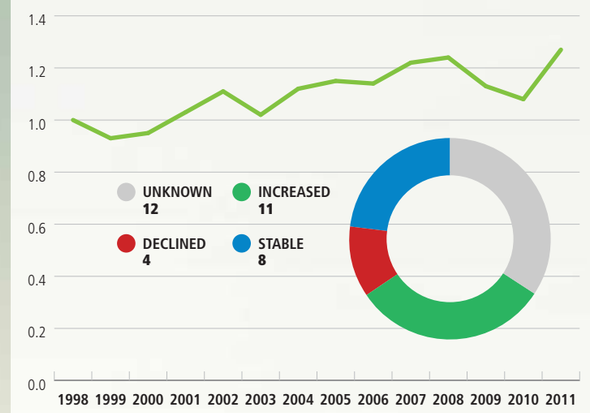
FARMLAND BIRD INDEX, IRELAND



Source: The Heritage Council - Developing Birds as indicators in Ireland, 2012

Farmland Bird index for Ireland between 1998 and 2010 based on 18 species, indicating the number of constituent species that have increased (green), declined (red), remained stable (blue) and those whose status remains unknown (grey).

WOODLAND BIRD INDEX, IRELAND



Source: The Heritage Council - Developing Birds as indicators in Ireland, 2012

Woodland Bird index for Ireland between 1998 and 2011 based on 23 species, indicating the number of constituent species that have increased (green), declined (red), remained stable (blue) and those whose status remains unknown (grey).

Origin Green IRELAND Working with nature

Section 4

COMPANY TARGETS

KEY FACTS

€12m

THE REDUCTION IN ENERGY USAGE PROJECTED BY THE END OF 2017 HAS THE POTENTIAL TO DELIVER COST SAVINGS OF €12M FOR VERIFIED MEMBERS.

14,000 tonnes

GENERAL WASTE IS SET TO BE 14,000 TONNES OR 15% LOWER BY 2017 AMONG VERIFIED MEMBERS WITH WASTE TARGETS.

€17m

REDUCTIONS IN WATER USAGE AMONGST VERIFIED MEMBERS WILL AMOUNT TO SAVINGS OF €17 MILLION BY 2017.

COMPANY TARGETS

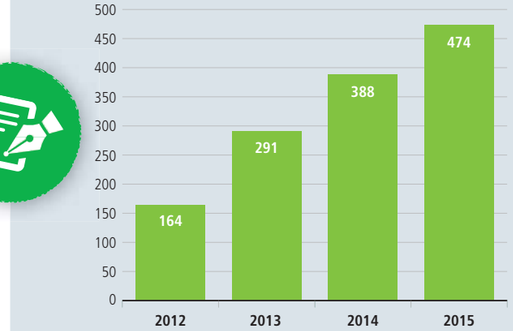
At manufacturing level, the commitment of participating companies to develop clear, measurable and time bound targets as part of an overall sustainability strategy for their business forms an essential component of the Origin Green programme.

Once a potential member company or producer has signed up to the Origin Green Charter, clear objectives are agreed across three key target areas; Raw Material Sourcing, Manufacturing Processes and Social Sustainability.

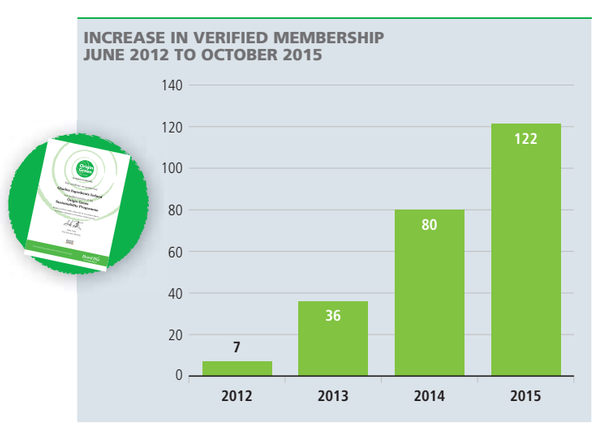
Within the *Origin Green Sustainability Charter*, Bord Bia allows companies a degree of flexibility to decide upon the target areas which are most relevant to their business. The rationale for this is that sustainability should remain a core element within the overall business strategy of companies participating in Origin Green, if ongoing progress is to be made. Furthermore, a one size fits all approach would be counterproductive as it would fail to recognise the range and varying scale of companies across the Irish food and drink industry. Therefore, companies have the ability to form and shape a sustainability plan that is relevant for their business.

The *Origin Green Sustainability Charter* sets a minimum number of targets that must be included in each plan. Furthermore, one target must be designated as a stretch target, which requires a substantial effort over a period of time in order to be achieved. Each stretch target will be different, but all should demonstrate a strong commitment to making substantial progress within a chosen target area. Stretch targets require senior level commitment, as it will take resources, effort and determination to ensure successful results.

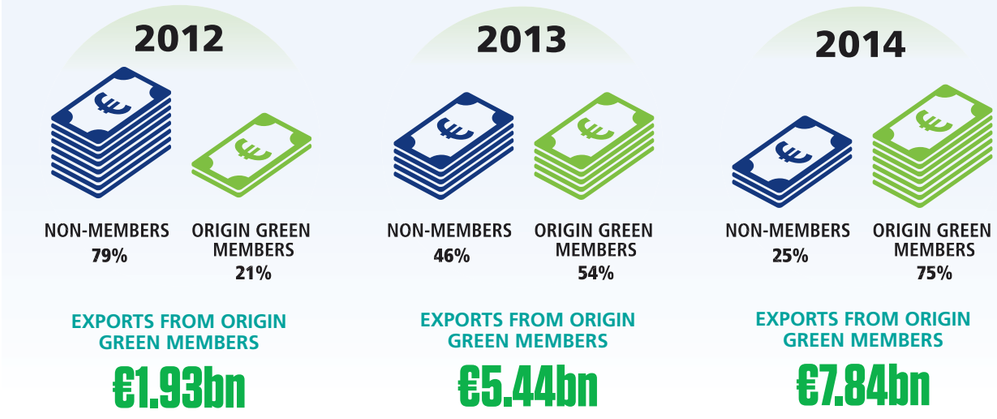
TREND IN COMPANIES SIGNING UP TO ORIGIN GREEN JUNE 2012 TO OCTOBER 2015



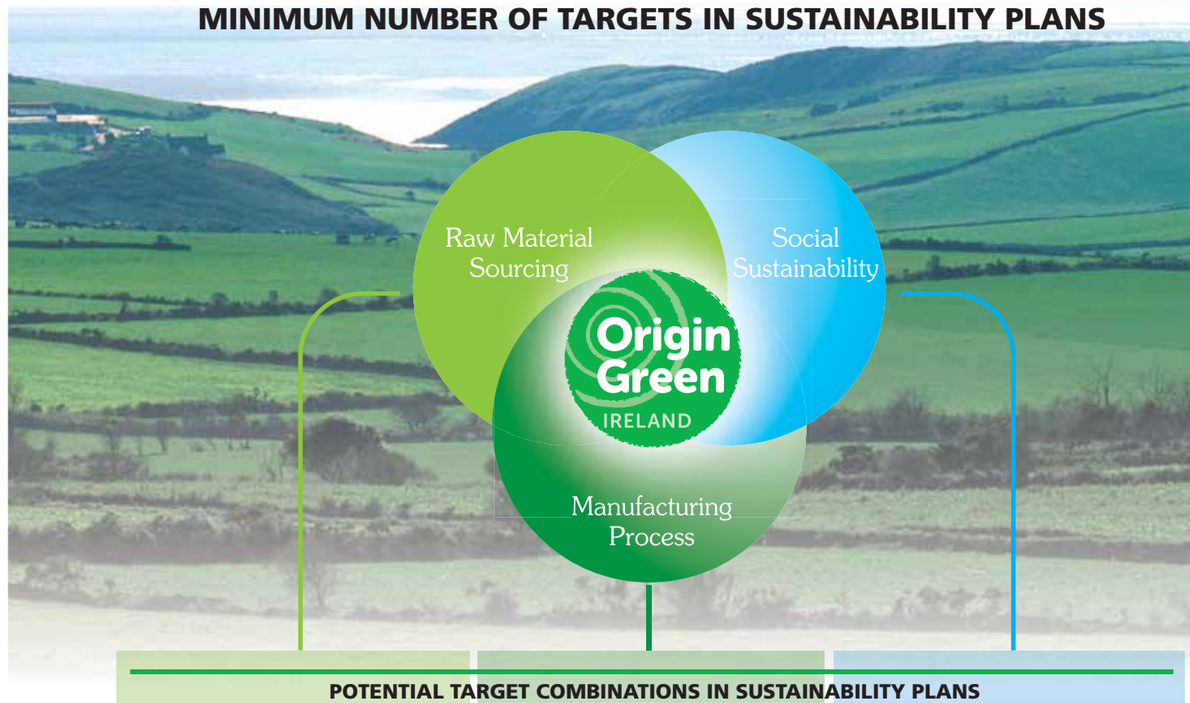
INCREASE IN VERIFIED MEMBERSHIP JUNE 2012 TO OCTOBER 2015



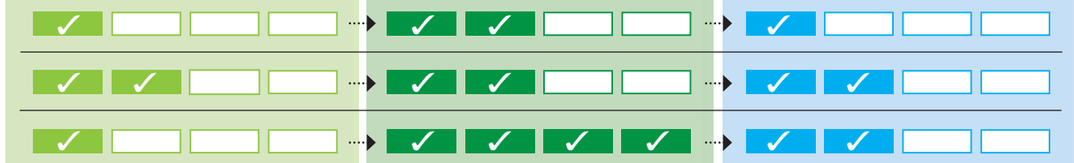
PERCENTAGE OF EXPORTS FROM ORIGIN GREEN VERIFIED MEMBERS



MINIMUM NUMBER OF TARGETS IN SUSTAINABILITY PLANS



POTENTIAL TARGET COMBINATIONS IN SUSTAINABILITY PLANS



Target Area 1: Raw Material Sourcing

Companies are asked to assess the main raw materials used in their business, in order to identify relevant targets that ensure raw materials are being sourced in a sustainable manner. Typically, there are two types of targets which companies are asked to consider under this heading, namely:

- Sourcing from suppliers with sustainability certifications
- Developing specific sustainability initiatives with suppliers

In addition, companies are also asked to consider the development of a Sustainable Procurement Policy for their business as part of their Origin Green plan.

Target Area 2: Manufacturing Process

Under the Manufacturing Process heading, there are five types of targets which companies may set, namely:

- Energy
- Greenhouse Gas Emissions
- Water
- Waste
- Biodiversity

The focus in this area is to develop targets that will reduce the resource intensity of the manufacturing process, thus enabling companies to work towards achieving a drop in absolute resource use over time. Separately, biodiversity targets focus on initiatives will help improve biodiversity on-site or will assess how production processes can encourage, advance or indeed protect existing biodiversity.

Target Area 3: Social Sustainability

There are three types of targets included under the Social Sustainability heading, namely:

- **Health & Nutrition** attributes of products. This potentially includes a reduction in sugar, salt and fats in products to the development of healthy product ranges and the promotion of healthier lifestyles.
- **The role of the company in its local community**. Potential targets include the support of local schools, charities and community groups.
- **Employee well-being**. Targets under this heading can include initiatives that encourage employees to become healthier, the development of better work/life balance programmes, as well as the potential for career development.

One stretch target must be included in each Origin Green plan.



RAW MATERIAL SOURCING
KEY METRICS

164

BY OCTOBER 2015, 164 RAW MATERIAL SOURCING TARGETS HAD BEEN SET BY VERIFIED MEMBERS.

6.5bn litres

BY 2017, OVER 6.5 BILLION LITRES OF MILK PROCESSED BY VERIFIED MEMBERS IS EXPECTED TO COME FROM CERTIFIED MEMBERS OF THE SUSTAINABLE DAIRY ASSURANCE SCHEME (SDAS).

83

EIGHTY-THREE MEMBERS HAVE CHOSEN TO SET TARGETS IN RELATION TO THEIR COMMITMENTS TO SOURCE FROM SUPPLIERS WITH RECOGNISED CERTIFICATIONS.

39 targets

THIRTY-NINE MEMBERS HAVE SET TARGETS TO DEVELOP SPECIFIC SUSTAINABILITY INITIATIVES WITH SUPPLIERS.

RAW MATERIAL SOURCING

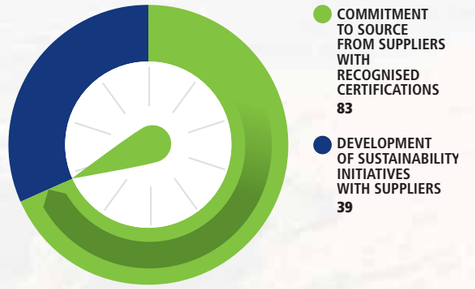
The core requirement for verified members of Origin Green is to include at least one raw material sourcing target in their sustainability plans. By October 2015, the 122 verified members had committed to 164 raw material sourcing targets.

The target areas suggested in the Sustainability Charter are as follows:

- **Commitment to source from suppliers with recognised certifications**
- **Development of sustainability initiatives with suppliers**

Among the 122 verified members, 83 have chosen to set targets in relation to their commitments to source from suppliers with recognised certifications, while 39 have committed to developing sustainability initiatives with their suppliers.

DISTRIBUTION OF RAW MATERIAL TARGETS AMONG VERIFIED MEMBERS (NUMBER OF COMPANIES)



122

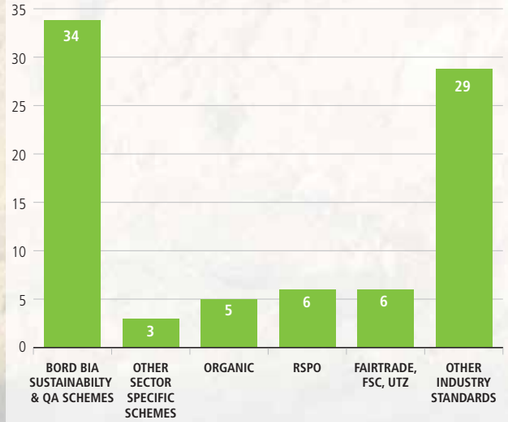
THE NUMBER OF VERIFIED MEMBERS THAT HAVE COMMITTED TO 164 RAW MATERIAL SOURCING TARGETS.

Commitments to source from suppliers with recognised certifications

Given the diverse nature and scale of the sectors covered by verified members, it is unsurprising that a wide range of certification targets have been chosen by companies. These range from commitments to source an increasing proportion of raw materials from Bord Bia certified farms to Organic certification to Fairtrade, Forest Stewardship Council (FSC), etc.

A breakdown of the certification options chosen by verified members are highlighted in the chart below.

CERTIFICATION SCHEMES CHOSEN BY VERIFIED MEMBERS (NUMBER OF COMPANIES)



Development of sustainability initiatives with suppliers

Thirty-nine members have set 57 targets to develop specific sustainability initiatives with suppliers. As with commitments to source from suppliers with sustainability certifications, a wide range of targets have been committed to by verified members. Typically these can be broken down into five main categories:

- Sustainable procurement policies
- Local sourcing
- Supplier training & awareness
- Animal welfare
- Biodiversity action plans

The spread of targets set by member companies is highlighted in the following chart.

SOURCING INITIATIVES COMMITTED TO BY VERIFIED MEMBERS (NUMBER OF TARGETS)



Some examples of the types of initiatives being planned under these headings include:

BIODIVERSITY ACTION PLAN

- Implement biodiversity plan that will increase hedgerow area by 150m, plant 200 trees and reduce viral vectors by 10%
- Establish wetlands and enhanced semi-wetlands to attract a range of mammals, amphibians and fowl across five sites throughout Ireland

ANIMAL WELFARE

- Establish animal health & welfare initiatives on supplier farms to improve animal welfare, reduce vet costs and farm labour associated with welfare issues
- Ensure that all suppliers meet Animal Welfare standards as outlined in ambition of key customers

SUSTAINABLE PROCUREMENT POLICY

- Develop a sustainable procurement policy. Roll out across all suppliers by the end of 2015
- Finalise sustainable procurement policy and commence roll out across suppliers in 2016

Case Study

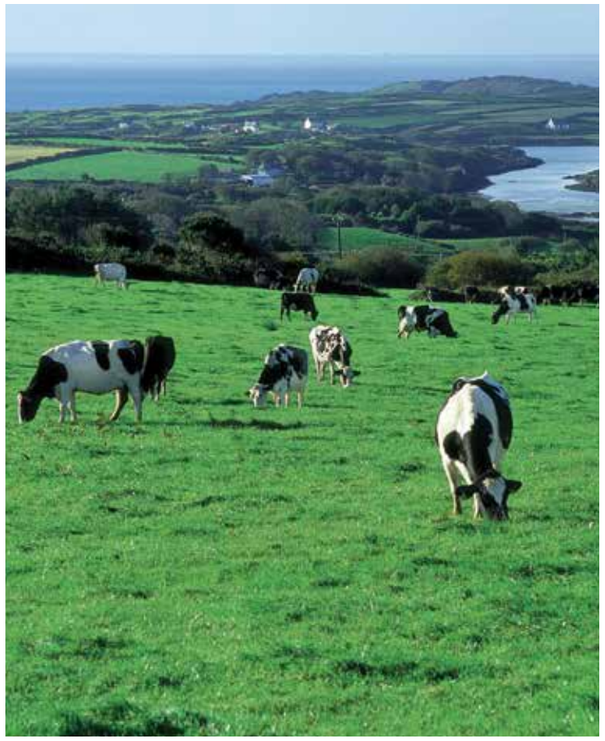
Sustainable Dairy Assurance Scheme

SECTOR: **DAIRY**

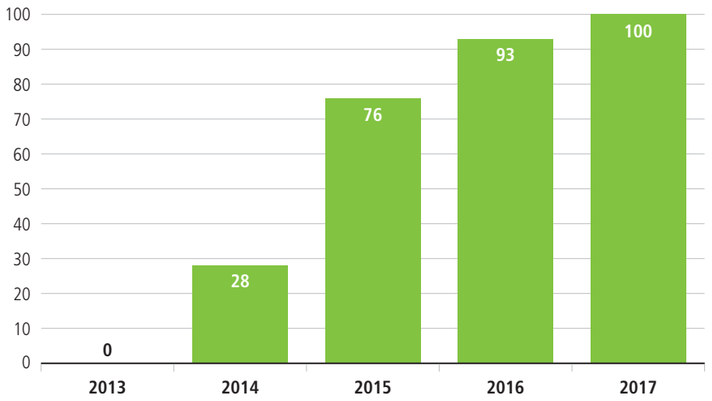
One example of companies committing to sourcing from certified farmers is among verified members from the dairy sector and the commitments they are making to ensure that their suppliers are part of the Sustainable Dairy Assurance Scheme (SDAS).

The scheme, which was launched by Bord Bia in December 2013 aims to monitor and improve the performance of Irish dairy farms in relation to sustainable production of milk. The scheme covers a wide range of sustainability criteria ranging from safety and traceability to animal welfare and greenhouse gas emissions.

The majority of dairy companies that are verified members of Origin Green have included ambitious targets to boost the proportion of their suppliers that are part of the programme. From the starting point of zero in early 2014, members are committed to ensuring that 100% of their milk will come from participating farms. This is expected to result in over 6.5 billion litres of milk coming from certified farms.



MEMBER COMMITMENTS TO SOURCE FROM SDAS FARMS (% OF SUPPLIERS)



6.5bn ltrs

MEMBERS ARE COMMITTED TO ENSURING THAT 100% OF THEIR MILK WILL BE COMING FROM PARTICIPATING FARMS. THIS IS EXPECTED TO EQUATE TO OVER 6.5 BILLION LITRES OF MILK.

RAW MATERIAL SOURCING

Member Case Study

SECTOR: **DAIRY**

The Little Milk Company was established in 2008 and comprises of 10 organic dairy farmers from Munster and Leinster who produce a range of award winning organic cheddars, brie and cream cheeses. The company has achieved Irish Organic Farmers and Growers Association (IOFGA) certification and all of its farmers practice sustainable, organic, low input dairy farming.

Mindful of their environmental impact, the farmers also participate in environmental schemes, such as the Green, Low-Carbon, Agri-Environment Scheme (GLAS), the Agri-Environment Options Scheme (AEOS) and as part of the company's Origin Green raw material sourcing targets, the group has committed to joining the Bord Bia Sustainable Dairy Assurance Scheme (SDAS).

The Little Milk Company's primary raw material sourcing target is to change from the current unrecyclable plastic wrapping used for cheese to 100% recyclable and compostable packaging by 2019.



100%

THE LITTLE MILK COMPANY'S RAW MATERIAL SOURCING TARGET IS TO CHANGE FROM THE CURRENT UNRECYCLABLE PLASTIC WRAPPING USED FOR CHEESE TO 100% RECYCLABLE AND COMPOSTABLE PACKAGING BY 2019.

Other examples of targets being set under the Raw Material Sourcing heading include:

FAIRTRADE

- Grow proportion of fairtrade certified coffee to more than 41% of the total by 2017 compared to 34% in 2012
- Ten percent annual increase in volume of Fairtrade sugar products sold annually up to 2017

ROUNDTABLE ON SUSTAINABLE PALM OIL (RSPO) CERTIFIED

- One hundred percent of palm oil certified by 2017, relative to 50% in 2013
- Achieve 100% certified palm oil by 2014, relative to 0% in 2012
- Increase RSPO certified suppliers to 85% by 2019.

OTHER INDUSTRY STANDARDS

- All suppliers to have SEDEX approval by the end of 2015
- Fisheries improvement programme in place for two key species by the end of 2015
- Ninety percent of malting barley volume verified to SAI Farm Sustainability Assessment by end of 2017

Member Case Study

SECTOR: **BEVERAGES**

Bewley's Limited is an Irish, family-owned beverages company which was established in 1840, and now forms part of the Campbell Bewley Group. Founded as a Quaker owned company, Bewley's has grown to become one of the largest coffee roasters in Ireland and the UK.

Bewley's has a long established commitment to ethical sourcing, being the first company to import Fairtrade coffee into Ireland in 1996, the first to import Cup of Excellence coffees into Ireland and the first certified carbon neutral coffee roaster in Ireland. Bewley's is among the biggest promoters of Fairtrade Fortnight.

Bewley's has invested heavily into better traceability and direct sourcing models to guarantee a sustainable supply chain model, as well as building long-term relationships with coffee farmer's rights across the globe. Fairtrade coffee currently accounts for 38% of Bewley's raw coffee stock and as part of the company's Origin Green targets, it intends to increase this supply to 41% by 2017 from as baseline of 34% in 2012. This will equate to an increase of 20% overall. Fairtrade guarantees a premium to farmers in return for quality produce, social responsibility, and environmentally sustainable production practices. In turn, the extra premium allows coffee farmers to further invest in equipment and farm resources, while providing a fair wage to their employees.

In 2015, Bewley's aim to establish further communications with a number of its supply farms in Brazil and Nicaragua, to discuss sustainable pricing models and solidify long term direct supply contracts. Bewley's has also worked to diversify its supply base by expanding its African supply chain.

With its commitment to Origin Green and ethical sourcing, Bewley's is further enhancing its reputation as a champion for the sustainable procurement of raw materials, improving the lives of everyone across the supply chain, whilst maintaining their strong business results.



As the first company to import a Fairtrade product into Ireland, Bewley's are now the highest volume producer of any Fairtrade certified product in the Irish market.

41%

FAIRTRADE COFFEE CURRENTLY ACCOUNTS FOR 38% OF BEWLEY'S RAW COFFEE STOCK AND AS PART OF THE COMPANY'S ORIGIN GREEN TARGETS, IT INTENDS TO INCREASE THIS SUPPLY TO 41% BY 2017.

2015

IN 2015, BEWLEY'S AIM TO ESTABLISH FURTHER COMMUNICATIONS WITH A NUMBER OF ITS SUPPLY FARMS IN BRAZIL AND NICARAGUA, TO DISCUSS SUSTAINABLE PRICING MODELS AND SOLIDIFY LONG TERM DIRECT SUPPLY CONTRACTS.

RAW MATERIAL SOURCING

Member Case Study



SECTOR: **DAIRY**

Glanbia Ingredients Ireland (GII) has committed to strong targets to ensure that 100% of its dairy ingredients are sustainably sourced by the end of 2020. In order to achieve this target and in conjunction with Origin Green goals, GII developed the on-farm Sustainability and Quality Assurance programme Open Source® to ensure that its supply base is meeting the standards set out within Bord Bia's Sustainable Dairy Assurance Scheme (SDAS), which is the first national dairy audit scheme of its kind anywhere in the world – independently auditing, recording and monitoring sustainability credentials of every dairy farm across Ireland.

To help prepare its supply base to meet SDAS standards, GII's expert milk advisory team works closely with its farmer suppliers on administering the Open Source® code which covers a broad spectrum of measures including milk quality, animal health and welfare, energy efficiency, carbon emissions, water usage, waste management, biodiversity, and health and safety on farm, as well as planning for the future in terms of finances, expansion and succession planning.

In addition, GII also understands the importance of soil health and the difference great grassland management can make to their milk suppliers' profitability. As a result, the company has developed efficient Nutrient Management Plans (NMPs) in conjunction with skilled farmers. These maximise grass production from the land, which in turn helps to nurture the healthiest herds that produce the highest-quality milk.

GII employs its own in-house veterinarian who has developed a GII-specific herd health programme incorporating disease screening and animal health planning.

Crucially, GII's commitment to sustainability doesn't end at farm level; it employs a Manufacturing Execution System and its Glanbia Performance System at all its plants, which focus on keeping the environment clean and works on an ethos of zero waste, maximum recycling.

Combined, these factors offer complete traceability for GII customers, with a clear audit trail from the farm, to its processing plants, to end products.

100%

GII HAS COMMITTED TO STRONG TARGETS TO ENSURE THAT 100% OF ITS DAIRY INGREDIENTS ARE SUSTAINABLY SOURCED BY THE END OF 2020.

SDAS

GII DEVELOPED THE ON-FARM SUSTAINABILITY AND QUALITY ASSURANCE PROGRAMME OPEN SOURCE® TO ENSURE THAT ITS SUPPLY BASE IS MEETING THE STANDARDS SET OUT WITHIN BORD BIA'S SUSTAINABLE DAIRY ASSURANCE SCHEME (SDAS).

Member Case Study





SECTOR: **SEAFOOD**

Founded in 1979 by a group of Irish shareholders, Marine Harvest Ireland (MHI), part of the Marine Harvest Group, is Ireland's largest producer of farmed Atlantic salmon.

As part of MHI's Origin Green sustainable sourcing strategy, the company has committed to ensuring that all of its sites throughout Ireland will be 100% Aquaculture Stewardship Council (ASC) certified by 2018.

The ASC's aquaculture certification programme and logo recognise and reward responsible aquaculture. Developed by the World Wildlife Fund (WWF), the ASC is a global organisation working internationally with aquaculture producers, seafood processors, retail and foodservice companies, scientists, conservation groups, social NGOs and the public to promote the best environmental and social choice practices in aquaculture. The ASC seeks to increase the availability of aquaculture products certified as sustainable and responsibly produced, as well as providing credibility and third party assurance of conformity with production and chain of custody standards.

The ASC standard provides guidelines for responsible salmon farming, which cover the conservation of natural habitats, local biodiversity and ecosystem function, the protection of the health and genetic integrity of wild populations, responsible use of resources, disease management, social responsibility, and community and stakeholder engagement.

As part of its commitment to this strategy, Marine Harvest Ireland in 2015 announced that its Deenish site in Co. Kerry is the first in Ireland to achieve ASC certification, with its other sites to follow.

1st

MARINE HARVEST IRELAND IN 2015 ANNOUNCED THAT ITS DEENISH SITE IN CO. KERRY IS THE FIRST IN IRELAND TO ACHIEVE ASC CERTIFICATION, WITH ITS OTHER SITES TO FOLLOW THROUGHOUT IRELAND.

100%

MARINE HARVEST HAS COMMITTED TO ENSURING THAT ALL OF ITS SITES THROUGHOUT IRELAND WILL BE 100% AQUACULTURE STEWARDSHIP COUNCIL (ASC) CERTIFIED BY 2018.



ENERGY
KEY METRICS

11%

ENERGY USAGE PER UNIT OF OUTPUT WAS 11% LOWER IN 2014 RELATIVE TO BASE YEAR OF MEMBER PLANS.

16%

BY 2017, ENERGY USAGE PER UNIT OF OUTPUT IS EXPECTED TO BE 16% LOWER.

80 Million Kilowatt Hours

BY THE END OF 2017, USAGE AMONG COMPANIES WITH ENERGY TARGETS, OTHER THAN DAIRY, IS EXPECTED TO BE 80 MILLION KILOWATT HOURS BELOW BASELINE LEVELS.

€12 million

THE REDUCTION IN ENERGY USAGE PROJECTED BY THE END OF 2017 HAS THE POTENTIAL TO DELIVER COST SAVINGS OF €12M TO COMPANIES WITH ENERGY TARGETS.

26% Reduction

ALL SECTORS REPRESENTED BY VERIFIED MEMBERS SHOW REDUCED ENERGY USAGE PER UNIT OF OUTPUT IN 2014. THE LARGEST REDUCTION WAS EVIDENT IN THE HORTICULTURE AND MEAT SECTORS WITH DECLINES OF 26% AND 25% RESPECTIVELY.

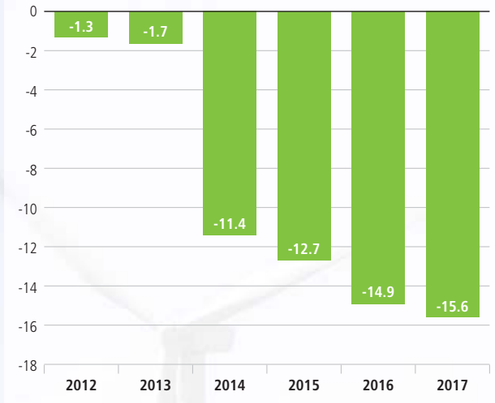
MANUFACTURING PROCESS: ENERGY

When the cumulative energy targets for all Origin Green verified members are added, it shows that energy usage per unit of output in 2014 averaged 11% lower than the baseline year of their individual plans.

The data show a steady progression since 2012, with projections for the period to 2017, suggesting that energy usage per unit of output will be almost 16% lower than the initial base period across member plans.

This represents significant progress over a relatively short period and reflects the range of energy efficiency initiatives undertaken by verified members.

PROGRESSION IN ENERGY USAGE PER UNIT OF OUTPUT (% CHANGE RELATIVE TO BASE YEAR*)



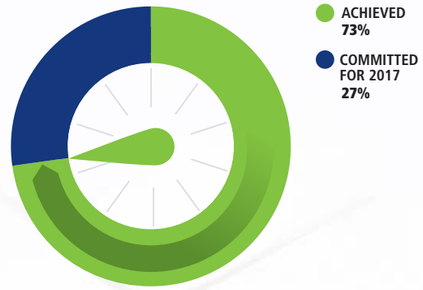
With Irish food and drink exports having grown by 45% since 2009, many sectors are experiencing a period of significant and continuous output growth, which is impacting on absolute energy usage. In particular, the dairy industry has experienced substantial growth in the period due to a strong demand for higher value dairy ingredients and powders. When the data from the 97 verified members with energy targets is combined for 2014, it shows an increase of 7% relative to the base year of their plans. However, total energy usage across member companies, outside of the dairy sector, with energy targets, was some 43 million kilowatt hours lower in 2014.

The commitments made by member companies for the period to 2017 suggest a slowdown in absolute energy usage within the sector, despite the anticipated rise in output over the period. In sectors other than dairy, a drop of 4% in energy usage relative to 2014 is projected. If achieved, this would represent a reduction of a further 37 million kilowatt hours.

The rate of reduction projected for 2017 equates to sufficient energy to meet the annual energy needs of almost 20,000 households and will reduce annual emissions from energy generation by 43 million kg CO_2e. At today's cost of carbon, this equates to annual savings of €430,000.

Furthermore, at current electricity prices, this reduction has the potential to reduce costs by almost €12 million by the end of 2017. This equates to an average saving of €123,000 amongst the 97 companies with energy targets.

PROPORTION OF ENERGY COMMITMENTS ACHIEVED TO DATE



16%

PROJECTIONS FOR THE PERIOD TO 2017, SUGGEST THAT ENERGY USAGE PER UNIT OF OUTPUT WILL BE AROUND 16% LOWER THAN THE INITIAL BASE PERIOD OF EACH PLAN.

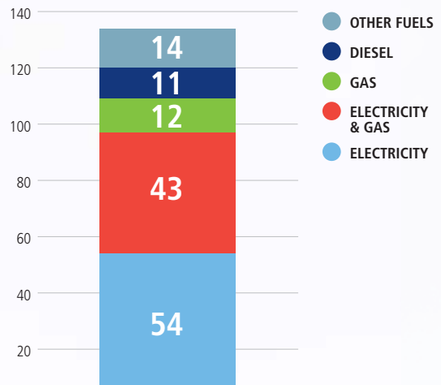
*Average base year is 2012

MANUFACTURING PROCESS: **ENERGY**

Areas of focus within energy

A wide range of targets have been set under the energy heading by verified members. Ninety-seven Origin Green plans contain a total of 138 energy targets. Out of this total, some 134 are energy reduction targets, with the majority focusing on electricity & gas. A further four plans include renewable energy generation targets, with these being designated as stretch targets.

DISTRIBUTION OF ENERGY REDUCTION TARGETS



138

NINETY-SEVEN ORIGIN GREEN PLANS CONTAIN A TOTAL OF 138 ENERGY TARGETS.

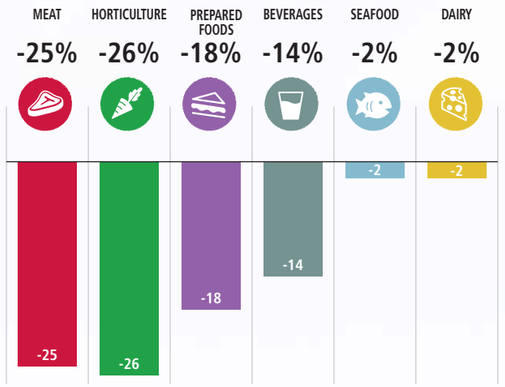
26%

THE LARGEST REDUCTION AT SECTORAL LEVEL WAS EVIDENT IN THE HORTICULTURE AND MEAT SECTORS WITH DECLINES OF 26% AND 25% RESPECTIVELY.

Performance by sector

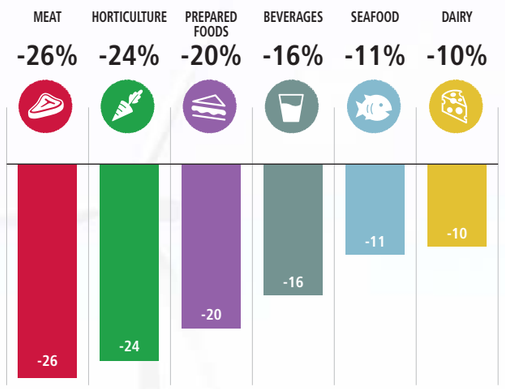
All sectors represented by verified members show reduced energy usage per unit of output in 2014. The largest reduction was evident in the Horticulture and Meat sectors with declines of 26% and 25% respectively. Despite increased levels of production in the dairy industry, a reduction of 2% was recorded over the period.

TRENDS IN ENERGY USAGE PER UNIT OF OUTPUT (% CHANGE 2014 VS. BASE YEAR*)



This trend looks set to continue for the period to 2017, with all sectors expected to show further reductions on a per unit of output basis.

PROJECTED CHANGES IN ENERGY USAGE PER UNIT OF OUTPUT (% CHANGE 2017 VS. BASE YEAR*)



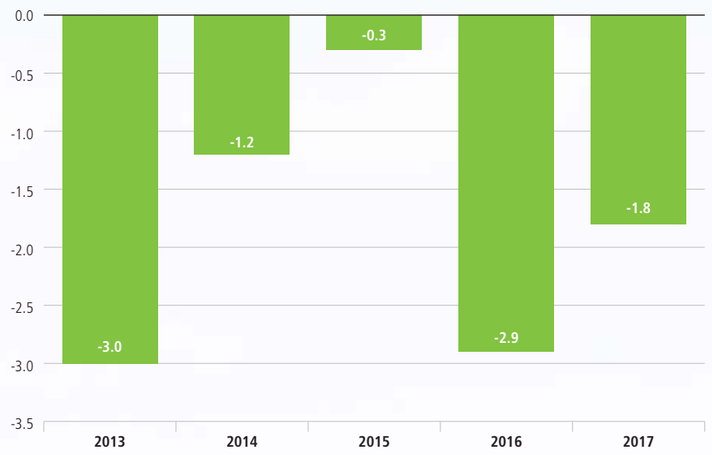
*Average base year is 2012

Trends in total energy usage across sectors

The trend in overall or absolute energy usage varies considerably across sectors. Members from the Beverages, Seafood, Meat and Prepared Foods sectors all show declines, while members from the Dairy sector show marginally higher absolute usage. This reflects the increased levels of processing taking place within the sector, as well as increased output levels.

Verified members from the Beverages sector recorded the largest reduction at 33m kilowatt hours relative to the average baseline year of 2012, followed by meat at 9 million kilowatt hours.

TREND IN ENERGY USAGE WITHIN THE BEVERAGE SECTOR (% CHANGE ON PREVIOUS YEAR)



9m kwh

THE MEAT SECTOR RECORDED A REDUCTION OF 9 MILLION KILOWATT HOURS COMPARED TO THE AVERAGE BASELINE YEAR OF 2012.

33m kwh

VERIFIED MEMBERS FROM THE BEVERAGES SECTOR RECORDED THE LARGEST REDUCTION AT 33M KILOWATT HOURS RELATIVE TO THE AVERAGE BASELINE YEAR OF 2012.

Projected trends in total energy usage by sector

Projections for the period to 2017 among verified members suggest a slowdown in absolute energy usage. The reduction will be led by the beverage sector where a drop of 2% is anticipated. This will be followed by the Prepared Foods sector, which looks set to reduce energy usage by just over 1% with similar declines anticipated among verified members in the meat and horticulture sectors.

ENERGY USAGE AMONG VERIFIED MEMBERS, KWH (PROJECTED FOR 2015 TO 2017)



1%

THE PREPARED FOODS SECTOR LOOKS SET TO REDUCE ENERGY USAGE BY 1%.

2%

THE DROP IN ABSOLUTE ENERGY USAGE WILL BE LED BY THE BEVERAGES SECTOR, WHERE A DROP OF 2% IS ANTICIPATED.

Member Case Study

KEPAK GROUP

SECTOR: **MEAT**

Kepak Group, an Irish based company, is one of Europe's leading food companies, employing over 1,500 people, in the processing and marketing of a full range of meats, such as beef, lamb and pigmeat in various formats. The Group is comprised of three strategic business units, namely Kepak Meat Division (KMD), Kepak Convenience Foods (KCF) and Kepak Frozen Division (KFD).

960,000 litres

THE KEPAK ENERGY TEAM DEVELOPED A MULTI-SITE STRATEGY WHICH BEGAN IN 2012 WITH THE REMOVAL OF THE COMPANY'S HEAVY FUEL OIL BOILER TO BE REPLACED WITH A MORE CARBON EFFICIENT GAS BOILER. THIS CHANGE RESULTED IN AN ANNUAL SAVING OF OVER 960,000 LITRES OF HEAVY FUEL OIL.

As part of Kepak's Origin Green plan, one of the company's primary targets is to reduce energy usage across the Group's six Irish sites. In order to implement these changes and reduce overall usage, the Kepak energy team developed a multi-site strategy which began in 2012 with the removal of the company's heavy fuel oil boiler to be replaced with a more carbon efficient gas boiler. This change resulted in an annual saving of over 960,000 litres of heavy fuel oil. Kepak's overall dependence on oil has been further reduced with the introduction of a new low pressure/high volume cleaning system, as well as the lagging of tanks across the Group's Irish sites. The combined reduction in oil usage from these changes resulted in a further reduction of over 170,000 litres of oil per annum.

Kepak has also installed heat recovery systems on its refrigeration compressors oil cooling system, as well as replacing inefficient air compressors throughout the Group with energy efficient alternatives, leading to an annual saving of over 260,000 kWh in gas and electricity.

The Kepak Group plans to implement further energy saving initiatives throughout its Irish sites over the coming years, with an overall target of reducing energy by 10% over the five year period to 2018. Kepak's progress to date is evident from the fact that in 2013, they became the first beef processor in Ireland to receive the ISO 50001 Standard in Energy Management Systems at its Athleague site in Co. Roscommon.



Member Case Study



Dairygold Food INGREDIENTS

SECTOR: **DAIRY**

Dairygold is Ireland's largest farmer owned dairy business, processing approximately 1.1 billion litres of milk annually (18% of the Irish Milk pool) from its 3,000 milk suppliers. The Society's competitive grass based production model places it at the forefront of dairy farming efficiency, allowing it to compete with the very best internationally.

1.1bn litres

DAIRYGOLD IS IRELAND'S LARGEST FARMER OWNED DAIRY BUSINESS, PROCESSING APPROXIMATELY 1.1 BILLION LITRES OF MILK ANNUALLY.

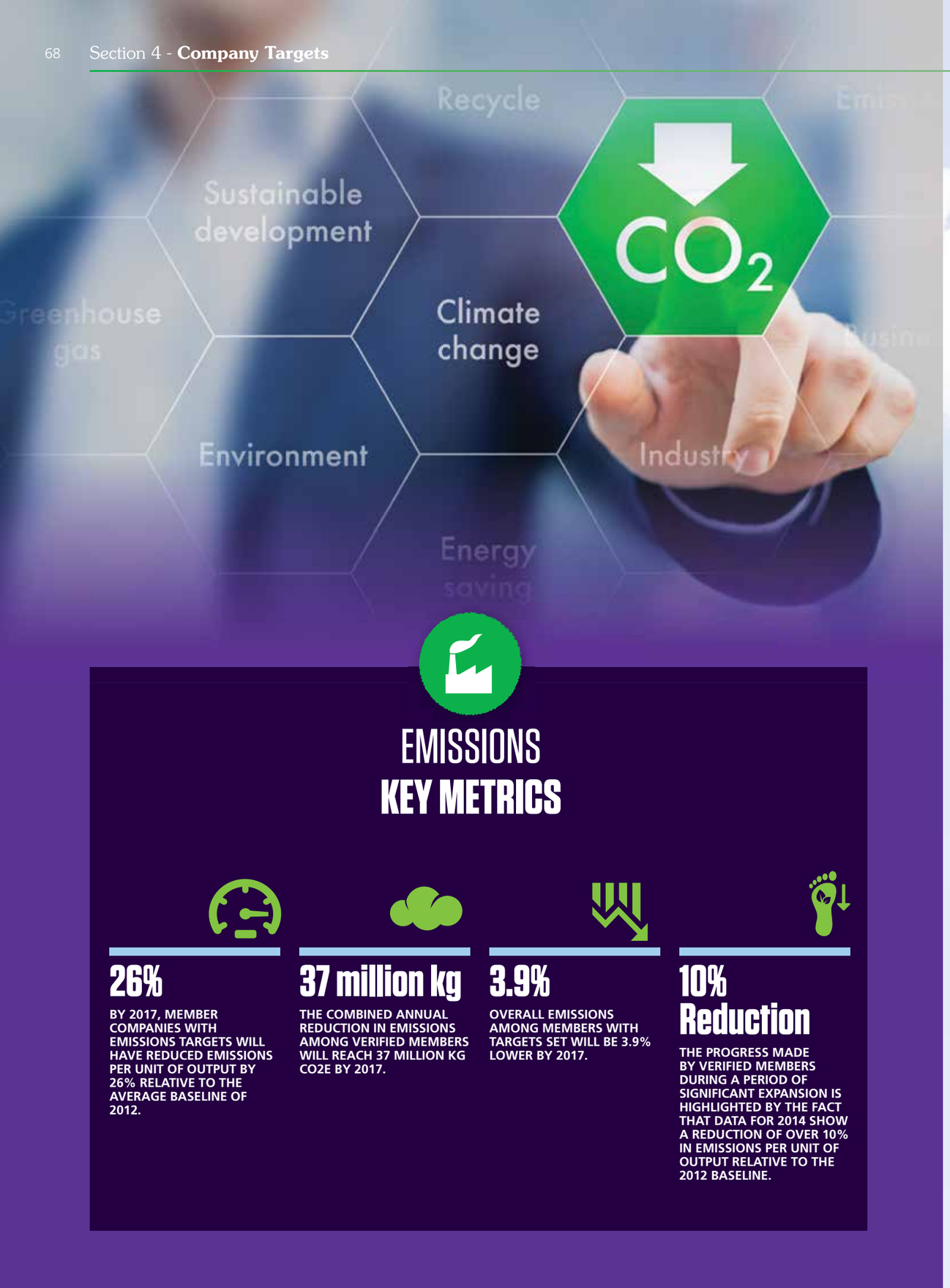
As part of the business commitment to sustainability, in 2013, Dairygold invested in an innovative ADI BVF® Anaerobic Digestion system in Mitchelstown. This was the first dairy application of this system globally.

The system comprises an above-ground 45,000 m^3 low-rate anaerobic reactor. The digester is designed to pre-treat a large portion of the process wastewater from Dairygold's production facility. The reactor anaerobically digests the majority of the organic load; it converts the degradable organics in the wastewater into energy-rich biogas and generates a small amount of waste anaerobic sludge. The reactor releases a high-quality anaerobic effluent to feed the existing downstream treatment system.

2,700 TONNES

DAIRYGOLD'S BIOGAS GENERATION HAS DIRECTLY DISPLACED THE BURNING OF FOSSIL NATURAL GAS, SUPPLYING 6% OF SITE HEAT REQUIREMENTS FROM A RENEWABLE SOURCE, WITH AN EQUIVALENT GREENHOUSE GAS REDUCTION OF OVER 2,700 TONNES PER ANNUM.

The biogas is recovered through an innovative floating membrane system and is burned in two onsite boilers to provide hot water and steam. This has directly displaced the burning of natural gas, supplying 6% of site heat requirements from a renewable source, with an equivalent greenhouse gas reduction of over 2,700 tonnes per annum. This investment has enabled Dairygold to meet its Origin Green renewable energy commitment 12 months ahead of schedule.



EMISSIONS KEY METRICS

26%

BY 2017, MEMBER COMPANIES WITH EMISSIONS TARGETS WILL HAVE REDUCED EMISSIONS PER UNIT OF OUTPUT BY 26% RELATIVE TO THE AVERAGE BASELINE OF 2012.

37 million kg

THE COMBINED ANNUAL REDUCTION IN EMISSIONS AMONG VERIFIED MEMBERS WILL REACH 37 MILLION KG CO2E BY 2017.

3.9%

OVERALL EMISSIONS AMONG MEMBERS WITH TARGETS SET WILL BE 3.9% LOWER BY 2017.

10% Reduction

THE PROGRESS MADE BY VERIFIED MEMBERS DURING A PERIOD OF SIGNIFICANT EXPANSION IS HIGHLIGHTED BY THE FACT THAT DATA FOR 2014 SHOW A REDUCTION OF OVER 10% IN EMISSIONS PER UNIT OF OUTPUT RELATIVE TO THE 2012 BASELINE.

MANUFACTURING PROCESS: EMISSIONS

To date, emissions has been selected as a target area by 38 verified members for their Origin Green plans, with most focusing upon specific emissions reduction projects. Emissions targets have been mostly set by larger companies with a dedicated team tasked with delivering on what are often long term targets. Many of these companies are also required to report emissions under the EU Emissions Trading Scheme. Small to medium sized companies have tended to focus on energy targets, which in themselves help reduce overall emissions.

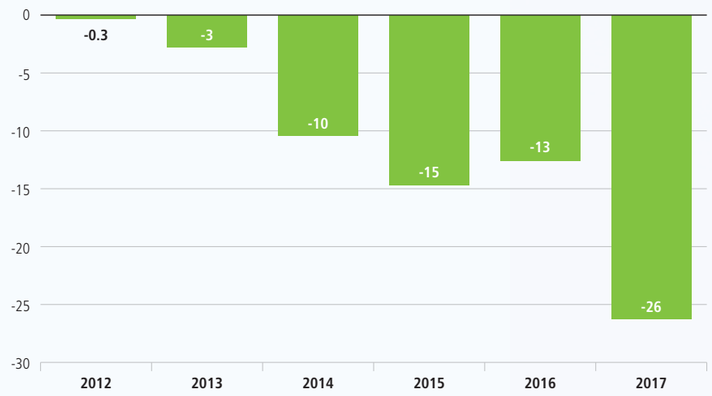
For 2014, the data show that overall emissions from this group of companies were almost 2% below baseline levels. This is despite the significant production expansion amongst a number of these companies. Projections for the period up to the end of 2017 outline a decline of 3.9% in overall CO_2 emissions. This equates to a reduction of over 24 million kg CO_2. When added to the 13 million kg CO_2e saved by 2014, it means that by 2017, overall emissions will be 37 million kg CO_2e below baseline levels.

Varying trends are evident across different sectors with most showing stable to declining total emissions.

The progress made by verified members during a period of significant expansion by all sectors is highlighted by the fact that data for 2014 show a reduction of over 10% in emissions per unit of output relative to the baseline.

Commitments made in plans for the period to 2017 indicate further progress among verified members. Figures for 2017 suggest emissions per unit of production will be over 26% lower than baseline levels.

PROGRESSION IN CO_2 EMISSIONS PER UNIT OF OUTPUT (% CHANGE RELATIVE TO BASE YEAR*)



10%

BY THE END OF 2014 EMISSIONS PER UNIT OF OUTPUT AMONG VERIFIED MEMBERS WITH EMISSIONS TARGETS WERE 10% BELOW BASELINE LEVELS.

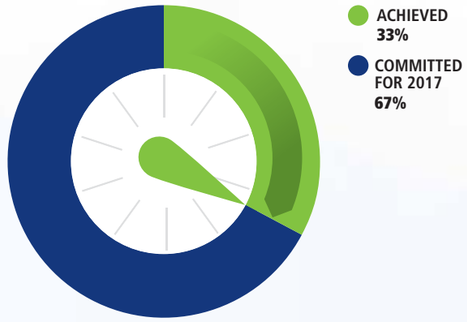
*Average base year is 2012

MANUFACTURING PROCESS: **EMISSIONS**

Emissions commitments achieved to date

Of the 38 verified member companies with emissions targets included, on average, they had delivered around 33% of their overall emissions commitments by the end of 2014. This reflects the long term nature of emission-reduction initiatives.

PROPORTION OF EMISSIONS COMMITMENTS ACHIEVED TO DATE



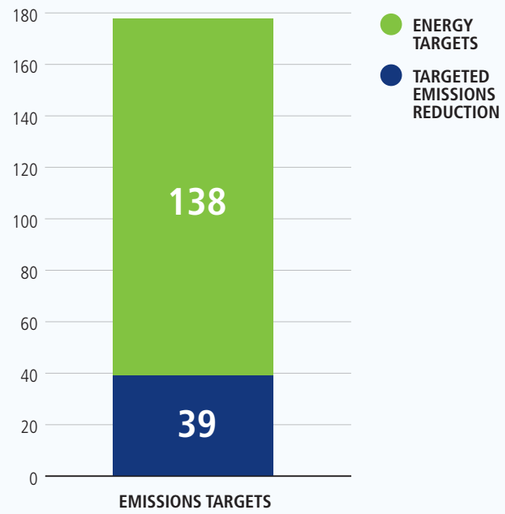
33%

THE 38 VERIFIED MEMBER COMPANIES WITH EMISSIONS TARGETS HAD DELIVERED AROUND 33% OF THEIR OVERALL EMISSIONS COMMITMENTS BY THE END OF 2014.

Areas of focus within emissions

The targets set by companies that result in lower CO_2 emissions tend to be targeted reduction initiatives or energy reduction targets that also reduce emissions. Some 38 companies have set 39 specific emissions reduction targets while 97 companies have set 138 energy reduction targets.

DISTRIBUTION OF EMISSIONS REDUCING TARGETS



177 targets

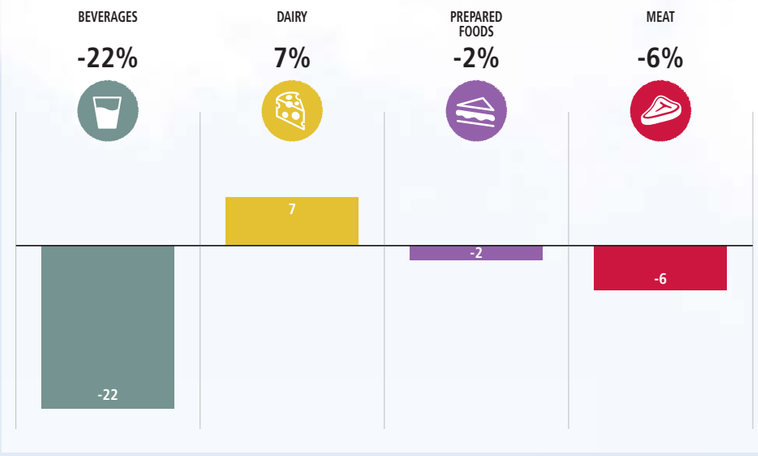
SOME 38 COMPANIES HAVE SET 39 SPECIFIC EMISSIONS REDUCTION TARGETS WHILE 97 COMPANIES HAVE SET 138 ENERGY REDUCTION TARGETS.

Performance by sector

The emissions reductions achieved to date vary by sector. By the end of 2014, members from the Beverages sector showed a reduction of 22%, whilst the Meat sector showed a drop of 6% in overall emissions relative to the baseline level. Prepared Food members also reported modest declines. Projections from Dairy members for 2017 point to a reduction of up to 7% in emissions relative to 2014.

Reduced emissions are also projected for members from the Meat, Prepared Foods and Beverages sectors over the 2015 to 2017 period.

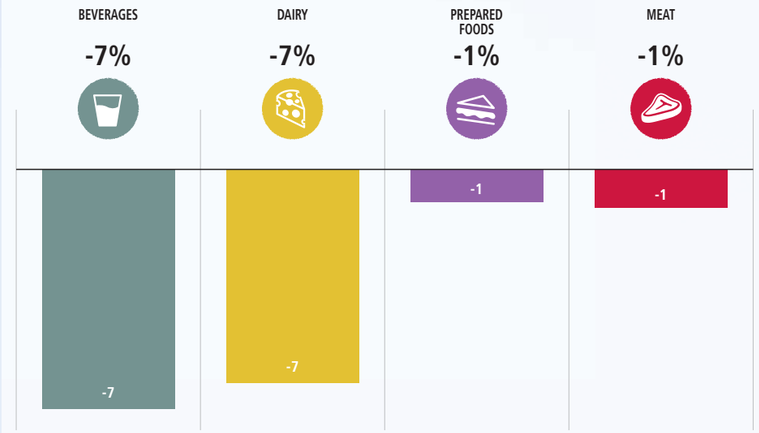
% CHANGE IN CO_2 EMISSIONS 2014 VS. BASE YEAR*



22%

BY THE END OF 2014, MEMBERS FROM THE BEVERAGES SECTOR SHOWED A REDUCTION OF 22%, RELATIVE TO THE BASELINE.

% CHANGE IN CO_2 EMISSIONS 2017 VS. 2014



7%

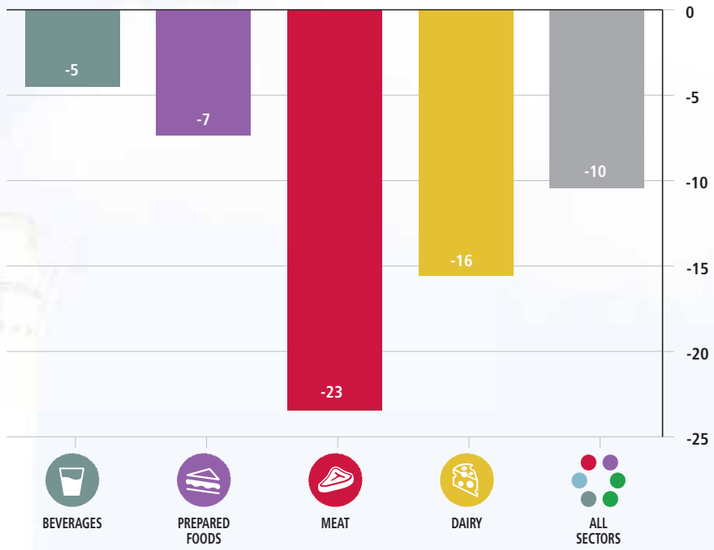
PROJECTIONS FROM DAIRY MEMBERS FOR 2017 POINT TO A REDUCTION OF UP TO 7% IN EMISSIONS RELATIVE TO 2014.

*Average base year is 2012

MANUFACTURING PROCESS: **EMISSIONS**

On a unit of output basis, the most impressive reductions by the end of 2014 were recorded by members from the Meat and Dairy sectors at 23% and 16% respectively. Declines were also recorded by Prepared Foods (-7%) and Beverages (-5%) members. Overall, this positive trend is projected to continue up to the end of 2017. Emissions among Dairy members with targets in their plans are projected to be more than 48% lower, whilst Meat members show a drop of almost 21%.

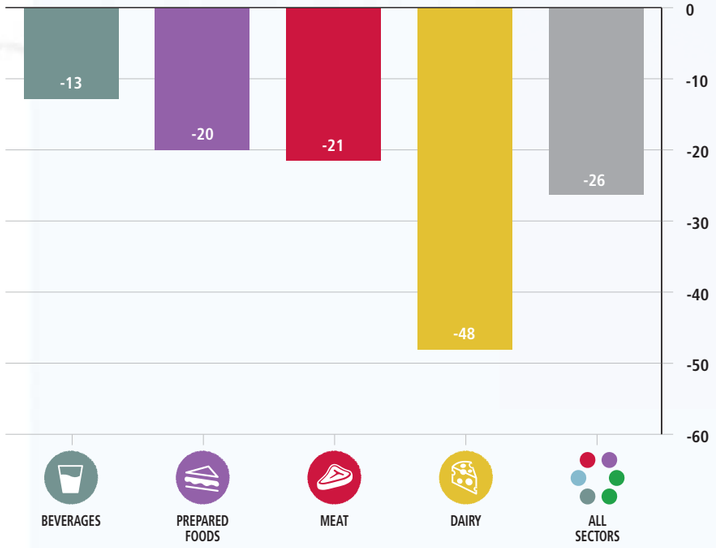
TRENDS IN EMISSIONS PER UNIT OF OUTPUT (% CHANGE 2014 VS. BASE YEAR*)



23%

ON A UNIT OF OUTPUT BASIS, THE MOST IMPRESSIVE REDUCTIONS BY THE END OF 2014 WERE RECORDED BY MEMBERS FROM THE MEAT SECTOR AT 23%.

PROJECTED CHANGES IN EMISSIONS PER UNIT OF OUTPUT (% CHANGE 2017 VS. BASE YEAR*)



48%

BY 2017, EMISSIONS PER UNIT AMONG DAIRY MEMBERS WITH TARGETS IN THEIR PLANS ARE PROJECTED TO BE MORE THAN 48% LOWER, WHILST MEAT MEMBERS SHOW A DROP OF ALMOST 21%.

*Average base year is 2012

Member Case Study

DIAGEO



SECTOR: **BEVERAGES**

Diageo Ireland is based in St James' Gate Brewery in Dublin, where Guinness has been brewed for over 250 years. Diageo also produces Baileys in Ireland and brews beers including Smithwick's, Harp, Budweiser and Carlsberg for the Irish market. With annual exports of more than €1 billion, the organisation employs approximately 1,200 people in its Irish production facilities.

Despite a period of significant expansion and growth, Diageo has managed to drop its CO_2e year on year, resulting in a total drop of 28% in total emissions since 2010. With the consolidation of operations to St. James' Gate and the building of a new state of the art Brewhouse called Brewhouse No. 4, which covers 10,000m², this building utilises highly efficient modern technological processes to greatly reduce overall carbon emissions at its St. James' Gate facility.

Furthermore, the Baileys production site in Dublin improved its ratio of greenhouse gases used per unit of output by 24% between 2010 and 2015, with success largely owed to waste reduction and other process improvements.

As part of Diageo Ireland's Origin Green targets, the company has set themselves the target of halving greenhouse gas emissions at the St. James' Gate site between 2015 and 2020, which would result in a total cumulative reduction of 60% in operational emissions over the ten year period to 2020.

Across its operations, the company has tackled a number of key areas, such as ensuring that all packaging is recyclable/reusable (98.6% non-compliant in 2009 to 0.01% in 2014), prioritising local sourcing, and ensuring safe access to water. This is evident from the fact that St James' Gate has started extracting and treating its own water on site, replacing 500,000m³ of demand from the Dublin City drinking water network. Diageo also supports a wide range of charities and works in partnership with other organisations to provide volunteering opportunities for its employees at all levels across the business.

Diageo has shown a clear commitment to invest in the sustainability of its operations, to minimise its environmental impact and to support a sustainable society and community.

60%

DIAGEO HAS SET THEMSELVES THE TARGET OF HALVING GREENHOUSE GAS EMISSIONS AT THE ST JAMES'S GATE SITE BETWEEN 2015 AND 2020, WHICH WOULD RESULT IN A TOTAL CUMULATIVE REDUCTION OF 60% IN OPERATIONAL EMISSIONS OVER THE TEN YEAR PERIOD TO 2020.

500,000m³

ST JAMES' GATE HAS STARTED EXTRACTING AND TREATING ITS OWN WATER ON SITE, TAKING 500,000M³ OF DEMAND OFF THE DUBLIN CITY DRINKING WATER NETWORK.



WATER
KEY METRICS

1,856,000 cubic metres

BY 2017, WATER USAGE ACROSS VERIFIED MEMBERS WITH WATER TARGETS WILL BE REDUCED BY 1,856,000M³ OR ALMOST 11% RELATIVE TO THE 2012 BASELINE.

24%

WATER USAGE PER UNIT OF OUTPUT WILL BE 24% LOWER BY 2017 RELATIVE TO 2012 BASELINE LEVELS.

19%

WATER USAGE PER UNIT OF OUTPUT FELL BY 19% BY 2014 RELATIVE TO 2012 BASELINE LEVELS.

€17 million

THE REDUCTION IN WATER USE AMOUNTS TO SAVINGS OF €17 MILLION BY 2017, WHICH AVERAGES AT €230,000 AMONGST THE 74 COMPANIES WITH WATER TARGETS.

21% Drop

PREPARED FOOD MEMBERS WITH WATER TARGETS EXPECT A DROP OF MORE THAN 21% IN WATER USAGE BY 2017.

MANUFACTURING PROCESS: WATER

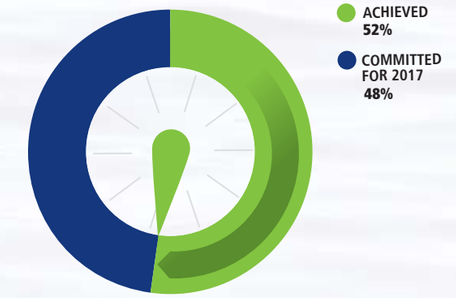
The level of water usage by verified member companies has declined in both absolute and relative terms over recent years. For 2014, figures show that total water use was 968,000 cubic metres (m³) below baseline levels. This represents a reduction of 5.9%.

Most sectors represented by verified members reported a decline in water use, led by Beverages, Horticulture and Meat.

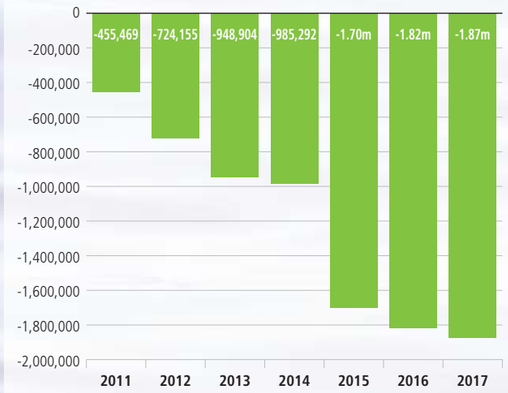
This downward trend seems set to continue with commitments by verified members expected to result in a further fall of 5.5% in water usage by the end of 2017. This equates to 888,000 m³.

This would result in a combined reduction on annual basis of over 1,856,000 m³. This equates to 1.86 billion litre bottles of water being saved annually, which is the equivalent of the water used by almost 34,000 Irish households.

PROPORTION OF WATER COMMITMENTS ACHIEVED TO DATE



TREND IN ABSOLUTE WATER USE (CUMULATIVE CHANGE IN CUBIC METRES)

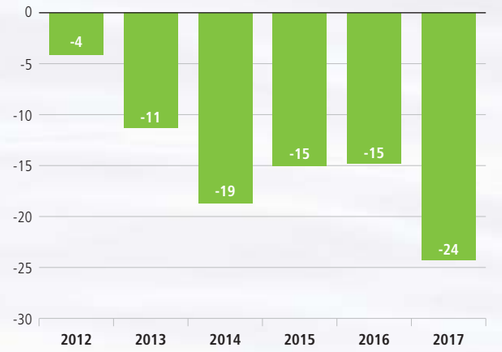


Water can pose a significant cost to Irish businesses. At an average cost of €2 per cubic metre, the rate of reduction over the period to 2017 could save the 74 companies with water targets a cumulative €17 million, which equates to €230,000 per company. This figure does not account for the additional costs associated with the heating and treatment of this water during the manufacturing process.

Substantial progress has also been made by verified companies on a unit of output basis. Data for 2014 show that water usage per unit of output was 19% below baseline levels. Lower usage levels were recorded across all sectors with the greatest reductions evident in Meat, Prepared Foods and Dairy.

This trend seems set to continue, with projections for 2017 suggesting that water usage per unit of output will be 24% lower, relative to the baseline, across those companies that have set water targets.

PROGRESSION IN WATER USAGE PER UNIT OF OUTPUT (% CHANGE RELATIVE TO BASE YEAR*)



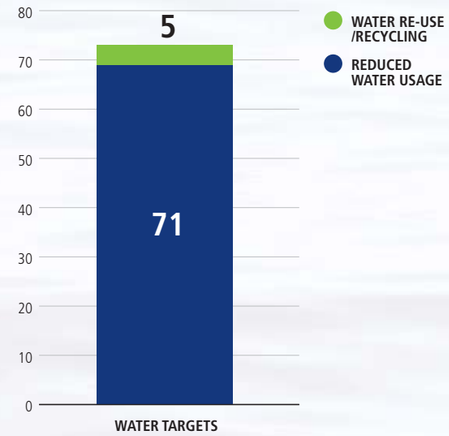
*Average base year is 2012

MANUFACTURING PROCESS: **WATER**

Areas of focus within water

A wide range of targets have been set under the water heading by verified members. A total of 74 verified members have set 76 water targets. Within this, some 71 targets focus on reduced water usage, while five targets focus on increasing the level of water re-use and recycling.

DISTRIBUTION OF WATER TARGETS



76

A TOTAL OF 74 VERIFIED MEMBERS HAVE SET 76 WATER TARGETS.

17%

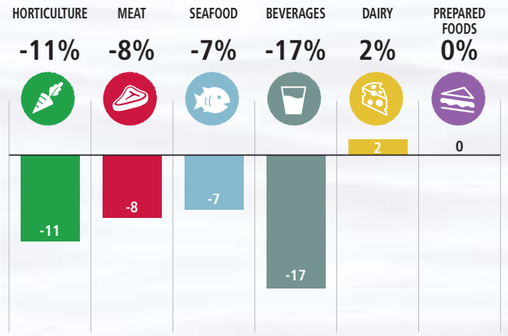
BEVERAGES RECORDED A DECLINE OF OVER 17% IN ABSOLUTE WATER USAGE IN 2014 RELATIVE TO THE BASELINE.

Performance by sector

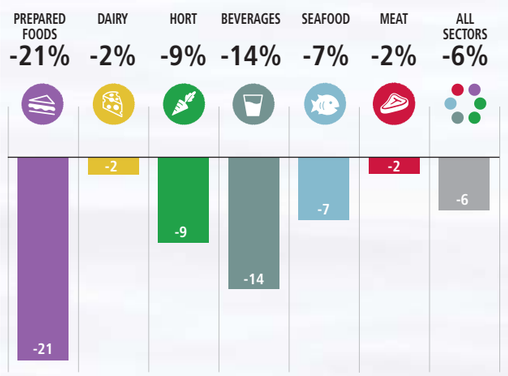
Most sectors represented by verified members with water reduction targets show lower absolute water usage in 2014, relative to the baseline of their plans. Beverages recorded a decline of over 17% in absolute water usage over the period while the Horticulture and Meat sectors showed reductions of over 11% and 8% respectively.

The downward movement on absolute water usage seems set to continue, with projections for 2017 suggesting that all sectors will have reduced water usage relative to 2014. Prepared Food members with water targets expect a drop of more than 21% in water usage while Beverage members are expected to deliver a 14% reduction. Relatively water intensive sectors such as Dairy and Meat are projected to reduce usage by approximately 2%.

TRENDS IN WATER USAGE BY SECTOR (% CHANGE 2014 VS. BASE YEAR*)



PROJECTED TRENDS IN WATER USAGE BY SECTOR (% CHANGE 2017 VS. 2014)

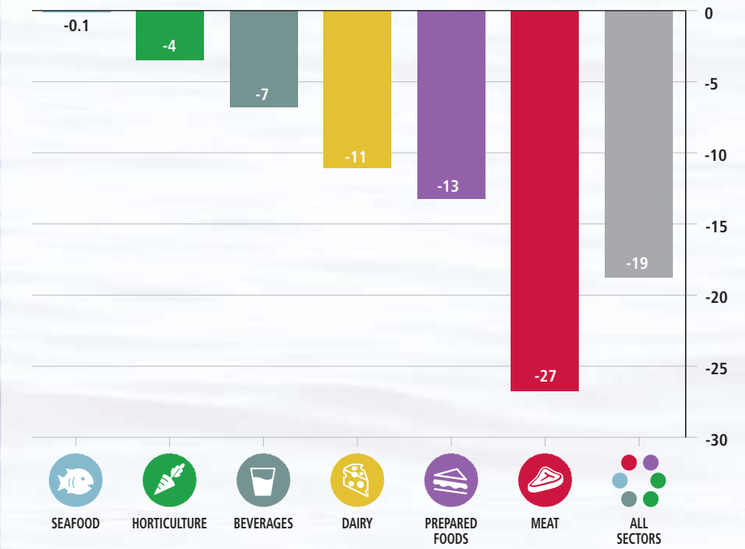


*Average base year is 2012

Trends in water usage per unit of output

Performance among verified members across different sectors is even more impressive on a unit of output basis. Verified members from the Meat sector recorded the largest fall on a unit of output basis, with 2014 data showing a reduction of almost 27% relative to the baseline. This is followed by Prepared Foods and Dairy with declines of 13% and 11% respectively. The Beverage sector was almost 7% lower.

% CHANGE 2014 VS. BASE YEAR*



13%

THE PREPARED FOODS SECTOR WAS ALMOST 13% LOWER RELATIVE TO THE 2012 BASELINE.

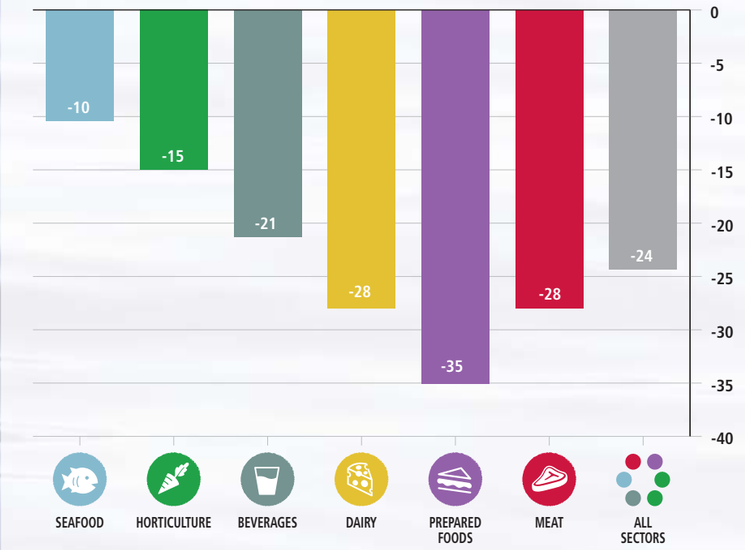
27%

VERIFIED MEMBERS FROM THE MEAT SECTOR RECORDED THE LARGEST FALL ON A UNIT OF OUTPUT BASIS, WITH 2014 DATA SHOWING A REDUCTION OF ALMOST 27% RELATIVE TO THE BASELINE.

Projected changes in water usage per unit of output

Projections for 2017 point to further significant improvements across most sectors with verified members from the Prepared Foods sector expecting a decline of 35%. Meat and Dairy both anticipate declines of 28%, whilst all companies anticipate reductions of over 24% on a unit of output basis. .

% CHANGE 2017 VS. BASE YEAR*



35%

VERIFIED MEMBERS FROM THE PREPARED FOODS SECTOR EXPECT A DECLINE IN WATER USAGE OF 35%BY 2017.

24%

ALL COMPANIES ANTICIPATE REDUCTIONS OF OVER 24% ON A UNIT OF OUTPUT BASIS.

*Average base year is 2012

Member Case Study

DAWN MEATS

SECTOR: **MEAT**

Dawn Meats is a family business established in 1980 in Co. Waterford, evolving to become a highly integrated production, sales, marketing and distribution operation with a clear focus on selling quality meat products in over 40 countries worldwide.

Through the company's Origin Green targets, Dawn Meats aims to achieve a 40% reduction in water usage by 2020. The company is achieving this target by reducing water consumption throughout its manufacturing operations by placing an emphasis on the water intensive cleaning procedures within its processing plants. The company has reduced its water sterilisation processes from using 1 litre of water a minute to using 1 litre of water every 15 minutes, with low-flow sterilisers replacing large volumes of water with smaller, pressurised flows. In 2013, Dawn Meats saved 60 million litres of water as a result of these innovations.

Dawn Meats is using technology employed by the US space agency NASA to increase thermal energy efficiency in all of its five sites throughout Ireland. In each of the sites, it employs a NASA developed advanced heating system that reclaims energy from boilers and uses this to heat water on site, resulting in thermal energy reductions, helping save energy, money and the environment.

The implementation of this innovative technology has resulted in a 90% reduction in energy intensity, with a corresponding CO2 saving of 300,000kg per annum. The company has also invested in low carbon effluent treatment and biodiversity projects.



40%

DAWN MEATS AIMS TO ACHIEVE A 40% REDUCTION IN WATER USAGE BY 2020.

60m LITRES

DAWN MEATS HAS REDUCED ITS WATER STERILISATION PROCESSES FROM USING 1 LITRE OF WATER A MINUTE TO USING 1 LITRE OF WATER EVERY 15 MINUTES, WITH LOW-FLOW STERILISERS REPLACING LARGE VOLUMES OF WATER WITH SMALLER, PRESSURISED FLOWS. IN 2013, DAWN MEATS SAVED 60 MILLION LITRES OF WATER AS A RESULT OF THESE INNOVATIONS.

300,000 kg

IMPLEMENTATION OF INNOVATIVE TECHNOLOGY AT DAWN MEATS HAS RESULTED IN AN UP TO 90% INCREASE IN ENERGY EFFICIENCY AND AN OVER 300,000 KG REDUCTION IN CO_2 EMISSIONS.

Member Case Study

IslandSeaFoods Ltd.

SECTOR: **SEAFOOD**

Island Seafoods is a family owned and operated business located in the popular fishing village of Killybegs, Co Donegal. The company has been supplying its premium healthy catch throughout the world since 1986, with a product range that includes mackerel, herring, sprat and blue whiting. Building on the process of continual environmental improvement which has underpinned business development over the past 20 years, Island Seafoods strives to reduce the carbon footprint of its business wherever possible.

In 1996, Island Seafoods installed a state of the art wastewater treatment plant (WWTP), which brought the biochemical oxygen demand (BOD) of effluent discharged down from 1700 parts per million (ppm) to less than 20ppm, with this system now widely accepted as the standard for this industry. As part of the company's community outreach, they also treat wastewater for other businesses in the local area, with this coopetition ensuring that businesses in this region remain compliant with local guidelines for wastewater management.

In the year 2000, in an effort to become energy independent, Island Seafoods set in motion plans to develop a hydroelectric power plant, using water from a dam above the factory to generate the on-site turbine. Finally commissioned in early 2007, the plant currently generates 700MW of electricity each year, which equates to 60% of the factory's annual consumption. In terms of carbon emissions, this development offsets 350 tonnes annually.

While both the WWTP and hydroelectric power plant were key aspects in working towards a sustainable business, in more recent years, Island Seafoods has looked at improving the efficiencies within its plant, whilst reducing the energy and water requirements of the business as a whole. As part of the company's Origin Green targets, a Green Team meets regularly to identify, develop, implement and monitor environmentally driven initiatives, with the company setting a target of reducing water consumption for cooling & cleaning by 15% by 2016.

Due to a long standing dedication to sustainability, alongside continuous efforts to reduce its water and energy requirements, Island Seafoods was recognised as the 'Green Business of the Year at the Green Business Awards 2015.



The dam which powers the hydroelectric plant at Island Seafoods, Killybegs, Co. Donegal

15%

AS PART OF ISLAND SEAFOODS' ORIGIN GREEN TARGETS, THE COMPANY SET A TARGET OF REDUCING WATER CONSUMPTION FOR COOLING & CLEANING BY 15% BY 2016.

700MW

COMMISSIONED IN 2007, THE HYDROELECTRIC POWER PLANT AT ISLAND SEAFOODS GENERATES 700MW OF ELECTRICITY EACH YEAR, WHICH EQUATES TO 60% OF ITS FACTORY'S ANNUAL CONSUMPTION.



WASTE
KEY METRICS

38%

THE QUANTITY OF WASTE DIVERTED TO LANDFILL WAS 38% LOWER IN 2014 AMONG VERIFIED MEMBERS WITH WASTE TARGETS.

57%

VERIFIED MEMBER COMMITMENTS SUGGEST THAT BY 2017, WASTE TO LANDFILL ON A PER UNIT OF OUTPUT BASIS WILL BE 57% BELOW THE BASELINE.

14,000 tonnes

GENERAL WASTE IS SET TO BE 14,000 TONNES OR 15% LOWER BY 2017 AMONG VERIFIED MEMBERS WITH WASTE TARGETS.

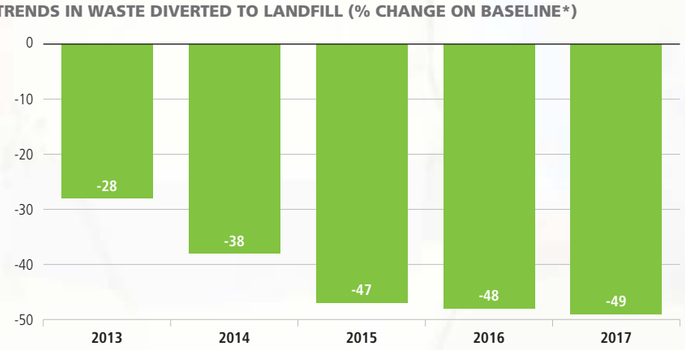
MANUFACTURING PROCESS:
WASTE

The waste target area has been selected by 87 verified member companies who have set 119 targets in total. Many have focused on reducing the level of waste diverted to landfill. Some member companies have been working towards achieving zero waste to landfill for a number of years prior to joining Origin Green and have achieved this goal in the early years of the implementation of their Origin Green plans.

For 2014, data relative to the baseline show a reduction of 3,400 tonnes in the quantity of waste diverted to landfill. This represents a drop of 38% over the period. Verified members across all sectors showed some decline in the level of waste diverted to landfill. The largest declines were recorded among Dairy, Meat and Beverage members.

Member plans have committed to further reductions over the coming years, with projections for 2017 pointing to a further fall of 17% or 960 tonnes. This would leave the level of waste to landfill in 2017 some 49% below baseline levels.

TRENDS IN WASTE DIVERTED TO LANDFILL (% CHANGE ON BASELINE*)

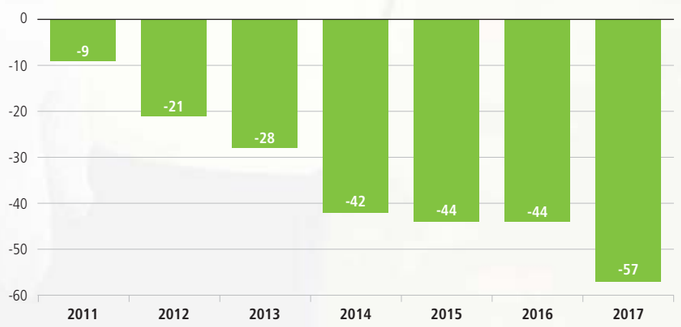


49%

THE LEVEL OF WASTE TO LANDFILL IN 2017 WILL BE SOME 49% BELOW BASELINE LEVELS.

Substantial reductions have also been recorded in the quantity of waste to landfill on a unit of output basis. By the end of 2014, a 42% reduction had been achieved on a unit of output basis. This positive trend seems set to continue, with projections for 2017 suggesting a 57% reduction per unit of output amongst verified members.

PROGRESSION IN WASTE TO LANDFILL PER UNIT OF OUTPUT (% CHANGE RELATIVE TO BASE YEAR*)



42%

BY THE END OF 2014, A 42% REDUCTION HAD BEEN ACHIEVED IN WASTE TO LANDFILL ON A UNIT OF OUTPUT BASIS.

*Average base year is 2012

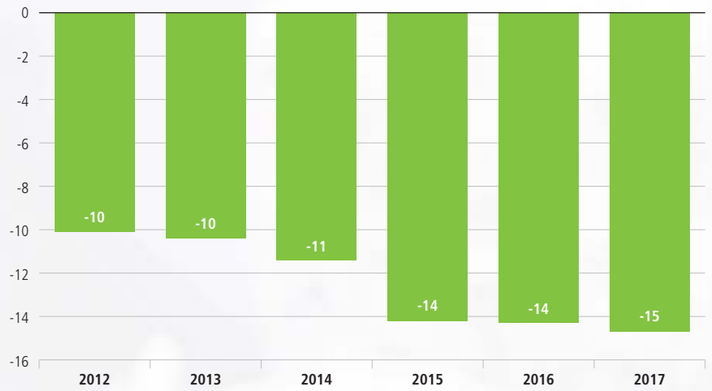
MANUFACTURING PROCESS: **WASTE**

Another area of focus for verified members under the waste heading has been a reduction in the amount of general waste produced. Data for 2014 shows a reduction of almost 10,600 tonnes in the quantity of waste generated relative to the baseline. This equates to a drop of more than 11% over the period.

Verified members from the Dairy sector have led the way with a reduction of 39% recorded, followed by Beverages at almost 16% and Prepared Foods at 9%.

A further reduction of 4% is projected by the end of 2017, which would reduce waste by 15% or 14,000 tonnes relative to the baseline among those verified members with a waste target.

TRENDS IN GENERAL WASTE (% CHANGE ON BASELINE*)

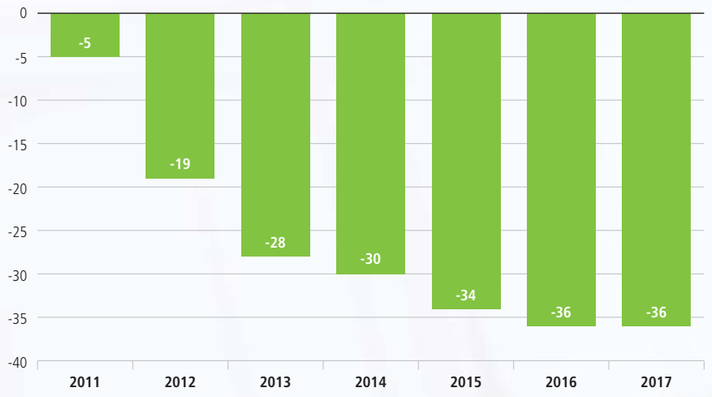


11%

DATA FOR 2014 SHOW A REDUCTION OF ALMOST 10,600 TONNES IN THE QUANTITY OF WASTE GENERATED RELATIVE TO THE BASELINE. THIS EQUATES TO A DROP OF MORE THAN 11% OVER THE PERIOD.

The amount of general waste produced has declined more substantially on a unit of output basis. Figures for 2014 suggest that general waste per unit of output was 30% below baseline levels. Commitments made by verified members for the period up to 2017 suggest that this progress is set to be maintained with a drop of 36% on a per unit basis projected.

PROGRESSION IN GENERAL WASTE PER UNIT OF OUTPUT (% CHANGE RELATIVE TO BASE YEAR*)



30%

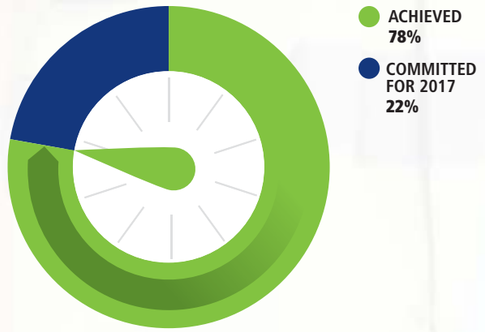
FIGURES FOR 2014 SUGGEST THAT GENERAL WASTE PER UNIT OF OUTPUT WAS 30% BELOW BASELINE LEVELS.

*Average base year is 2012

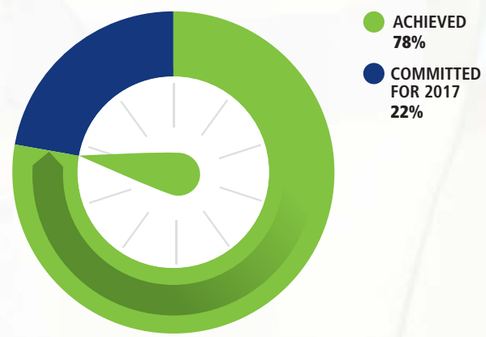
Waste commitments achieved to date

Verified members with waste targets have made significant progress towards achieving the commitments contained within their Origin Green plans. By the end of 2014, some 78% of the commitments made in relation to waste to landfill had been achieved. Similarly, trends have been evident in relation to general waste commitments. By the end of 2014, verified members with general waste targets had also delivered on 78% of their commitments.

WASTE TO LANDFILL



GENERAL WASTE



78%

BY THE END OF 2014, VERIFIED MEMBERS WITH GENERAL WASTE AND WASTE TO LANDFILL TARGETS HAD DELIVERED ON 78% OF THEIR COMMITMENTS.

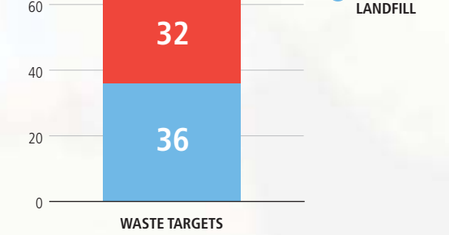
Areas of focus within waste

In addition to the 68 landfill and general waste targets contained in verified member plans, a number of other waste targets have been set. These include the following areas:

- **Waste recovery & recycling**
- **Food waste**
- **Packaging reduction**
- **Production waste**

Waste recycling and recovery accounts for 25 targets across verified member plans to date. The data for 2014 show that recycling had cumulatively increased by over 830 tonnes versus the baseline year of individual plans. Overall, recycling and recovery for 2014 surpassed 5,100 tonnes. For the period to 2017, this is projected to increase by a further 12% amongst companies with targets in this area.

DISTRIBUTION OF WASTE TARGETS (NO. OF TARGETS SET)



830

THE DATA FOR 2014 SHOW THAT RECYCLING HAD CUMULATIVELY INCREASED BY OVER 830 TONNES VERSUS THE BASELINE YEAR OF INDIVIDUAL PLANS.

MANUFACTURING PROCESS: **WASTE**

Performance by sector

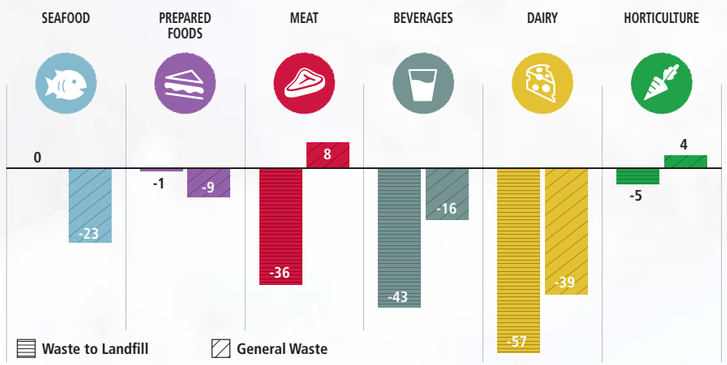
All sectors represented by verified members with waste targets reported either declines or a stabilisation in the level of waste diverted to landfill for 2014. Companies from the Dairy, Meat and Beverage sectors led the way.

Commitments made by member companies for the period to 2017 project a further reduction in waste to landfill for most sectors. Beverage companies are expected to continue to lead the way with an impressive drop of 76% projected, whilst Dairy, Meat and Horticulture members are projected to deliver reductions of 55%, 47% and 14% respectively.

Similar trends are anticipated in relation to general waste levels. Data for 2014 shows that verified members from the Dairy sector led the way with a reduction of 39% in the quantity of general waste relative to the baseline. Members from the Beverage sector reported a drop of almost 16% in waste levels, while Prepared Foods companies were 9% lower. Modest increases were reported by Meat and Horticulture.

Further significant progress is expected by the end of 2017. Commitments made by member companies would see lower waste levels across all sectors. Seafood members are forecast to show a drop of 23% in general waste levels relative to 2014, with companies from the Meat sector projected to deliver reductions of 9% over the same period.

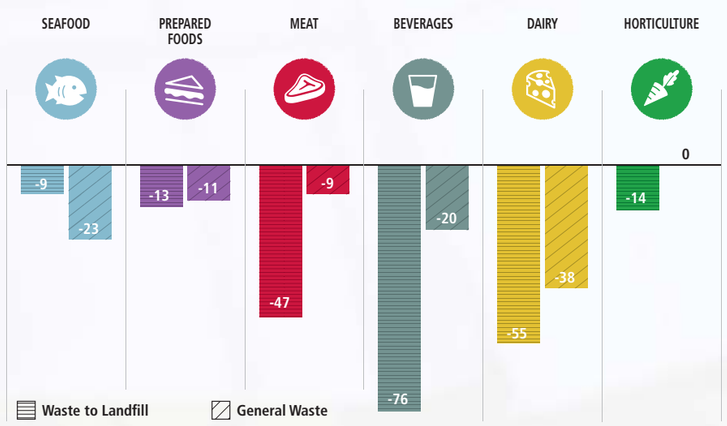
TRENDS IN WASTE BY SECTOR TO DATE (% CHANGE 2014 VS. BASE YEAR*)



16%

MEMBERS FROM THE BEVERAGE SECTOR REPORTED A DROP OF ALMOST 16% IN WASTE LEVELS IN THE PERIOD TO 2014.

WASTE COMMITMENTS TO 2017 (% CHANGE RELATIVE TO BASE YEAR*)



39%

VERIFIED MEMBERS FROM THE DAIRY SECTOR LED THE WAY WITH A REDUCTION OF 39% IN THE QUANTITY OF GENERAL WASTE RELATIVE TO THE BASELINE.

On a unit of output basis, all sectors are showing a decline in waste to landfill for both 2014 and 2017. In relation to general waste, sectors represented by verified members are all expecting lower waste per unit of output in the period to 2017.

*Average base year is 2012

Member Case Study

SECTOR: **MEAT**

Established in 1970 and part of the Linden Food Group, Slaney Foods prides itself on its reputation for sourcing and producing only the highest quality Irish beef.

As of February 2015, Slaney Foods International achieved its zero waste to landfill policy through diverting all non-recyclables from landfill disposal. Zero waste to landfill was a goal aspired to within its Origin Green plan and was developed in conjunction with the company's GreenTrack corporate sustainability philosophy and ISO 14001 accredited objectives.

Slaney Foods International carried out a full waste audit and recognised the need for increased recycling and reuse of waste streams generated throughout the production process. It increased recycling stations for the canteen, office and production areas to help waste segregation. Furthermore, it also installed dry mixed recycling bins in production areas, plastic baling in the dry goods store and paper recycling for the office space. As a consequence of these actions, Slaney recycled a total of 30,000kgs of cardboard, 29,000kgs of metal and 17,000kgs of plastic waste in 2014.









Dry Mixed Recycling

SLANEY INSTALLED DRY MIXED RECYCLING BINS IN PRODUCTION AREAS, PLASTIC BALING IN THE DRY GOODS STORE AND PAPER RECYCLING FOR THE OFFICE SPACE.

76,000kgs

SLANEY RECYCLED A TOTAL OF 30,000KGS OF CARDBOARD, 29,000KGS OF METAL AND 17,000KGS OF PLASTIC WASTE IN 2014.



BIODIVERSITY
KEY METRICS

22 kilograms

A SINGLE TREE CAN ABSORB CO2 AT A RATE OF 22KG PER YEAR.

€2.6bn

THE VALUE OF BIODIVERSITY TO THE IRISH ECONOMY PER YEAR.

25%

ONE IN FOUR ORIGIN GREEN MEMBERS HAS COMMITTED TO LONG-TERM BIODIVERSITY TARGETS.

26,000 miles

AN ACRE OF TREES ABSORBS THE EQUIVALENT OF ALL THE CO2 EMITTED BY DRIVING A FAMILY CAR 26,000 MILES.

MANUFACTURING PROCESS: BIODIVERSITY

Under this heading, Origin Green verified members set targets to improve biodiversity on their site(s), or will assess how production processes can enhance, integrate or protect existing biodiversity.

The United Nations Food and Agriculture Organization (FAO) denote that 40% of the world's economy is based directly or indirectly on the use of biological resources. Consequently, the rationale in protecting and safeguarding our ecosystems, habitats and species is highly compelling. From an Irish perspective, the National Biodiversity Data Centre highlight that the value of biodiversity to the Irish economy is at a minimum €2.6 billion per year.

The challenge of balancing sustainable growth within our agricultural and food manufacturing industries, alongside the protection and enhancement of existing biodiversity forms the basis of this key target area within Origin Green, with companies strongly encouraged to establish and maintain targets within this space.

Of the 122 verified members of Origin Green, 31 companies have established a total of 46 targets/actions within this area. Whilst lower in relative terms to other targets set under the Manufacturing Processes banner, the number of biodiversity based targets have grown steadily year-on-year and this is expected to increase further following the launch of the *All-Ireland Pollinator Plan 2015-2020*, which Bord Bia will be working to implement as widely as possible across member companies.

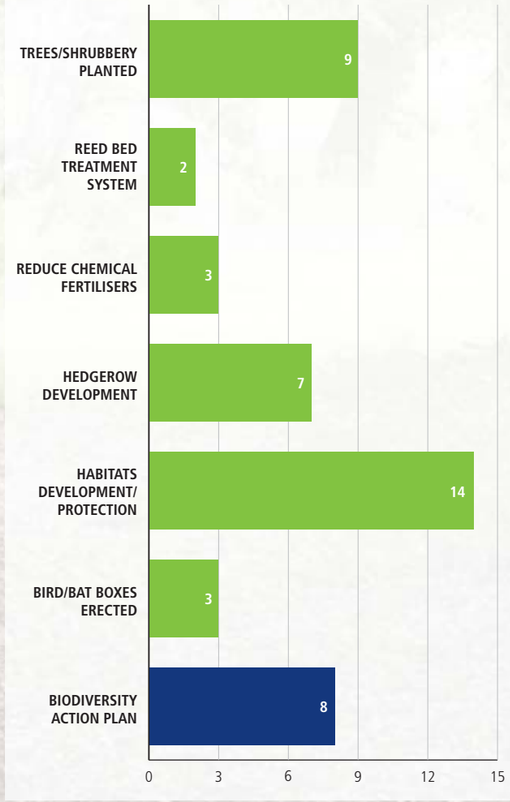
Areas of focus within biodiversity

A number of targets have been set under the biodiversity heading by verified members, with the focus predominantly on improving biodiversity on their own sites and immediate surroundings.

The breakdown of the various targets which have been set is outlined in the adjacent chart.

A number of companies under this heading have also developed biodiversity action plans, which encompass a wide range of initiatives across a number of sites.

BREAKDOWN OF TARGETS SET UNDER BIODIVERSITY



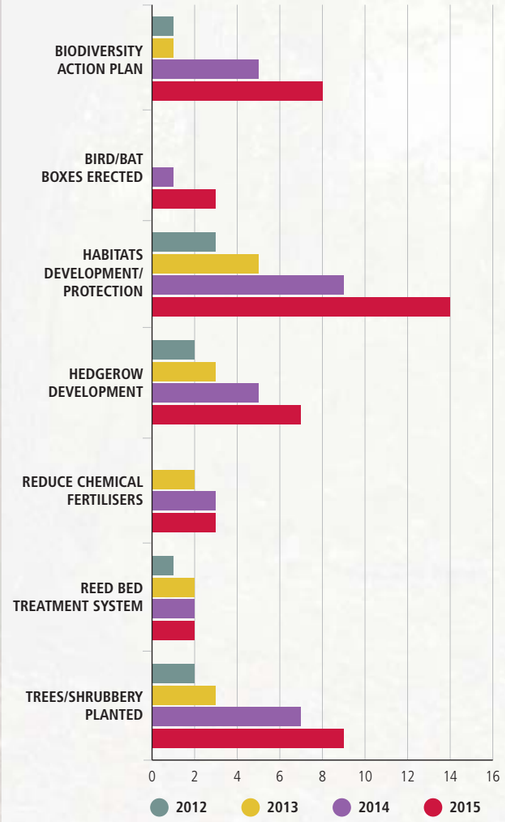
Preventing biodiversity loss

The loss of existing biodiversity remains a key challenge within the global agricultural industry. Of the 100 crops that provide 90% of the world's food supply, 71 are pollinated by bees. According to the Irish National Biodiversity Data Centre, pollinators contribute €53 million annually to Irish agriculture and are critical to the survival of the industry.

Over recent years throughout Ireland, there has been a worrying decline in the population of bees and other pollinators, as well as a decrease in flora and an increasing threat to our native species, which is being exacerbated by the onset of climate change.

In an effort to reverse this trend, Origin Green verified members are setting targets to protect and enhance biodiversity surrounding their sites. As well as having a positive impact upon Irish flora and fauna, biodiversity targets can also offset CO_2 by acting as a natural carbon sink.

GROWTH OF BIODIVERSITY TARGETS YEAR-ON-YEAR 2012-2015 (NO. OF TARGETS)



Protecting & enhancing biodiversity through Origin Green

Origin Green offers participating companies the infrastructure to set targets that can be independently verified in areas that may otherwise be difficult to achieve. Since 2012, biodiversity targets have become more prominent among verified members. Beginning initially with a handful of companies, over 25% of verified members have now committed to long-term biodiversity targets on their sites.

With increased knowledge regarding the importance of protecting biodiversity and its value to a the Irish food industry, Bord Bia is collaborating with the National Biodiversity Data Centre through its *All-Ireland Pollinator Plan 2015-2020*.

As part of the development of this All-Ireland Plan, Bord Bia will work to ensure that more biodiversity based targets and actions are integrated amongst participating Origin Green companies. In conjunction with the National Biodiversity Data Centre, increased mentoring will be provided through case studies and best practice guides to further integrate biodiversity on company sites.

The influence of Origin Green companies can also have a knock-on effect to the agricultural industry as a whole, with companies encouraging their own suppliers and farmers to enhance and protect biodiversity on their sites and farms.

25%

SINCE 2012, BIODIVERSITY TARGETS HAVE BECOME MORE PROMINENT AMONG VERIFIED MEMBERS. BEGINNING INITIALLY WITH A HANDFUL OF COMPANIES, OVER 25% OF VERIFIED MEMBERS HAVE NOW COMMITTED TO LONG-TERM BIODIVERSITY TARGETS ON THEIR SITES.

Examples of the biodiversity targets set by verified members

BIODIVERSITY ACTION PLAN

- Multi-site plan to include development of biodiversity gardens, wildlife corridors, bird sanctuaries, wildflower patches, insect hotels and dedicated conservation areas across six sites by 2019.
- Enhance farm biodiversity through a range of initiatives by 2018, such as the installation of bat and bird boxes, increased hedgerow maintenance and reduced trimming, planting 10 native trees and 20 rare native plants per year, as well as a stretch target to reduce pesticide, herbicide and fertiliser usage on site.

Member Case Study

abp Food Group

SECTOR: **MEAT**

APB Food Group is one of Europe's leading privately owned food processors. Today the group operates across six Irish sites and provides quality beef to thousands of customers throughout the world.

As part of the group's Origin Green targets, in 2012, ABP committed to developing and enhancing biodiversity on five of its six sites located throughout Ireland. In an effort to reverse the trend in the alarming decline in bee populations, ABP committed to developing on-site bee hotels to attract pollinating insects.

The group also established wetlands and enhanced semi-wetlands in an effort to attract a range of mammals, amphibians and fowl to its biodiversity corridors, from species such as frogs and toads, to butterflies and damselflies. Finally, ABP also introduced woodland areas on site, being planted with native species such as oak, ash, birch and alder. It is hoped that these woodlands will attract a wide variety of birds including finches and swifts; as well as animals such as hedgehogs and squirrels.

Through its recognition of the co-dependence between agricultural development and ecological conservation, the biodiversity programme at ABP ensures that native wildlife and pollinators are given an opportunity to thrive and that our fragile ecosystem remains protected.



The Bee Hotel at ABP Cahir, Co Tipperary

5 Sites

AS PART OF THE GROUP'S ORIGIN GREEN TARGETS, IN 2012, ABP COMMITTED TO DEVELOPING AND ENHANCING BIODIVERSITY ON FIVE OF ITS SIX SITES LOCATED THROUGHOUT IRELAND.

MANUFACTURING PROCESS: **BIODIVERSITY**

HABITATS DEVELOPMENT/ PROTECTION

- Increase biodiversity through the transformation of 120m² of unused land surrounding the business premises into a wildlife garden by 2018, alongside the planting of nectar rich wild flowers, hedgerows and native plants to help sustain habitats for birds, bats, bees, butterflies, insects & amphibians.
- Installation of a six pond reed-bed wastewater polishing system to reduce pollution and provide a wildlife habitat over an area of 3 acres, including the establishment of a willow plantation by 2017.

TREES/ SHRUBBERY PLANTED

- Planting 150m² of new hedgerow to create a natural environment for the Carabid beetle, which feeds off vine weevil larvae, thus keeping the pest away from fruit stocks. Also, existing hedgerows gaps will be filled with indigenous Hawthorn and Ash, while Elm trees will be restocked.
- By 2018, plant 180 native Irish trees on site surrounding the 900 metre perimeter.

Member Case Study

Wyeth® | Nutrition

SECTOR: **DAIRY**

Nestlé's Wyeth Nutritionals Ireland Limited specialises in the production of a wide range of infant and prenatal nutritional products, including infant formula, follow-on formula, growing-up milks, and prenatal supplements at its plant in Askeaton, Co. Limerick.

In 2014, as part of its Origin Green biodiversity targets, Wyeth Nutritionals became the first business in Ireland to develop and open its own butterfly meadow adjacent to its Limerick plant. Encompassing 1,800 square metres, the wild butterfly meadow is part of the company's overall sustainability strategy, which aims to reduce its environmental footprint through reductions targets for water use, energy, raw material procurement, biodiversity and waste. In 2015, the plant successfully implemented its zero waste to landfill policy.

As pollinators, butterflies are vital to our ecosystem and are essential to the food we grow in Ireland. Through the restoration of this natural habitat and by increasing indigenous species, Wyeth Nutritionals is playing its role in safeguarding and enhancing Ireland's unique ecological network.



John O'Sullivan, Factory Manager, Nestlé's Wyeth Nutritionals, with children from Askeaton Primary School opening the butterfly meadow.

1,800 square metres

ENCOMPASSING 1,800 SQUARE METRES, WYETH'S WILD BUTTERFLY MEADOW IS PART OF THE COMPANY'S OVERALL SUSTAINABILITY STRATEGY, WHICH AIMS TO REDUCE ITS ENVIRONMENTAL FOOTPRINT THROUGH REDUCTIONS TARGETS FOR WATER USE, ENERGY, RAW MATERIAL PROCUREMENT, BIODIVERSITY AND WASTE.

Member Case Study

Irish Distillers
Pernod Ricard



SECTOR: **BEVERAGES**

An affiliate of Pernod Ricard since 1988, Irish Distillers was originally formed in 1966 following the merger of three Irish whiskey distilleries – John Jameson & Son and John Power & Son in Dublin, and Cork Distilleries Company, the origins of which date back to 1825.

Irish Distillers has a history of commitment to environmental sustainability and building upon this ethos, the company has embraced the integration of biodiversity initiatives across its Irish sites. As part of the development of its new whiskey maturation complex in Dungourney, Co. Cork, which opened in 2014, the company has planted 17,000 trees using 15 different native species. These are supplemented by 12,000 native shrubs, as woodland understorey, to create the necessary layering for biodiversity. The woodland meets on-site storm water attenuation ponds where 6,600 native wetland plants have been planted, enhancing the ecology of the facility by creating a variety of habitats for increased biodiversity.

The planting of indigenous shrubs will encourage small birds to nest, as the berries from the plants, as well as the insects that will colonise the attenuation pond, will act as a food source for several small species of birds and bats. The company has planted 2 hectares of native meadow seed, including a number of endangered wildflower species. The area of meadow seed will treble around the Dungourney facility, further increasing food supply, pollination opportunities and carbon fixing.

Through a firm and ongoing commitment to biodiversity, Irish Distillers is demonstrating how modern day facilities can integrate native flora and fauna on production sites to offset carbon emissions, as well as advancing Ireland's ecological network.

17,000 TREES

AS PART OF THE DEVELOPMENT OF ITS NEW WHISKEY MATURATION COMPLEX IN DUNGOURNEY, CO. CORK, WHICH OPENED IN 2014, IRISH DISTILLERS HAS PLANTED 17,000 TREES USING 15 DIFFERENT NATIVE SPECIES.



SOCIAL SUSTAINABILITY KEY METRICS

208
AS OF OCTOBER 2015, 208 TARGETS HAVE BEEN ESTABLISHED UNDER THE HEADING OF SOCIAL SUSTAINABILITY BY VERIFIED MEMBERS.

118
VERIFIED MEMBERS HAVE COMMITTED TO 118 COMMUNITY BASED TARGETS.

27
TWENTY-SEVEN HEALTH AND NUTRITION TARGETS HAVE BEEN ESTABLISHED BY VERIFIED MEMBERS TO DATE.

36
A TOTAL OF 36 VERIFIED MEMBERS HAVE SET 49 EMPLOYEE WELLBEING TARGETS AS PART OF THEIR ORIGIN GREEN PLANS.

SOCIAL SUSTAINABILITY

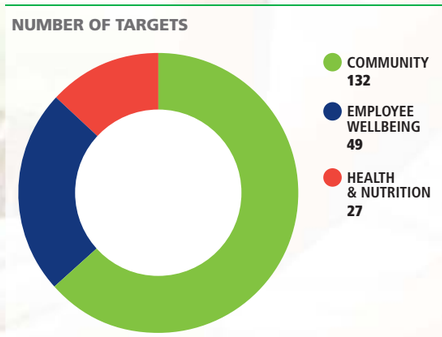
Companies are required to include a minimum of one target under the heading of Social Sustainability as part of their Origin Green plan. By the end of October 2015, the 122 verified members have established a combined total of 208 social sustainability targets.

The three main areas of consideration under this heading are as follows:

- **Health & Nutrition of products**
- **Company role in its local community**
- **Employee wellbeing**

Of the 208 targets set, some 132 cover local community initiatives, 49 fall under the employee wellbeing heading, with a further 27 health and nutrition targets.

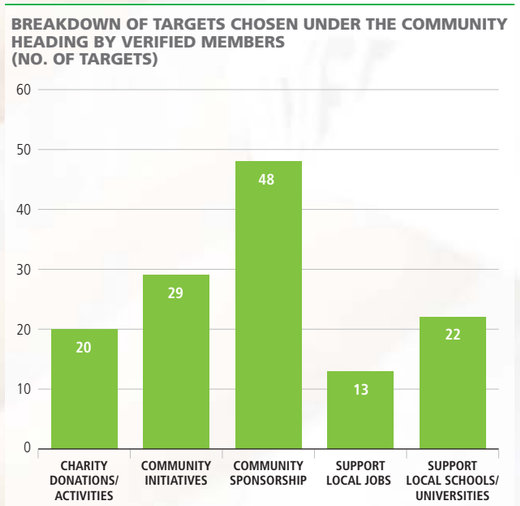
Distribution of Social Sustainability targets among verified members



Company Role in its Local Community

Verified member companies have set ambitious targets to involve themselves within their local community. Targets range from sponsorship to volunteering, and from supporting local schools to mentorship and education programmes.

A breakdown of the 132 targets chosen by a total of 90 verified members is highlighted in the chart below.



The most popular target area under the community banner is sponsorship. This covers sponsorship of local community groups, sports teams or local events. Origin Green members are also offering their expertise in a number of different ways, such as through food donations, advice and mentorship, as well as training and education programmes.

SOCIAL SUSTAINABILITY

Examples of commitments being made by verified members under the community heading

COMMUNITY INITIATIVES

- Shut down all operations one day per year so all staff can volunteer to support local groups in the community.
- Working with Paralympics Ireland to support athletes and create and deliver a programme of Paralympic Sport awareness and talent identification for the Rio Olympics 2016.

SUPPORTING LOCAL JOBS

- Employ a minimum of 40 students per year to provide work placements and vital experience over a five year period to 2018.
- Support local job seekers by using the skills of management to support up to 50 unskilled and non-graduate individuals to reintegrate into the workforce by 2017.

COMMUNITY SPONSORSHIP

- Donate an average of €30,000 to local charities each year over a five year period to 2018.
- Increase support for good causes from €1,000 to €25,000 over a five year period to 2017.

Member Case Study

Riverview Eggs
The Home of Amazing Irish Eggs since 1966

SECTOR: **EGGS**

Riverview Eggs has been producing and selling eggs from the Kelleher farm in Glanmire, Co Cork, since 1966. Today, the company employs 24 people in Watergrasshill, Co Cork and supports a further 40 people on farms throughout Ireland. Through a vertically integrated supply chain model, all production farms are family owned and operated, with Riverview supplying large retailer groups, as well as many other wholesale and foodservice groups across Ireland.

As part of its Origin Green social sustainability targets, the company provides free eggs to local charities, such as St. Vincent de Paul, Cork Penny Dinners, the Cork Simon Community, and Cork Outreach. Initially, Riverview began by supporting the Christmas food appeal for these various charities, but as those seeking assistance grew, the company decided to provide free eggs on a weekly basis. Riverview also offers nutritional and healthy cooking advice to assist and ensure that its produce is being used to its full potential.

Riverview's commitment to the community also involves the provision of sponsorship and nutritional advice to local sports clubs. Through the company's commitment to the Bord Bia Quality Assurance Scheme and Origin Green, Riverview is demonstrating its strong philanthropic credentials, whilst making a tangible difference within its local community.



D.J Kelleher, Managing Director Riverview Eggs with his mother, Margaret Kelleher, Founder.

FREE EGGS

RIVERVIEW EGGS PROVIDES FREE EGGS TO LOCAL CHARITIES, SUCH AS ST. VINCENT DE PAUL, CORK PENNY DINNERS, THE CORK SIMON COMMUNITY, AND CORK OUTREACH.

International commitments being made by verified members

Alongside the support for local communities, due to their international outreach and scale, a number of Origin Green verified members have become involved through sponsorship and mentorship programmes in developing countries. This can involve companies sharing their expertise through skills and training. Irish food and drinks companies are using their knowledge to upskill farmers and help improve nutrition in communities across a number of developing countries.

Member Case Study

KERRY



A smallholder model farmer explaining to women`s groups on the management of crops during a field day.

SECTOR: **PREPARED FOODS**

Kerry Group is a world leader in Taste and Nutrition, serving the food, beverage and pharmaceutical industries, and is also a leading consumer foods processor and supplier in selected EU markets.

As part of the Kerry Group's Origin Green social sustainability targets, the company, in partnership with Concern Worldwide, is contributing to a pioneering initiative aimed at improving nutrition and reducing mortality rates in children who are less than two years of age in the developing world. The RAIN (Realigning Agriculture to Improve Nutrition) project in Zambia has an objective to effectively prevent child and maternal malnutrition among rural poor communities by developing a sustainable model that combines agricultural with nutrition and health interventions. The project also aims to empower women through women's groups and community gender sensitisation sessions.

To date, the project has trained some 200 model farmers and works with community health volunteers to develop and implement education programmes with almost 5,000 participating families. In addition, 53 boreholes have been rehabilitated to ensure access to water, as well as providing irrigation for plantations during the dry season. The RAIN project was selected as winner of the 'Greatest Potential Impact on Nutrition' category at the World Bank's Secure Nutrition Knowledge Platform 2013.

Closer to home, Kerry Group supports numerous community and charitable initiatives, including the Heart to Hand charity, who partner with Kerry to donate much needed food to homeless shelters in the Dublin area. Kerry Group is also strongly committed to supporting arts and sport in local communities through its funding of the prestigious Listowel Writers' Week, the National Folk Theatre, the Community Games and the rapidly growing Kerry Group Rás Mumhan cycling event, to name but a few.

RAIN PROJECT

THE RAIN PROJECT IN ZAMBIA SUPPORTED BY THE KERRY GROUP HAS AN OBJECTIVE TO EFFECTIVELY PREVENT CHILD AND MATERNAL MALNUTRITION AMONG RURAL POOR COMMUNITIES.

5,000

TO DATE, THE RAIN PROJECT HAS TRAINED SOME 200 MODEL FARMERS AND WORKS WITH COMMUNITY HEALTH VOLUNTEERS TO DEVELOP AND IMPLEMENT EDUCATION PROGRAMMES WITH ALMOST 5,000 PARTICIPATING FAMILIES.

Member Case Study

Country Crest
True to nature

HAITI

WITH THE CHRISTINE VALLEY MODEL FARM PROJECT IN HAITI, AGRICULTURAL EQUIPMENT, TECHNOLOGY AND ON-HAND EXPERTISE WERE SUPPLIED DIRECTLY BY COUNTRY CREST TO ENABLE NATIVE FARMERS TO GROW VEGETABLES AND BRING THEM TO MARKET.

SECTOR: **HORTICULTURE**

Country Crest is one of Ireland's largest suppliers of quality potatoes and onions to multiple retailers, as well as manufacturing vegetable accompaniments and prepared wholesome meals.

As part of the Country Crest's Origin Green social sustainability targets, the company funds projects in developing countries to facilitate farming enterprises and food sustainability, as well as contributing to raising the overall standard of living. Within these developing countries, Country Crest's targets are being achieved by promoting sustainable, secure and safe food production through mentoring services, educational assistance, physical machinery, as well as its time and expertise.

With the Christine Valley Model Farm project in Haiti, agricultural equipment, technology and on-hand expertise were supplied directly by Country Crest to enable native farmers to grow vegetables and bring them to market. As a result, the farmers were able to reinvest money earned from their produce back into the farm and community, creating a sustainable business model in the process.

Country Crest also supports the Halalele High School project in Lesotho, which is engaged in vegetable and potato growing. The project aims to provide food and nourishment for the school children, introduce agricultural science as part of the educational curriculum, and generate funds for the school via the sale of quality grown produce. Country Crest is also involved with Vita, an Irish charity in Ethiopia, where they are helping to develop a sustainable vegetable growing project and seed potato production in small rural farms.

Country Crest employees are involved in the development of these projects and their successful implementation. By improving the lives of communities overseas, County Crest is also boosting morale amongst their own employees, whilst creating a positive and collaborative working environment.

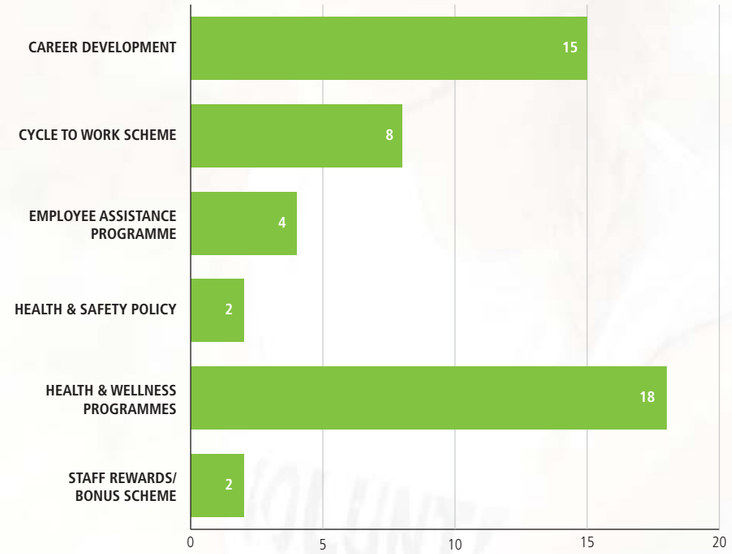


The Country Crest farm team in Haiti

Employee Wellbeing

A total of 36 verified members have set 49 employee wellbeing targets as part of their Origin Green plans. Participating companies set targets from encouraging employees to become healthier, through fitness programmes, education programmes or sponsored gym memberships to developing better work/life balance programmes to reduce stress and illness amongst staff.

BREAKDOWN OF TARGETS CHOSEN UNDER EMPLOYEE WELLBEING BY VERIFIED MEMBERS (NO. OF TARGETS)



49

A TOTAL OF 36 VERIFIED MEMBERS HAVE SET 49 EMPLOYEE WELLBEING TARGETS AS PART OF THEIR ORIGIN GREEN PLANS.

Some examples of the initiatives being implemented under the employee wellbeing heading include:

EMPLOYEE ASSISTANCE PROGRAMME

- Introduction of a wellness week to encourage staff to examine their lifestyles. This includes exercise, diet, pensions and safety in the home.
- Develop and implement a comprehensive employee assistance programme for all staff and their partners/ families by 2016, including access to confidential support services to improve work/life balance.

CAREER DEVELOPMENT

- Organise English language training for all non-national staff to integrate them further into the workforce.
- Place staff on accredited training courses to improve health and safety on site and prevent workplace accidents.

CYCLE TO WORK SCHEME

- Increase the number of employees cycling to work using the government backed cycle to work initiative to 20 staff members by 2018.

STAFF FITNESS SCHEME

- Develop an Operation Transformation programme for staff over a three year period to 2016 to enable them to access trained professionals to improve their fitness and quality of life, as well as offering subsidised gym membership to all employees.

SOCIAL SUSTAINABILITY

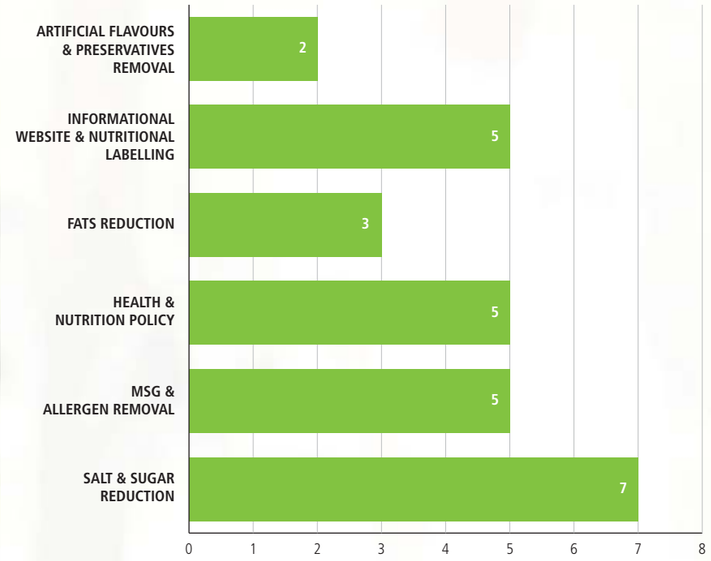
Health & Nutrition

The final area where companies may establish Origin Green targets under Social Sustainability is Health & Nutrition.

In recent years, the challenges surrounding health and nutrition have become increasingly evident. Recognising this challenge, 27 health and nutrition targets have been set by verified members. These range from enhancing the health and nutrition attributes of their products by reducing fat, salt and sugar content to improving nutritional labelling, introducing healthy product ranges and supporting and sponsoring local community action on healthy living.

A breakdown of the various targets being set is outlined in the chart below, with companies predominantly setting targets and long term strategies to improve the nutritional balance of their products.

BREAKDOWN OF TARGETS CHOSEN UNDER HEALTH & NUTRITION BY VERIFIED MEMBERS (NO. OF TARGETS)



27

TWENTY-SEVEN HEALTH AND NUTRITION TARGETS HAVE BEEN SET BY VERIFIED MEMBERS.

Some examples of the health and nutrition commitments made by verified members include:

FATS REDUCTION

- Reformulate ingredients by working with suppliers so that the use of hydrogenated fats is discontinued by 2018.

SALT REDUCTION

- Re-engineer the recipes for all sauces to reduce their salt content by 5% by 2017.

SUGAR REDUCTION

- Reduce the quantity of sugar in our recipes by 10% by 2016.

DEVELOP INFORMATIONAL WEBSITE

- Provide regular recipes, tips and information on our website and social media channels demonstrating yogurt as a healthy ingredient in balanced diets by the end of 2015.

HEALTH & NUTRITION POLICY

- Implementation of a comprehensive health and nutrition policy by the end of 2015 to reduce sodium, added hydrogenated fat, added saturated fat, artificial additives and allergens, as well as introducing more health beneficial ingredients into our product range.

Member Case Study



SECTOR: **PREPARED FOODS**

From its base in Naas, Co. Kildare, Dawn Farms has firmly established itself as the leading European supplier of cooked and fermented meat ingredients to the foodservice and manufacturing sectors.

Dawn Farms is responding to the growing consumer interest in health and wellness by placing it at the core of its bespoke new product development process called NECTAR. NECTAR, an acronym standing for Need, Explore, Create, Test, Action and Review, is a robust stage-gate innovation process that the company employs to convert ideas into outstanding products quickly and efficiently.

Through Dawn Farms' Origin Green health and nutrition targets, the company is championing the development of healthier products and actively engaging with its customers on nutritional initiatives. Its health and nutrition policy requires all new products, where possible, to use only natural flavours and colours, fall within the FSA salt targets, minimise the use of allergens where an alternative is available, and be lower in saturated fat and sugar.

In addition, Dawn Farms products are 100% free from hydrogenated fat, palm oil, nuts, artificial colours & MSG. Furthermore, exploratory studies are underway regarding the addition of health beneficial ingredients.

Member Case Study

0.6g/100g

LARGO FOODS HAS MADE AN ONGOING COMMITMENT TO USE MINIMUM SODIUM IN NEW PRODUCT LAUNCHES WITH A TARGET OF ACHIEVING 0.6G/100G.

SECTOR: **PREPARED FOODS**

Largo Foods was established in 1983 in Ashbourne Co. Meath and now currently employs over 400 people. The company manufactures an extensive range of branded potato crisp snacks including Tayto, Hunky Dorys, Perri and King from its factory in Ashbourne, Co. Meath.



Largo Foods has demonstrated a commitment to social sustainability through its efforts to improve the nutritional content of its products. All crisps are cooked in 100% sunflower oil, which is naturally low in saturates and high in healthier polyunsaturates. It is also committed to providing GDA labelling on all branded products.

Sodium intake is linked to high blood pressure which is a risk factor for cardiovascular disease. Largo Foods is part of the Food Safety Authority of Ireland's (FSAI) sodium reduction initiative and has successfully delivered on its commitments to date in significantly reducing the amount of sodium in its snack products. It has included salt equivalent labelling on all products to improve consumer awareness. Through the company's Origin Green targets, it has also made an ongoing commitment to use minimum sodium in new product launches with a target of achieving 0.6g/100g. Finally, it has also committed to review sodium and fat levels across existing product ranges with a view to reformulating where technically and commercially viable.

Working with nature

Section 5

DELIVERING ON A VISION FOR 2025

WHY DO WE NEED A VISION?

An important part of Bord Bia's role is to support its stakeholders by helping them make better, more informed, strategic decisions. Working together towards a unified, shared vision is a key part of this.

In an uncertain, complex world, it is all too easy to be blown off course by events as they occur. A vision acts as a 'guiding star', allowing an industry to remain focused and to adapt and respond to changes and 'external shocks' more effectively.

A VISION FOR 2025

The launch of Origin Green in 2012 marked the beginning of a journey. Our food and drink industry is now working together to embed sustainability into every facet of its business, from how our herds graze, to how our factories operate. Today, as Origin Green members actively and measurably improve their performance, the goal of taking Ireland to a world leadership position in sustainability remains on track. As the momentum for change intensifies, it also encourages us to look beyond the first milestones and ask what the future will bring. A decade from now, when Origin Green is second nature to our industry, how will it shape the Irish food and drink industry's position in the world?

While there is much that is difficult to predict about the period ahead, we can have no doubt about the challenges posed to food producers. In less than fifty years, our planet's population has more than doubled, to stand today at 7.3 billion. By 2050, it will reach 9.7 billion.

This growth, coupled with the challenges of climate change and a shrinking resource base of land and water, will put intense pressure on agriculture, and demand effective responses from every decision-maker – from governments to producers to consumers. A decade from now, the sense of sustainability as an optional extra will have given way to the clear recognition that food production is a contract with nature, a contract whose observance will define the future of our world.

In the Irish food and drink industry, the vision is that after more than a decade of improving our environmental and social performance, our model of food production will be one in which virtually every action comes under the umbrella of sustainability. From the health of our animals to the biodiversity of our landscape to the quality of waterways to the energy efficiency of our production lines, our industry will be recognised as a point of excellence internationally for the way in which we utilise, and safeguard, our precious resources.

Irish farmers will be central to this ground-up approach. Under this vision by 2025, we will have more than a decade of success in reducing emissions. As global demand for Irish output surges, our farms will be busier places than ever, but new technologies and best practices will be so deeply embedded that the conversation begins to change from emissions reduction to positive environmental contributions.

The most progressive farms will be powered with renewable energy, pooling resources with others or selling their excess energy to the national grid. Busier farms employ more people and empower their local business eco-systems, where the artisan food sector will flourish, bringing a wealth of locally produced food and drink to our communities. Under this vision, for all the progress outlined, a visitor to the Irish countryside will see hedgerows alive with flowers, butterflies and bees. Birds such as the corncrake will once again be growing in number, nesting in the conservation areas that are integral to every farm. Gullies and streams will feed clear waters into river systems where trout and salmon populations are growing strongly.

After more than a decade of embedding sustainability into the routine of industry, the Origin Green logo will be synonymous with sustainable food production both at home and abroad. The global food industry will recognise that no industry has worked harder to meet the complex challenges of our times than Ireland. Under this vision, powerful organisations will stand behind Origin Green, recognising it represents not only the highest standards in sustainably produced food, but a resolute commitment to the wellbeing of consumers. Irish companies, in fact, will be known internationally for prioritising health and wellness in their products, and consumers will reference our industry as one committed to delivering real benefits to both consumers and the environment.

As sustainability becomes the new business-imperative around the world, role models will be needed and the Irish industry will be noted for its openness and generosity, with the country a destination point for those in search of the solutions, technologies and policies needed to make food production more sustainable.

At home, our 360-degree approach will also provide leadership within the Irish economy, as our proven business model inspires other sectors to act decisively.

The goal of sustainability is to leave our world in better shape than we found it. We know there are no easy answers to the challenge of replenishing the planet's resources, but we believe sincerely that those who walk the journey of Origin Green will be leaders in a positive vision of a future. A decade from now, they will look with pride at not only at how far they have come, but at who has travelled with them. The actions required are, in many cases, already happening around us. The vision and commitment that is driving sustainability today will, by 2025, become mainstream, allowing us to plan even bolder steps for the future.

If sustainability is the passion to do the right thing, Origin Green is the conviction that this passion can be the foundation for success. Our commitment in 2025 will, undoubtedly, be to continue on the path we have taken, knowing that each achievement provides the next generation with a stronger foothold on which to set out their vision.

BECOMING A WORLD LEADER

In June 2012 we defined, against four milestones, how Ireland could become a world leader in sustainably produced food and drink. We committed to bringing everyone on the journey by 2016, farmers and food and drink manufacturers alike, measuring what matters, using internationally recognised standards and independent verification, and to making this a journey of continuous improvement.

This report we hope will demonstrate that our work towards the achievement of these milestones is well underway. But it is important also that in pursuit of vision, and our ambition to be a world leader in sustainability that, for the period ahead, and to focus our work programme, we set new milestones that will similarly define how leadership can be sustained.

These milestones are set out in more detail below but are essentially built around five pillars:

LOWERING OUR ENVIRONMENTAL FOOTPRINT, prioritising emissions, biodiversity and water quality.

ENHANCING OUR IMPACT ON SOCIETY, prioritising health and wellbeing.

CREATING A SHOWCASE FOR SUSTAINABILITY AT HOME, completing the supply chain from farm to fork.

PURSUING INNOVATIVE SOLUTIONS THROUGH COLLABORATION with organisations in Ireland and internationally.

COMMUNICATING THE STORY OF ORIGIN GREEN, and reaching out to consumers at home and overseas.



Bord Bia | Irish Food Board

LOWERING OUR ENVIRONMENTAL FOOTPRINT

For many, it is at farm level that Origin Green truly delivers something unique through the measurement and feedback & advice loop that has been developed for beef and dairy farmers to date. In order to build on what currently exists, the industry needs to share a common vision on what success will ultimately look like. Bord Bia is proposing the following long term vision for Irish farming as part of Origin Green:

"FARMING IN IRELAND WILL SEEK TO HAVE THE LOWEST ENVIRONMENTAL FOOTPRINT IN EUROPE"

Such a vision presents many challenges for the sector but also offers significant opportunities in relation to market preference, production efficiency and public good if it were to be achieved.

Greenhouse gas emissions

The challenges and potential opportunities from reducing greenhouse gas emissions are outlined by Dr Rogier Schulte, Chair of FAO LEAP Partnership & Teagasc Working Group on GHG Emissions as follows:

One of this biggest challenges facing Irish agriculture is to contribute to the global reduction in greenhouse gas emissions. In 2008, Ireland was given the task of reducing national emissions by 20% by 2020 under the EU Climate and Energy Package: no other country was given a tougher target at the time.

Our agricultural sector accounts for about a third of national greenhouse gas emissions. By contrast, agriculture accounts for only 10% in most other European countries, which is largely due to the heavy industries that 'dilute' their farm emissions. But in Ireland it is not possible to subscribe to large reductions in our national greenhouse gas emissions without also reducing emissions from farming.

We know that reducing emissions simply by reducing food output would give us the worst of both worlds, as this could increase global greenhouse gas emissions. Scientific research has shown that the carbon footprint of Irish food is amongst the lowest in Europe and indeed the world. We know that the global demand for food will continue to rise. In particular, burgeoning middle classes in Asia are predicted to demand ever more meat and dairy produce. If our efficient farmers are not allowed to produce more food in Ireland for this growing appetite, then less efficient farmers will do so elsewhere. The end result of carbon quota: less food, more greenhouse gases, more climate change.

However, there is a lot that we can achieve. We can tackle the twin challenges of Food Security and Climate Change through efficiency. Using simple steps, such as a longer grazing season, more productive animals, and even nutrient management planning, we can reduce the 'carbon footprint' of our produce. This is the amount of gas we produce per litre of milk, or per kilogram of meat. Recent Teagasc research shows that Irish farmers have already been on this journey for quite a while: in 2013, each meal of Irish food produced 15% less greenhouse gas than the same meal in 1990.

And this trend need not stop this year: if we continue to reduce our carbon footprint, then it is possible to grow agriculture in line with Food Harvest 2020, while at the same time 'flat-lining' greenhouse gas emissions. And that is good news. The better news is that all the actions that reduce the carbon footprint also reduce costs on the farm. And that is not just a theory. Last year, the Teagasc National Farm Survey showed that the most profitable dairy farms were also the farms with the lowest carbon footprint.

And of course we know that farming does not only emit greenhouse gases to the atmosphere, it also takes carbon-dioxide from the air and locks it up in the ground. This storage of carbon (called sequestration) is particularly effective in permanent grasslands and forestry. It needs no explanation that the potential for this sequestration in Ireland is promising, to say the least.

Dr Rogier Schulte,
Chair of FAO LEAP Partnership & Teagasc Working Group on GHG Emissions

Data from Bord Bia's farm assessments show that the 'average' suckler beef farm has the following characteristics:

- **Outdoor grazing season of 245 days**
- **Calving rate of 80%**
- **Age at first calving of 32 months**
- **Average lifetime daily liveweight gain of less than 800g**
- **Less than 50% of slurry spread in spring**

Establishing Ireland as the country with the lowest carbon footprint for beef in Europe requires a reduction of around 10% on a straight comparison basis, ignoring the split between dairy and suckler beef.

On the average suckler beef farm with 32 hectares of land, 20 suckler cows with all young cattle reared to beef, there are a number of ways of achieving this goal.

It could be achieved by focusing on a single performance area such as calving rate. Increasing the calving rate from 80% to 92% would potentially reduce the footprint by 10% and boost the financial performance of the farm by €2,300 annually.

Alternatively it could be achieved by a smaller adjustment across a number of the key measures such as:

- **Increasing the length of the grazing season by 18 days to 263 days**
- **Reducing age at first calving by two months**
- **Increasing calving rate from 80% to 85%**
- **Lifting lifetime average daily weight gain by 50g per day**
- **Changing the proportion of slurry spread in spring from 50% to 70%**

Milk production in Ireland has the joint lowest carbon footprint. The farm assessments undertaken through the Origin Green Programme across dairy farms show that similar to beef, considerable variation is evident across farms, which offers scope for further improvement. The long term vision for Irish dairy production should be the same as beef, namely to have the lowest environmental footprint in Europe. This requires the planned expansion in milk output to occur in a way that ensures emission levels are minimised.

Next steps for Origin Green

Greenhouse gas emissions have been a key part of Origin Green from the beginning with Bord Bia involved in carbon footprint assessment at farm level since 2009. This has allowed us to build up a strong picture of the performance across different sectors. The next critical step is to engage farmers on the issue and help them identify areas offering potential improvement that can also benefit the farms financial performance. This is the rationale behind the development of The Carbon Navigator Tool with Teagasc, which focuses on practical management areas that can deliver environmental and financial benefit to farmers.

The roll out of the Rural Development Programme between now and 2020 will see up to 50,000 farmers actively using The Carbon Navigator.

At company level, Emissions is one of the targets areas within the Origin Green Charter with 38 companies setting emissions targets in addition to the 97 with energy reduction targets. By the end of 2016 every company will be required to include an emissions target as part of their Origin Green plan.

BENEFITS OF REDUCING BEEF FOOTPRINT BY 10% ON A TYPICAL SUCKLER BEEF FARM

	GHG CHange	€ benefit
Increase length of grazing season by 18 days	-3.1%	+€1,297
Reduce age at first calving by two months	-0.6%	+€442
Increasing calving rate by 5%	-4.1%	+€946
Increase lifetime average daily weight gain by 50g per day	-0.3%	+€1,040
Increase beef output by 50kg per hectare	-1.1%	€0
Increase proportion of slurry spread in spring from 50% to 70%.	-1.2%	+€62

10%

THE COMBINED IMPACT OF MAKING THESE CHANGES COULD POTENTIALLY REDUCE THE FOOTPRINT BY 10% AND BOOST THE FARMS FINANCIAL PERFORMANCE BY €3,800 ANNUALLY.

€300m

WITH UP TO 80,000 FARMS KEEPING SUCKLER COWS, REDUCING THE FOOTPRINT BY 10% COULD POTENTIALLY REDUCE GREENHOUSE GAS EMISSIONS BY UP TO 1 MILLION TONNES CO_2 EQUIVALENT AND BE WORTH OVER €300 MILLION TO CATTLE FARMERS ANNUALLY THROUGH IMPROVED EFFICIENCY.

Biodiversity

While greenhouse gas emissions are a key factor in determining the environmental footprint of products, there are other factors that need to be considered, including biodiversity, water quality and soil health.

The following contribution from Dr Brendan Dunford, Programme Manager, Burren Life Programme outlines the importance of biodiversity and what can be done to maintain and improve it.

Our biodiversity – a rich, interwoven tapestry of plants and pollinators, smells, sights and sounds – has, for countless generations, underpinned our entire food production system. However new technological developments, while generally welcome, have in many instances outstripped nature's capacity to respond, resulting in a well-documented decline in biodiversity around the world , including in Ireland. Despite this, we still have a relatively rich biodiversity, justly celebrated in Origin Green, yet we simply cannot take this for granted as we have done. Investing in biodiversity need not, as many fear, undermine our production systems, but will actually help to sustain them.

What can the food sector do to reverse the ongoing decline in biodiversity in Ireland?

At a very basic level, the food sector needs to take a much stronger lead in communicating the fundamental importance of biodiversity in ensuring the quality and long term security of our food. But biodiversity needs action right now, so the food sector needs to drive innovative, targeted schemes to support biodiversity. Through such schemes farmers must be incentivised to sustain or enhance biodiversity on their land, and be rewarded – through direct payments and through certification and marketing support – in relation to their success in achieving this.

Dr Brendan Dunford,
Programme Manager, Burren Life Programme

The recently published All Ireland Pollinator Plan clearly outlines the challenge facing us all to reverse the decline in pollinators while demonstrating clear, practical steps that can be taken to create a better environment for pollinators to survive and thrive. Protecting pollinators can have clear benefits in terms of overall biodiversity. Achieving our vision of having the lowest environmental footprint in Europe requires a concerted effort by all stakeholders to implement the actions outlined in the Pollinator Plan.

Next steps for Origin Green

Biodiversity is a challenging area to quantify at farm level. It is clear that while Ireland has a number of strengths in relation to biodiversity, a significant number of challenges exist to maintain and enhance the biodiversity in our landscape. Origin Green includes Biodiversity measures at both farm and company level with 31 verified members setting 46 targets to date.

Bord Bia is committed to helping the implementation of the recently published All Ireland Pollinator Plan and will be reviewing Origin Green to see how we can assist with the delivery of some of the key actions outlined.

In addition, Bord Bia is currently working with Teagasc to roll out a pilot project in 2016 to examine the potential for the remote assessment of wildlife habitats on farms that are members of our schemes. The objective of the pilot is to see how we could undertake such an assessment at scale and provide guidance to farmers on how to maintain and enhance habitat areas on their farm.

52%

THE WORLD WILDLIFE FUND (WWF) NOTE THAT BIODIVERSITY WORLDWIDE HAS DECLINED BY 52% SINCE 1970.

Water Quality

While improvements in water quality have been evident over recent years, challenges remain to successfully deliver on the aims of the Water Framework Directive. It requires a combination of education, research, technological development and ongoing monitoring to ensure that Ireland has the highest water quality possible. This will be a key requirement if the long term vision for Irish food and drink products is to be achieved. The challenges in relation to water quality are outlined in the following contribution by Dr Matt Crowe from the Environmental Protection Agency.

A clean, healthy and well protected environment has to be the foundation on which Origin Green is built and we are fortunate that the quality of groundwater and surface waters in Ireland is among the best in Europe. The challenge is to establish how to grow the overall value of agriculture in Ireland while also improving and protecting the overall quality of our environment. This challenge is illustrated by the EPA's most recent figures for water quality - 47% of our rivers, 57% of our lakes, 55% of our transitional waters (estuaries) and 7% of our coastal waters require improvement. There are very significant risks to the environment associated with increasing animal numbers, the associated intensification and associated increases in food processing. These risks are to water quality, air quality, soil quality, biodiversity and climate.

Eutrophication, which is caused by nutrient pollution, remains the most significant issue for surface waters in Ireland. The EPA's most recent Water Quality Report highlighted that levels of key nutrients (nitrogen and phosphorus) in groundwater and rivers have been mostly decreasing or stable since 2007, which is a welcome development. However, anticipated increases in pressures due to increasing agricultural output will need to be carefully managed to build on these positive trends.

Clearly local and regional variation is a significant issue and a constraint on intensification. Some areas are more suitable than others for intensification and more vulnerable areas need more careful protection. In underscoring its environmental sustainability credentials, Origin Green will need to provide the evidence that the agricultural sector is working to improve water quality nationally, regionally and locally while also working to increase agricultural productivity and value. Development of clear and tangible metrics for tracking the impact of intensification across the environment and agricultural will be needed. It is not enough to say that we are green, we must be able to prove that we are green.

A strong evidence base will contribute significantly to promoting credible environmentally sustainable agricultural practices and initiatives. In carrying out our on-going statutory assessment and reporting activities on Ireland's environment, the EPA will base its assessments and analysis on the most up to date scientific evidence available. A key indicator for the EPA will be Ireland's compliance with national and international commitments including water, air, climate and biodiversity and Origin Green can help Ireland meet these commitments.

Dr. Matt Crowe,
Director, Environmental Protection Agency

Next steps for Origin Green

Bord Bia recognises the potential role of Origin Green in helping ensure ongoing progress is made in relation to water quality.

Through our farm level audits, a strong focus on protection of watercourses and other water sources will be maintained. For example as part of the requirements of the Sustainable Dairy Assurance Scheme, private water supplies are required to be tested with further requirements addressing contamination prevention. Similarly, a number of criteria focus on nutrient management, prevention of soil erosion and minimising the potential for leaching and run off.

Bord Bia will continue to work with companies that are participating in Origin Green to ensure that water quality remains a priority.

Bord Bia will continue to engage with organisations such as the EPA to ensure that we can play our part in helping deliver on the objectives of the Water Framework directive.

Challenges to be addressed

Achieving the vision of having the lowest environmental footprint in Europe requires a number of challenges to be overcome, many of which include all stakeholders within the sector. These include:

Challenge One: Farm Implementation

What needs to be done?	Who needs to be involved?
• Increase participation in Bord Bia Quality & Sustainable Assurance Schemes. • Highlight the on farm and market benefits of pursuing sustainable farming practices. • Ensure that national programmes are linked to the objectives of Origin Green. • Encourage adoption of Carbon Navigator tools. • Develop additional tools/indicators that incorporate biodiversity, water quality and social sustainability. • Consider potential to encourage sustainable farming when revising legislation. • Promote sustainable farming in the development of European Union policy. • Publicise improving on-farm sustainability practices to international customers.	Bord Bia Government Departments Farm Organisations State Agencies Stakeholder Groups Member Companies

Challenge Two: Farmer Engagement

What needs to be done?	Who needs to be involved?
• Communicate the interest among international customers to visit Irish farms to learn more about Origin Green. • Publically recognise individual farmer's achievements in adopting Origin Green. • Highlight the potential benefits in relation to farm profitability to be gained from sustainable farming. • Incentivise adoption of sustainable farming practice in knowledge transfer programmes. • Develop initiatives at local level to publicise the advantages to farmers of Quality & Sustainable Assurance Schemes. • Demonstrate, where possible, how participation in national agricultural schemes contributes to Origin Green. • When undertaking research, include focus on potential to drive sustainable farming practices.	Bord Bia Farm Organisations Government Departments State Agencies Stakeholder Groups Member Companies

Challenge Three: Manufacturing & Food Processing Engagement

What needs to be done?	Who needs to be involved?
• Assess how key customers are engaged with sustainability and how Origin Green might provide a potential source of competitive advantage. • Signpost supports available to develop sustainability plans & achieve Origin Green verified member status. • Analyse in greater depth the particular challenges companies face in trying to become verified members with a view to developing further supports. • Encourage greater interaction between companies to assist in overcoming challenges. • Incentivise Origin Green participation in accessing Bord Bia services. • Motivate companies to progress their participation in Origin Green by communicating the impact of the programme.	Bord Bia Member Companies Government Departments State Agencies Industry Associations

Challenge Four: Manufacturing and Food Processor Implementation

What needs to be done?	Who needs to be involved?
• Communicate progress against plans throughout the company across all business units. • Ongoing monitoring of targets to identify potential challenges. • Communicate the progress made by companies both domestically and internationally. • Consider how policy can positively impact on Origin Green companies. • Identify any regulatory barriers that may impede progress against plans and engage with state agencies. • Communicate the progress being achieved by Origin Green.	Bord Bia Member Companies Government Departments State Agencies Industry Associations

ENHANCING OUR IMPACT ON SOCIETY



The scope of sustainability continues to broaden in the marketplace with increasing emphasis on health and wellbeing, supply chain transparency and biodiversity in addition to the ongoing emphasis on reducing supply chain emissions.

The following short contributions outline some of the potential game changers in relation to sustainability that Origin Green needs to reflect in terms of its increased scope and depth.

Traceability & Transparency

The following contribution from Jim Bracken, Sustainability Director, GS1 outlines his perspective on the importance of traceability and transparency along the supply chain.

From a sustainability perspective traceability has become a key requirement to prove the provenance of a product. Consumers, more than ever before, are looking for greater transparency and traceability across the supply chain so they can know where their food is coming from. This puts a requirement on everyone involved in the supply chain, and regulators, to ensure that systems are in place to allow this level of transparency.

The most effective traceability systems are those where there is real visibility based on batch or item serialization and where technology can rapidly identity the quantity and location of products at each point along the supply chain. This is now possible and affordable today by leveraging the power of the Internet of Things (IOT).

Many leading companies are publicly committing to only using raw material from sustainable sources. A good example is Metro's deployment of their fish traceability solution which tells consumers the location where the fish was caught. This technology is also being extended to cover their meat supply chain. Brand manufacturers are also adopting it to back up the source of their raw materials.

A good traceability system will also provide a real ROI because of the efficiencies it generates in the everyday manufacturing and supply chain processes.

Jim Bracken,
Sustainability Director, GS1

GS1

GS1 IS A LEADING GLOBAL ORGANISATION DEDICATED TO THE DESIGN AND IMPLEMENTATION OF GLOBAL STANDARDS AND SOLUTIONS TO IMPROVE EFFICIENCY AND VISIBILITY IN SUPPLY CHAINS.

Next steps for Origin Green

The scope of Bord Bia's Quality Assurance Processor standards in tandem with national legislation have helped ensure traceability and transparency across the supply chain.

Origin Green builds on this through the increased scope of areas being assessed at both farm and food company level. It also seeks to create a stronger link between farm and food processing through the requirement within the Origin Green Charter that each company sets raw material sourcing targets.

To date 122 verified members have set 164 raw material sourcing targets, which range from sourcing from suppliers with recognised certifications to developing specific sustainability initiatives with suppliers. This is helping to create stronger linkages and transparency across the supply chain. Bord Bia will continue to work with member companies to help further strengthen their raw material sourcing targets to ensure that they can clearly demonstrate the provenance of the raw materials used in their products.

Health & Wellness

The following contribution from Professor Dolores O'Riordan from the UCD Institute of Food and Health outlines the challenge facing the food sector and society generally to ensure that we enjoy a healthy diet and active lifestyle.

The increasing global incidence of diet-related diseases particularly those attributed to obesity (type II diabetes, heart disease, some cancers) is a major public health concern. The food industry is heavily criticised for contributing to obesity, often by the use of over-simplified arguments relating to marketing of 'bad' foods, high in sugar and fat content. However the goal of improving health through food is a complex one, with multiple factors (e.g. diet, lifestyle, genetics, meal constituents and food structure) at play.

Food companies face major challenges in taking an active role and showing commitment to stemming the increase in diet-related diseases. The challenges include food reformulation to reduce the energy density of foods. This is technically challenging, may have adverse effects on consumer acceptability, compromise taste, influence food safety, increase costs and lead to legislative hurdles. Reformulation inevitably requires an investment in research that may be prohibitive to some companies.

The food industry needs to support the reformulation by providing clear nutritional information, practicing responsible marketing and promoting healthy lifestyles. Although reformulation may make a positive contribution to health, it will not provide a solution. One of the biggest challenges is the relatively poor understanding of how to influence positive and long term changes in eating behaviour. This is a challenge that industry cannot face alone and partnerships will be required between educators, government bodies and industry to tackle this complex issue.

Professor Dolores O'Riordan,
Director, UCD Institute of Food and Health, University College Dublin

Next steps for Origin Green

The challenges outlined by Professor O'Riordan explain why health & wellness is an increasingly important part of the sustainability strategies of leading customers in the domestic and international marketplace.

Health & Nutrition has been a target area within the Origin Green Charter from the outset with 27 health and nutrition targets set to date. The Origin Green Charter is now being revised to place greater emphasis on this target area with each company required to have set a health and nutrition target by the end of 2016.

1.9bn

ACCORDING TO THE WORLD HEALTH ORGANISATION (WHO), IN 2014, MORE THAN 1.9 BILLION ADULTS, 18 YEARS AND OLDER, WERE OVERWEIGHT. OF THESE OVER 600 MILLION WERE OBESE.

805m

THE UNITED NATIONS FOOD AND AGRICULTURE ORGANIZATION (FAO) ESTIMATES THAT ABOUT 805 MILLION PEOPLE OF THE 7.3 BILLION PEOPLE IN THE WORLD, OR ONE IN NINE, WERE SUFFERING FROM CHRONIC UNDERNOURISHMENT IN 2012-2014.

CREATING A SHOWCASE FOR SUSTAINABILITY AT HOME

There is considerable potential to make the Irish market a showcase for the sustainable production of food and drink products. Such a showcase can help further enhance the reputation and drive market preference for our products across the globe.

In order to create this showcase we need to have every farm and every food company signed up to the sustainability agenda and extend the scope of the programme to include other elements of the value chain.

With 40,000 Origin Green farm assessments projected for 2015 and more than 470 food and drink companies signed up to Origin Green, we are on track to meet the first requirement.

In terms of extending the scope, Bord Bia is developing a sustainability charter for retailers and foodservice distributors. It is intended that the charter will operate the same way as Origin Green currently works at food company level. Retailers and foodservice distributors will develop independently verified, multiannual sustainability plans for their businesses with clear measurable targets. The targets areas included in the charter are as follows:

- **Sustainable Sourcing**
- **Operations**
- **Health & Nutrition**
- **Social Sustainability**

Bord Bia has been in contact with a number of key retailers and foodservice distributors over recent months to review the content of the charter and to gain buy-in. The response to date has been universally positive. A pilot project with a small number of retailers and foodservice companies to road test the Charter is now commencing with a view to rolling out the charter fully in the spring of 2016.

The development of the retail and foodservice charter means that Origin Green on the Irish market will cover all elements of the supply chain up to the point where consumers purchase or consume the final product. This co-ordinated approach will allow the creation of a real showcase to demonstrate how Origin Green can bring a structure to a supply chain and encourage the delivery of measurable improvements in the sustainability performance of a sector.



EXTENDING THE SCOPE

THE DEVELOPMENT OF THE RETAIL AND FOODSERVICE CHARTER BY BORD BIA MEANS THAT ORIGIN GREEN WILL COMPLETE THE SUPPLY CHAIN FROM FARM TO FORK ON THE IRISH MARKET.



PURSUING INNOVATIVE SOLUTIONS THROUGH COLLABORATION

The positioning of Ireland as a leader in the international discussion around sustainable food systems is key to growing the reputation of Irish food and drink products with customers and relevant organisations globally.

Since the launch of Origin Green, Bord Bia has actively engaged with organisations like The Carbon Trust, SAI Platform, WWF, FAO and The World Bank to help get an in-depth understanding of their priorities and what Ireland needs to offer if we are to achieve our ambition of becoming a global leader. Bord Bia's Global Sustainability Forum in November 2015 is part of this process, where over 350 sustainability professionals will spend two days in Ireland, have in-depth discussions and share learnings.

Similarly, the market placements undertaken by our Origin Green Ambassadors are key to building relationships and potential collaboration with some of the world's leading customers for food and drink products.

Bord Bia will continue to seek potential collaboration opportunities with key customers and opinion formers internationally to further drive market understanding of Origin Green and ensure that the programme develops in a way that meets the emerging needs of the global marketplace.

In Ireland, Bord Bia will continue to engage with relevant bodies and organisations to help guide the ongoing development and roll out of Origin Green.

COLLABORATION

SINCE THE LAUNCH OF ORIGIN GREEN, BORD BIA HAS ACTIVELY ENGAGED WITH ORGANISATIONS LIKE THE CARBON TRUST, SAI PLATFORM, WWF, FAO AND THE WORLD BANK.

COMMUNICATING THE STORY OF ORIGIN GREEN

Delivering on the long term vision of driving a preference for Irish food and drink products through Origin Green requires strong, clear, effective communication to trade customers, and in time, consumers.

Since the launch of the programme in 2012, considerable success has been recorded in creating awareness of Origin Green, and through initiatives such as the Origin Green Ambassador programme, building understanding among key customers. This work will continue and build further over the coming years.

Research undertaken by Bord Bia among Irish consumers shows a high degree of pride associated with the ambition of Origin Green. Recognising this, Bord Bia will roll out the Origin Green message to the Irish public over the coming five years with the dual message of inspiring pride in our country's food and drink leadership ambitions and a call to action regarding how citizens can employ the Origin Green tenets of sustainability in their own homes and communities.

It is our ambition that Origin Green will, over time, become more and more relevant in consumer choice, and firmly establishing our credentials has the potential to set Ireland up as a sustainable food leader of the 21st century.

> "Ireland is leading the way in another important area – climate smart agriculture. Its Origin Green program has mobilized Irish farmers and food producers to set and achieve measurable sustainability targets... we're helping other countries learn from this model."
>
> **Jim Yong Kim**
> **World Bank President**

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