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Executive summary

The poultry sector has delivered considerable progress across a number of sustainability metrics over recent years while playing an increasing role in meeting consumers needs for a healthy, balanced diet. Notwithstanding this progress, Ibec Poultry Group members remain committed to driving further positive progress to help safeguard the future of the sector and ensure it continues to play a key role in maintaining rural communities. This will require ongoing alignment with stakeholders to gain stronger recognition for the sector, address sustainability challenges and secure greater transparency across the supply chain.

Importance of the sector

The poultry sector (meat and eggs) remains a critical part of the rural economy in many parts of the country, delivering around €700 million in output and supports over 5,000 jobs. Around 800 farms are involved in commercial poultry production in the Republic of Ireland.

The farm-gate value of output of the poultry meat sector has increased by 30% over the 2015 to 2022 period. Poultry exports were valued at €350 million in 2022 according to Bord Bia's Export Performance & Prospects report. This represents an increase of 20% relative to 2018.

The poultry sector (poultry meat & eggs) has a multiplier effect of 1.8 which means that every €10 million increase in the value of domestic output results in €18 million of additional output in the wider economy, which highlights its role in driving the rural economy.

Role of poultry in a healthy, balanced diet

Poultry remains the most popular meat among Irish consumers, accounting for 75% of meat consumption growth since 2015 to reach around 45% market share.

This increase hasn't been matched by a corresponding growth in Irish output, which has led to a decline in self-sufficiency. This has been most pronounced in relation to breast meat with Ireland currently only 50% self-sufficient, leading to a strong increase in imports.

Egg consumption has remained firm with 900 million sold annually with 650 million eggs purchased at retail. These are produced locally by independent, local farmers and packed by independent local businesses. The remainder is sold through foodservice and food processing with the sector having additional capability to meet demand in these channels.

Poultry offers strong nutritional attributes for consumers seeking a healthy, low fat diet. Chicken has established a strong consumer reputation on the basis of it being rich in protein and low in fat with an AVEC report showing that poultrymeat is naturally high in protein while chicken breast contains 50% less kilocalories than tofu and one eight of hazelnuts.

Information from Bord Bia shows that skinless chicken breast is naturally low in salt while one portion contains half the vitamin B3 requirement for a healthy metabolism and a quarter of the selenium requirement for a healthy immune system.

Eggs perform equally strongly with Bord Bia data showing that two eggs deliver half of the daily protein requirement for an adult, all of the vitamin B12 and one third of the vitamin D, selenium and iodine daily requirements.

Similarly, the digestible indispensable amino acids score for poultry and eggs is twice as high as products such as almonds and lentils.

Sustainability performance of Irish poultry

The sustainability performance of the poultry sector remains strong reflecting the efforts made by stakeholders across the value chain. The integrated nature of the Irish poultry sector provides a strong infrastructure to manage resources in a way that minimises environmental impact.

The poultry sector is supported by the presence of Bord Bia's Sustainable Poultry Products Assurance Scheme (SPPAS) and Sustainable Egg Assurance Scheme with almost 100% of production coming from member farms. Both independently accredited schemes incorporate best practice criteria covering sustainability areas and quality assurance requirements.

Origin Green's scope extends to food manufacturing with 10 poultrymeat and egg producers currently verified members of the programme.

Low greenhouse gas emissions

The results of JRC analysis showed that Ireland had the lowest emissions intensity across the EU at 3.3kg CO₂e per kg of poultrymeat, a third lower than the EU average. This suggests that the emissions associated with Irish poultry production is almost 300,000 tonnes CO2e lower annually than would be the case if our emissions intensity was at the EU average.

For eggs Ireland ranks among the lowest EU member states in relation to emissions intensity, standing at 2.5kg CO₂e per kg of eggs. This is around 15% lower than the EU average.

The sector continues to focus on enhancing feed conversion ratios through ongoing investment in genetics and feed formulation. Feed conversion ratios for Irish poultry meat production have improved consistently with around 0.2kg less feed per kg produced required in 2022 relative to 2012. This equates to an improvement of 12% over the period. This has helped reduced emissions intensity by around 10% or 300g CO₂e per kg of meat.

Recent years have seen further investments at farm level in enhanced manure storage systems while litter spreading timing and application methods have focused on optimising the nutrient value and minimising emissions to protect the local environment.

The combined impacts of these initiatives suggests that the emissions intensity associated with broiler production was closer to 2.5kg CO2e per kg of meat in 2022, which represents an improvement of up to 20% over the last 10 years. Similar trends have been evident in relation to eggs.

"Poultry remains the most popular meat among Irish consumers, accounting for 75% of meat consumption growth since 2015 to reach around 45% market share."

Strong flock health and welfare

The sector retains a strong focus on biosecurity training and assessments at farm level. This is delivered through veterinarians trained in Animal Health Ireland's Targeted Advisory Service on Animal Health service (TASAH) with assessments completed on 500 units by the end of 2022.

The strength of biosecurity measures evident across the Irish poultry flock is demonstrated by the number of outbreaks of Avian Influenza (AI) across domestic flocks with data from EFSA showing that outbreaks in Ireland per thousand tonnes of production is among the lowest in Europe.

There are a number of ongoing monitoring and control systems in place including the National Salmonella Control and the Campylobacter Performance Improvement Programmes. The results of DAFM salmonella monitoring over the 2016 – 2022 period showed virtually all samples were negative.

The poultry sector in the EU is bound by strict legislation on welfare standards. Similarly, Bord Bia's Assurance Schemes for poultry and eggs include an Animal Health and Welfare Plan, which is developed and reviewed annually by a veterinary practitioner.

Industry data in relation to antibiotic usage trends over recent years indicates significant like for like improvements with strong double digit reductions recorded over the 2015 to 2022 period. It leaves antibiotic usage in Ireland below the EU/UK average and highlights the ongoing improvement evident over the period.

Analysis undertaken by DAFM suggest that around 90% of birds don't receive any antibiotics, which is well ahead of international norms. In addition, HP-CIA's have been removed from use. These developments combine to result in extremely low levels of antimicrobial resistance.

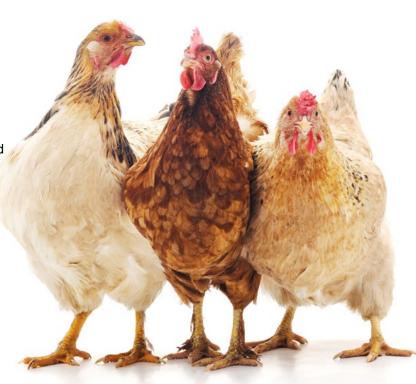
Progress at processing level

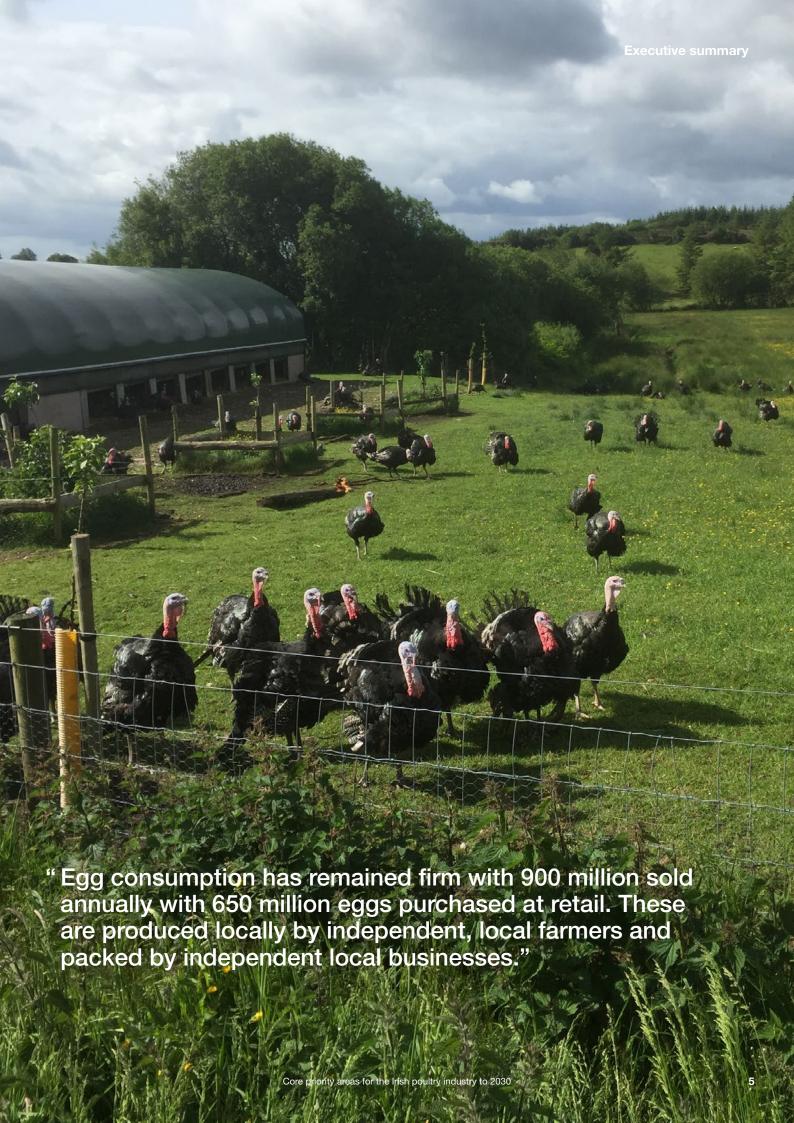
The poultry sector has made significant progress in relation to sustainable sourcing, decarbonising processing and maintaining its support for local communities. In 2022, almost 100% of poultry meat and eggs were sourced from Bord Bia Sustainable Assurance Scheme member farms and growers.

The integrated nature of the poultry sector means there is a consistent focus on driving production efficiency and the sustainability of farm level production. This is driven by a network of industry field officers that help ensure ongoing best practice.

Significant progress has been made in relation to packaging with over 70% of plastic packaging now consisting of recycled content with almost all paper and board Forest Stewardship Certified.

Poultry meat processors have made considerable gains in reducing Scope 1 and 2 emissions since 2015 with an average decline of around 20% in energy related emissions. Significant efforts have been made by processors and producers to minimise waste, increase the level of recycling and elimination of waste to landfill. Since 2015, the sector has reduced water usage by 10%.





About the industry

The poultry sector is a critical part of the rural economy in many parts of the country.

involved in commercial poultry production

19%

Valued at

€700
million
at wholesale

prices

The sector produces

170,000 tonnes

of poultry meat and

900 million eggs



3%

Chicken, turkey and duck as percentages of poultry meat output



Economic contribution



Farm gate output of poultry meat valued at

€185 million

in 2022

The sector spends up to

€400 million

on inputs annually



Supports over

5000 jobs



Contributes more than

€140 million

in wages

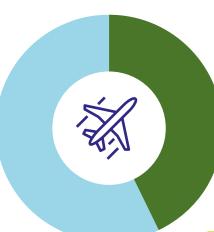
Exports

Poultry exports were valued at

€350 million

in 2022

Represents
20%
increase
since 2018



€200m in value-added exports

€150m in exports of primary poultry products

Exported to some

48
countries
in 2022



Future priorities

The policy and market imperatives to deliver ongoing progress in the period ahead are clear. The core priority areas for the Irish poultry industry are outlined below.

Greenhouse gas emissions

The poultry sector will work with Bord Bia to further develop their carbon footprinting model to provide a uniform approach across the sector for tracking individual performance against national averages. This will be supported by the industry network of field officers.

Every two point improvement in feed conversion ratios for broilers translates into a 1% reduction in greenhouse gas emissions and also reduces the amount of land required for feed production by a similar proportion. The industry will continue to work to drive further reductions in feed conversion ratios in the period to 2030 with an ambition to deliver double digit progress for broiler production.

Industry members are committed to working with feed ingredient suppliers to further explore the potential to reduce reliance on soya through increased utilisation of native protein sources while maintaining performance and minimising emissions.

Manure utilisation

Poultry litter represents an underutilised resource given its nutrient value and the potential role it can play in delivering Ireland's Climate Action Plan and circular economy ambitions.

There are a number of potential uses for poultry litter that the industry is committed to exploring with relevant stakeholders. These include utilising litter as a feedstock for AD plants, Biochar, fertiliser for gardening and developing circular loops between the tillage and poultry sector. Delivering on these will require the supported development of the infrastructure needed that make them accessible to farmers and provide a viable option to generate revenue for the poultry sector while minimising emissions, boosting soil health and protecting water quality.

Energy generation

There is considerable opportunity for the poultry sector to play a proactive role in the development of solar infrastructure as part of Ireland's renewable energy ambitions. The recent opening of the new Targeted Agricultural Modernisation Scheme (TAMS 3) will help provide further impetus to investments at farm level to enable farmers to generate their own electricity. The sector is committed to encouraging the installation of solar technology at farm level and enhanced solar investment at processing/production level.

Flock health and welfare

Supporting the further delivery of the TASAH biosecurity service across broiler, duck, turkey and layer farms will be a priority for the poultry sector in 2023 and beyond.

The sector is committed to maintaining high welfare standards across the value chain and will engage with stakeholders to explore the potential to coordinate data tracking at a national level in relation to welfare indicators.

The poultry industry will support the roll out of ante and post mortem checks with results being made available to producers on an ongoing basis to help drive flock health.

The collection of animal medicines data is being boosted by the implementation of an electronic medicines prescription system. This went live in January 2023.

Building on the substantial progress made to date, the poultry sector is committed to working with other stakeholders to develop species relevant welfare metrics with ongoing data tracking at a national level, explore mechanisms to enhance national research capability and support strengthened knowledge transfer of best practice across a range of health and welfare measures.

Nature

The considerable investments being made through Eco-Schemes and Environmental programmes under the new CAP in relation to space for nature, habitat enhancement and watercourse protection will help encourage farm practices that can enhance biodiversity. The poultry industry is committed to working with its farm suppliers to encourage biodiversity practices while ensuring strong biosecurity is maintained at farm level.

Decarbonising processing

The Government target of reducing greenhouse gas emissions from industry by 35% by 2030 relative to 2018 represents a significant challenge for the poultry sector given the considerable progress already delivered. However, the sector remains fully committed to driving further progress toward decarbonisation.

The immediate focus among companies is to further reduce Scope 1 and 2 emissions through utilisation of renewable energy from certified sources, heat recovery technology and investment in wind/solar energy. In addition, an ongoing emphasis on waste recycling and minimising water use will help drive further gains in resource efficiency and minimise environmental impact.

Building on a long tradition of utilising by products, poultry companies will continue to invest in technologies that support the utilisation of the broadest range of by-products possible and contribute positively to the delivery of Ireland's Circular Economy ambitions.

Poultry processors will engage with Meat Technology Ireland to embrace its work programme in relation to packaging and shelf life extension as part of efforts to minimise product and packaging waste.

Contributing to local communities

The 10 poultry members of Origin Green have set clear measurable targets to quantify their broader contribution to social sustainability. These targets span supporting local community initiatives, employee wellbeing programmes and a focus on diversity and inclusion within their businesses. The sector is fully committed to continuing and enhancing its role in supporting the future health of its local communities.

Educating consumers

The poultry industry will engage with Bord Bia and Safefood to strengthen communications to consumers around the nutritional and environmental attributes of poultry and eggs to help them make informed purchase decisions. The Ibec Poultry Group will engage with Meat Technology Ireland to explore the potential for poultry to be part of its work programme.

"The sector is committed to maintaining high welfare standards across the value chain and will engage with stakeholders to explore the potential to coordinate data tracking at a national level in relation to welfare indicators."

Issues to be addressed

The priorities outlined provide a sense of the commitments being made by the industry. However, there are a number of issues that need to be addressed in order to secure a positive future for the sector. These include:

- Recognition of the sector at a policy level Notwithstanding the support provided though programmes such as TAMS, the level of priority given to the poultry sector at a policy level is limited currently. There is a need for a national roadmap to guide the future sustainable development of the sector as part of the implementation of Food Vision 2030.
- An increasing proportion of consumer demand for poultry products in Ireland is being met by imports with volumes averaging 130,000 tonnes over recent years. This represents a major lost opportunity for the domestic poultry to service the needs of Irish consumers with locally produced products, particularly in the foodservice and butcher channels. The value of poultry sales at foodservice level prior to COVID was over €300 million with up to 90% of this being met by imported product.

Addressing this requires greater transparency across the supply chain. There is a need strengthen the implementation of country of origin labelling to ensure it is being enforced fully across all parts of the supply chain, particularly in relation to loose meat sales and foodservice while also ensuring that Quality Mark controls are robustly enforced at retail.

■ Consistency of standards

Ireland rightly prides itself on having high food standards and controls. There is a real fear that standards associated with some imported products are at a lower level, which creates a potential risk to the food chain and results in imports being more competitively priced. This needs to be addressed at an EU level. Similarly, the decision of the UK to leave the EU creates the potential for different food standards over time. Given the All Island nature of the Irish poultry sector, it is critical that there is an All Island approach to ensuring the same standards are consistently applied to avoid any potential competitiveness issues arising from regulatory divergence. A similar consistency of standards is needed for all poultry products entering the EU market.

■ Approach to welfare legislation revision
The recommendations outlined in EFSA's
Opinion on the welfare of broilers and
layers on farm include a number of areas of
concern that, if implemented, would severely
impact on the economic sustainability of the
poultry sector while also resulting in a higher
environmental impact. There is a real need
for the voice of the sector to be heard more
strongly in the development of revised animal
welfare legislation to ensure it recognises
day to day production realities, the economic
impact of potential changes and considers all
elements of sustainability.

■ Market access

Optimising the value of poultry output requires access to the widest range of markets possible for different cuts and products. While some progress has been made over recent years, there is a need for increased efforts in advancing market access negotiations with poultry part of a multiproduct, multi-species strategy.

■ Processing broiler breeders and layers
There is a need to ensure that broiler breeders
and laying hens at the end of their productive
cycle are processed in Ireland. This requires all
relevant actors to work together to ensure the
availability of an end market on a year round
basis to provide market certainty to farmers,
ensure strong welfare standards and offer the
potential to add value to this product.



■ Research and knowledge transfer

There is currently a limited national infrastructure in place to support the delivery of poultry specific research and knowledge transfer, which impacts on the potential for the sector to lead the development and implementation of emerging best practices technologies.

There is a need to secure additional funding and resources to address this challenge as a matter of urgency. From a knowledge transfer perspective an immediate step required is to expand the number of poultry farms that are part of the Signpost programme and an increase in the number of advisors dedicated to the sector.

■ Enabling the decarbonisation of poultry processing

There are a number of structural enablers required to incentivise the delivery of a decarbonised processing sector.

These include:

- Clearer framework to encourage the adoption of technologies such as Anaerobic Digestion and biochar with incentives in place to deliver a co-ordinated infrastructure.
- Ongoing strong grant supports for the adoption of solar photovoltaic technology (PV) and Biomass to provide greater certainty regarding the return on investment.
- Streamlined planning processes for wind, solar and anaerobic digestion.
- Financial incentives and access to finance to drive investment in renewable energy.

Importance of the poultry sector

The poultry sector remains a critical part of the rural economy in many parts of the country. The traditional cluster nature of the sector persists with a number of key regions driving the value generated by the sector.

On an annual basis, the sector produces around 170,000 tonnes of poultry and 900 million eggs delivering a secure, safe and nutritious source of protein for consumers in Ireland and export markets.

There are around 560 poultry breeding, hatching and rearing farms in Ireland. Annual output stands at around 110 million broilers 4.5 million ducks and 1.5 million turkeys.

Grower numbers

The sector is highly integrated and unlike many other farm systems, poultry production, both meat and eggs, does not receive any income support or subsidies.

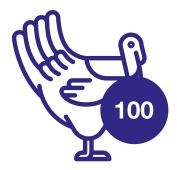
Around 800 farms are involved in commercial poultry production in the Republic of Ireland. A breakdown across different species is outlined below.

In addition, there are an estimated 200 egg producers supported by a network of hatchery farms. More than 45% of eggs coming are produced by independent free-range egg laying flocks with around 50% produced in enriched colony sites. It is estimated that were more than 3.5 million laying hens in Ireland in 2022.

Distribution of grower numbers









Source: Industry information *includes hatcheries, rearing and breeder farms

Annual output

valued at

Regional clusters

The poultry sector is built around a number of clusters across the country. In these regions, the sector represents the main agri-food enterprise and provides a critical source of economic activity given the level of spend through direct and indirect service providers.

The Border region accounts for around 70% of the flock followed by 14% in the southern region, 12% in the mid-west/west and the remaining 4% in the midlands and eastern region. The presence of these clusters helps ensure the delivery of a robust infrastructure to support producers.

Sector output

The poultry sector (meat and eggs) produces an annual output of around €700 million at wholesale prices. The sector supports over 5,000 jobs and over 3,500 of these are based in the border region.

Analysis by Professor Thia Hennessy in 2020 estimated that the sector spent more than €250 million on farm inputs (including animal feed), while

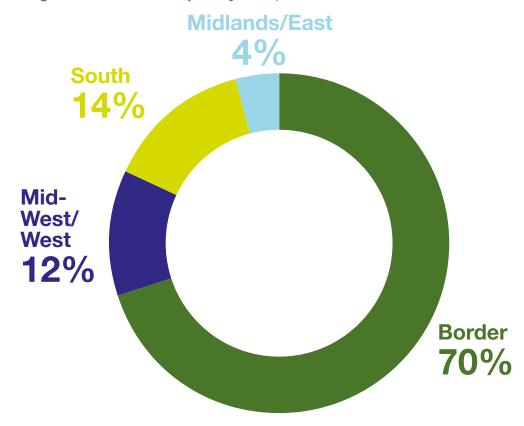
the processing sector spent around €140 million on wages, salaries and other inputs annually. This analysis was undertaken prior to the unprecedented input cost inflation since early 2022.

inflation since early 2022.

It also showed that the poultry sector has a multiplier effect of 1.8 which means that every €10 million increase in the value of domestic output results in €18 million additional output in the wider economy. This highlights the important role of the sector in supporting the rural economy across different parts of the country.

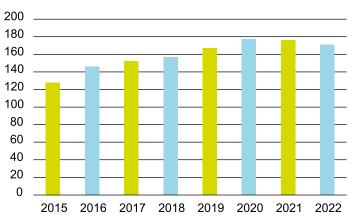
The farm-gate value of output of the poultry meat sector has increased by 55% over the last 30 years to reach €185 million at producer prices in 2022 according to advanced estimates from the Central Statistics Office. Much of this growth has been evident over recent years with a rise of 30% recorded over the 2015 to 2022 period.

Regional distribution of poultry flock, 2020



Source: Central Statistics Office





Production up by

33% since 2015

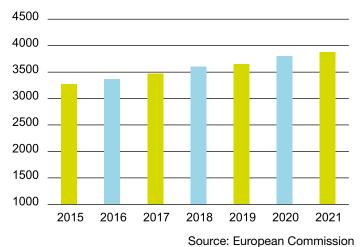
Source: European Commission

This growth was helped by production volumes increasing by a third since 2015 to reach 171,000 tonnes. This reflects productivity gains by the sector and firm broiler prices for much of the period.

Chicken accounts for over 75% of total output followed by ducks and turkey while annual egg output is estimated at 900 million eggs. Output recorded consistent growth over the 2015 to 2021 period driven by an increase of 20% in laying hen numbers.

The Irish egg sector has made considerable progress over the past number of years, particularly with the significant increase in free range production. Around 4% of laying hens were in organic systems having increased by 50% over the period. These developments highlight the investments made by the sector to meet evolving consumer demands.

Irish Laying Hen trends ('000 head)



Laying hen numbers are

20%
ahead
of 2015

"The poultry sector exported some €200m of value added poultry in 2022 reflecting investments made to boost the value of output. Poultry now accounts for almost a quarter of value added meat exports."

Exports

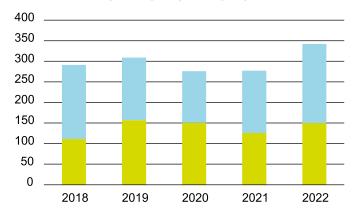
Overall poultry exports were valued at €350 million in 2022 according to Bord Bia's Export Performance & Prospects report. This represents an increase of 20% relative to 2018.

Primary poultry exports were valued at €150 million, which equates to around 4% of total primary meat exports. The poultry sector exported some €200m of value added poultry in 2022 reflecting investments made to boost the value of output. Poultry now accounts for almost a quarter of value added meat exports.

The duck sector is highly export oriented with 65% of the ducks processed destined for export markets. Almost 50% of duck exports go to the high-end food service sector in the UK and over 15% of duck exports are destined for Asian markets.

The vast majority of eggs are produced for consumption on the Irish market or as ingredients for other food products. However, some high value niche exports take place to the United Kingdom, the EU and the Middle East. Further potential for growth exists if the sector is supported with product and market development initiatives.

Trend in Irish poultry exports (€m)



Source: Bord Bia, Export Performance & Prospects

Primary poultryValue-added

50%
of hens in free range or organic systems in Ireland compared to less than 20% across EU



Role of poultry in a healthy, balanced diet

Consumers across the globe are increasingly looking to poultry as a source of animal protein. At a global level poultry became the most popular meat in 2017 and remains the fastest growing in terms of annual consumption.

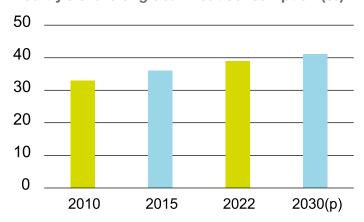
This trend is set to continue with OECD – FAO suggesting that poultry will account for 50% of global meat consumption growth in the period to 2030. This will lead to poultry accounting for 40% of meat consumption by 2025.

There are a number of key drivers behind this consumption growth with poultry being viewed as a convenient, affordable meat with strong nutritional attributes and a low carbon footprint.

Consumption trends in Ireland

A similar picture is evident in Ireland with poultry building on its position as the most popular meat. Data from the CSO shows growth of 28% in poultry consumption over the 2015 to 2021 period. This resulted in poultry accounting for 75% of meat consumption growth to reach approximately 45% market share. The value of duck consumption at retail level has recorded a fivefold increase since 2011.





Source: OECD-FAO Agricultural Outlook, 2022 - 2031

Poultry to account for 50% of global meat consumption growth to 2030

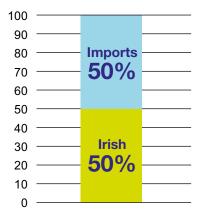
The growth in overall consumer demand for poultry in Ireland hasn't been matched by a corresponding growth in Irish output leading to the Irish poultry meat sector no longer being self-sufficient. This trend is most pronounced in relation to breast meat with Ireland currently only 50% self-sufficient.

This represents a significant missed opportunity to increase the value of Irish output and offer a secure source of supply to meet Irish consumer demand for high quality white meat rather than rely on various origin imports. It also means that the sector is challenged by the prevalence of imports with volumes averaging 130,000 tonnes over the last five years. This puts considerable competitive pressures on domestic poultry and impacts on the economic returns secured by the sector.

Similarly, egg consumption has remained firm over recent years with more than 650 million eggs purchased at retail level by Irish consumers annually reflecting the positive consumer perception of eggs offering a healthy meal option, being easy to cook and offering good value for money.

Analysis undertaken by Bord Bia across different meat species and retailers shows that in the final quarter of 2022 almost 80% of chicken sold in Irish retail outlets carried the Quality Mark. This reflects the strength of demand among Irish consumers for products carrying the Quality Mark as they associate such products with being fully traceable and produced in Ireland. A similar proportion of eggs are estimated to carry the Q mark.

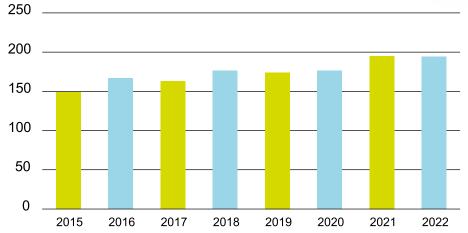
Sources of breast meat consumed in Ireland



Source: Ibec based on CSO data



Irish Poultry consumption, 2015-2022 ('000 tonnes)



Source: Ibec based on CSO & Industry data

This suggests the majority of poultry meat imports are destined for the food service and butcher channels or value added processing. Previous industry research suggested that up to 90% of chicken sales at foodservice level were imported. Prior to the COVID pandemic Bord Bia estimated the value of poultry sales to the food service sector were worth more than €300 million annually. This gives an indication of the scale of missed opportunity for the Irish poultry sector.

Nutritional attributes of poultry

A key strength of poultry is the nutritional attributes it offers to consumers seeking a healthy, low fat diet. Chicken has established a strong consumer reputation on the basis of it being rich in protein and low in fat.

This is highlighted by an AVEC report, which shows poultry meat is naturally high in protein and relatively low in kilocalories. A comparison of 28 grammes of protein from a chicken breast, hazelnuts and tofu shows that chicken has 50% less kilocalories than tofu and one eight of hazelnuts.

Similarly, the digestible indispensable amino acid score for poultry and eggs, which reflects the percentage of total daily requirement of indispensable amino acids contained in the average required daily protein intake in different proteins, shows that the score for poultry and eggs is twice

as high as products such as almonds and lentils according to a study published in *The Journal of Nutrition* in 2022. This highlights the critical role of poultry and eggs in providing high quality protein as part of a healthy diet.

According to Safefood, chicken is an excellent source of protein in the diet. A 100g portion of grilled chicken, without skin, provides approximately 60% of the recommended daily allowance of protein for men and 70% for women. It is also a source of a range of vitamins, minerals and trace elements.

Information from Bord Bia shows that skinless chicken breast has less than 4% fat, is naturally low in salt while one portion contains half the vitamin B3 requirement for a healthy metabolism and a quarter of the selenium requirement for a healthy immune system.

Duck represents an excellent source of protein with 75g of cooked meat providing more than 25% of recommended daily protein intake. It is also a strong source of vitamin B, iron, selenium and omega three fatty acids.

Eggs perform equally strongly with Bord Bia data showing that two eggs deliver half of the daily protein requirement for an adult, all of the vitamin B12 and one third of the vitamin D, selenium and iodine daily requirements. An average egg contains about 70kcal and 6g protein, which make it an ideal product as part of a healthy diet.

Kilocalories generated by same amount of Protein (28g)



133g Chicken Breast

140kcal



188g Hazelnuts

1,120kcal



359g Tofu

275kcal

Source: AVEC

Sustainability performance of Irish poultry

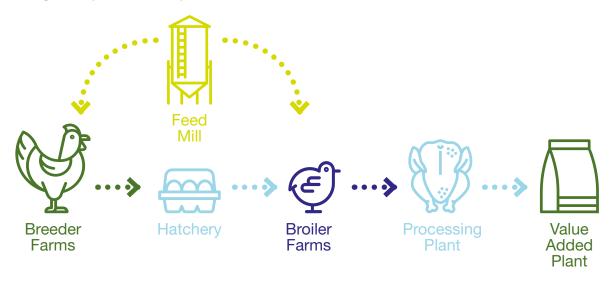
The Irish poultry sector performs strongly in relation to sustainability with ongoing improvements delivered over recent years, reflecting the efforts made by stakeholders across the value chain.

Strongly integrated sector

Relative to most other farm systems, the Irish poultry meat sector is highly integrated in relation to breeding, feeding, rearing and processing with efficient production systems in place across the range of output produced. This provides a strong infrastructure to manage resource use in a way that minimises environmental impact.

Broiler production is vertically co-ordinated by integrators. While farmers remain the owners of production buildings, most technical decisions are made by integrators with a strong farm advisory infrastructure in place to ensure production is delivered to the highest possible standards. The system typically operates to a just in time model with a high degree of agility to adapt rapidly to market developments. A similar system is in place for duck production while farmers play a more direct role in turkey and egg production.

Integrated production system



Benefits of integrated production systems

- Highly efficient and agile
- Strong flock performance through managed inputs
- Consistently strong biosecurity measures and quality controls
- Ongoing focus on flock health and welfare performance

The poultry sector is further supported by the presence of Bord Bia's Sustainable Poultry Products Assurance Scheme (SPPAS) and Sustainable Egg Assurance Scheme as part of Origin Green with almost 100% of production coming from member farms. Both independently accredited schemes incorporate best practice criteria covering sustainability measures and quality assurance requirements for chicken, turkey, duck and eggs from breeding farms, hatcheries and production farms. Compliance is assessed through an independent third party auditing infrastructure.

The scope of both schemes encompasses significant quality assurance and sustainability criteria, which allows the sector to assess performance and track progress. The following table summarises some of the key criteria assessed by the Schemes:

Key Sustainable Assurance Scheme Criteria

Quality Assurance	Sustainability
Biosecurity	Carbon footprint assessment
Flock Health and Welfare	Feed usage
Housing and Environment	Manure management
Health and Safety	Energy efficiency
Animal Medicines	Water

Origin Green's scope extends to food manufacturing with 10 poultrymeat and egg producers currently part of the programme. Membership requires a comprehensive multiannual plan that focuses on reducing environmental impacts and ensuring companies play a positive role in their local community. Each plan contains independently verified, measurable and timebound targets that are monitored annually.

Target areas include sustainable sourcing, packaging, greenhouse gas emissions, energy, waste, water, biodiversity, health and nutrition, community initiatives and employee wellbeing.



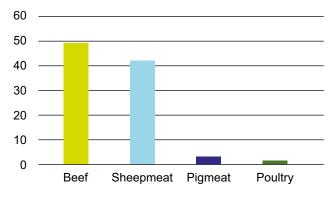
Low greenhouse gas emissions

The footprint associated with poultry and egg production at farm level represents the main source of Scope 3 emissions for the poultry sector.

A number of international studies has demonstrated the relatively low emissions intensity evident for poultry. Figures outlined in the OECD-FAO Agricultural Outlook 2022 – 2031 place emissions intensity for poultry on a liveweight basis at less than 10% of the average for meat products. This report suggests that poultry emissions intensity is helped by its strong feed conversion ratio and minimal methane emissions.

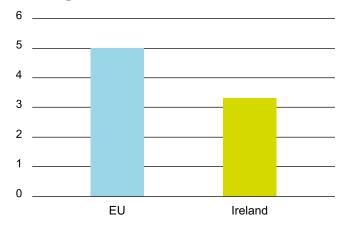
At a European level, the last comparison of emissions intensity across member states was published by the Joint Research Centre of the European Commission in their Evaluation of the livestock sector's contribution to the EU greenhouse gas emissions report. The results of this research showed an EU average emissions intensity for poultry meat 5kg CO₂e per kg with results ranging from 3.3kg CO₂e to 17.8kg CO₂e across member states. Ireland had the lowest emissions intensity across the EU at 3.3kg CO₂e per kg, a third lower than the EU average. Ireland also had the lowest absolute emissions among the 12 member states that represent 90% of poultry output.

Global GHG emissions intensity (Kg CO₂/Kg liveweight)



Source: OECD-FAO Agricultural Outlook, 2022 - 2031

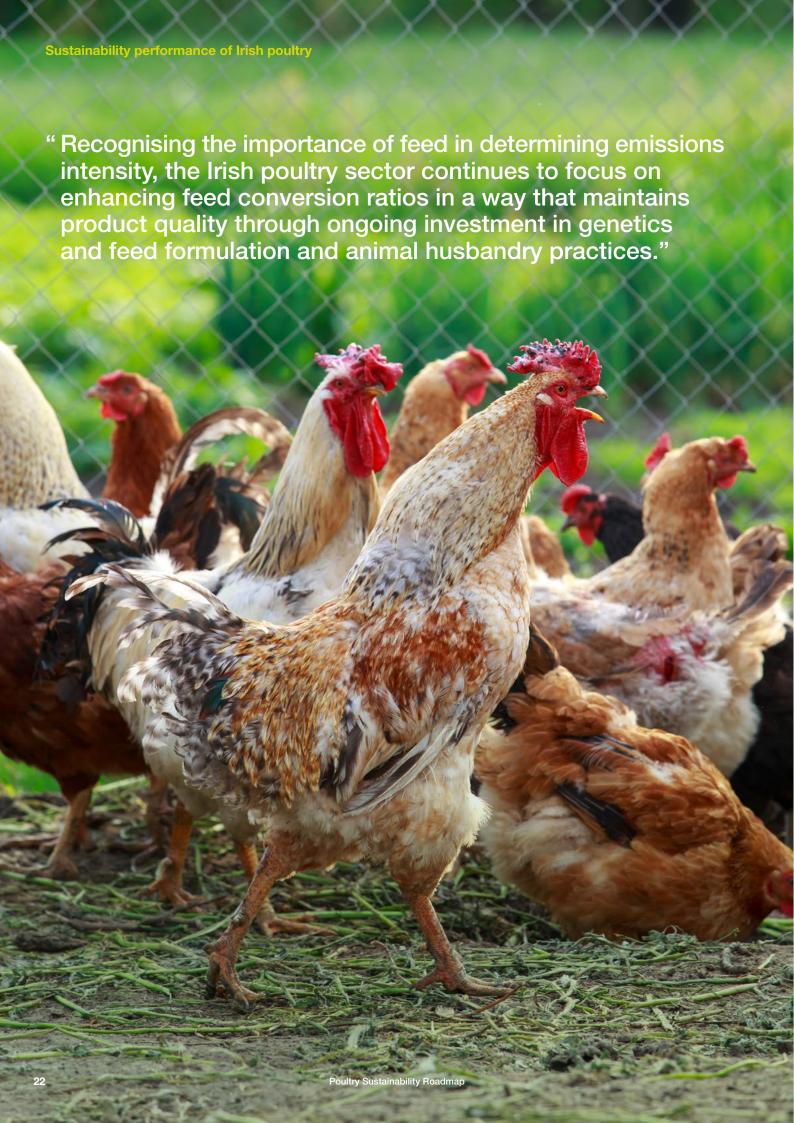
Poultry meat emissions intensity (Kg CO₂/Kg liveweight)

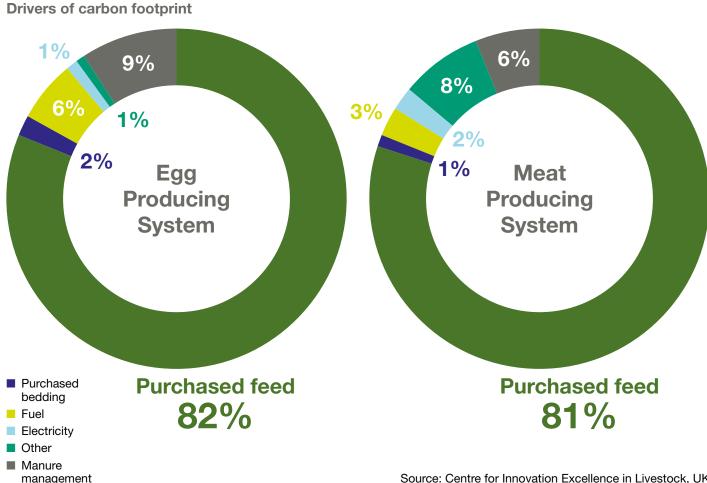


Source: Joint Research Centre of EU Commission.2011

To put these figures in context, these results suggest that the emissions associated with Irish poultry production is almost 300,000 tonnes CO₂e lower annually than would be the case if our emissions intensity was at the EU average. This equates to around 5% of the quantum government target for the reduction in greenhouse gas emissions from agriculture by 2030.

For eggs, Ireland ranks among the lowest EU member states in relation to emissions intensity, standing at 2.5kg CO₂e per kg of eggs. This is around 15% lower than the EU average.





Source: Centre for Innovation Excellence in Livestock, UK

Key footprint drivers

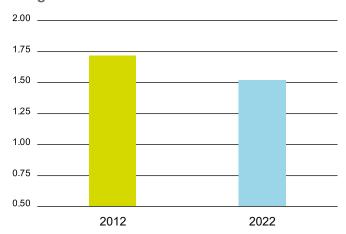
There are three key drivers that influence emissions for poultry production, namely feed, manure and energy. Bedding is an additional factor in driving turkey emissions. Research undertaken by the Centre for Innovation Excellence in Livestock in the UK suggests that feed accounts for 80% of farm level emissions across both poultrymeat and eggs. Manure management accounts for around 9% of poultrymeat emissions and 6% for eggs with energy standing at 6/7% depending on the system.

Ongoing progress

Recognising the importance of feed in determining emissions intensity, the Irish poultry sector continues to focus on enhancing feed conversion ratios in a way that maintains product quality through ongoing investment in genetics and feed formulation and animal husbandry practices.

The feed conversion ratio associated with Irish broiler production currently stands at around 1.5kg of feed per kg produced for a 2kg broiler, which compares favourably with other EU producers.

Progress in Feed Conversion Ratios



Source: Industry information



CASE STUDY

Silver Hill Duck focus on Sustainable Feed Conversion Rate

Silver Hill Duck has a fully integrated closed loop supply chain involving more than 4.5 million ducks annually. Silver Hill Duck is continuously implementing key projects across their breeding, genetics and sustainability programmes aimed at enhancing the future viability of both the business and the wider poultry sector.

Through careful genotype selection over the past nine years, Silver Hill Duck have succeeded in improving their feed efficiency, resulting in an average reduction in the carbon footprint across their 32 farms of more than 11% since 2016. Key to this success was maintaining genetic performance and not compromising the quality or customer expectation of a world renowned product exported to 30 countries globally.

Through these nutritional trials each duck reduced their feed intake by 9.2% representing a total annual reduction of more than 3,750 tonnes of feed, the equivalent of 190 lorry loads. Benefits include reduced methane from ducks, a reduction in transport and feed, improved feed conversion and increased revenue.

Feed conversion ratios have improved consistently over the last 10 years with a cumulative improvement suggesting that around 0.2kg less feed per kg produced was required in 2022 relative to 2012 for the same weight of bird. This equates to an improvement of 12% over the period.

With feed accounting for around 80% of farm level emissions, this improvement alone has helped reduced overall emissions intensity by around 10% or 300g CO₂e per kg of meat over the period.

Similarly, ongoing genetic improvement in poultry breeding stock has helped deliver productivity improvements with target weights reached 10% more quickly in 2022 than a decade earlier. This helps reduce overall feed requirements, litter output and energy use in production systems. For eggs, genetic improvements have helped extend the laying period and increase egg output while maintaining feed intake.

Manure management represents another important driver of emissions with over 100,000 tonnes of litter produced by broilers annually and a further 10,000 tonnes arising at enriched colony egg laying sites.

The main source of emissions relates to the storage and application of manure. Recent years have seen further investments at farm level in enhanced manure storage systems while litter spreading timing and application methods have focused on optimising the nutrient value and minimising emissions associated with this valuable resource in a way that protects the local environment.

Poultry litter is a rich source of nitrogen and phosphorus that offers significant potential to drive value as a fertiliser or as an input into renewable energy systems. This potential is explored further later in the report.

Ammonia emissions remain a challenge at a national level and has led to considerable focus on mitigation technologies over recent years such as utilisation of protected urea, low emissions slurry spreading techniques and research into slurry additives. Data from the EPA for 2020 shows a reduction of 1.6% in ammonia emissions relative to 2019. The poultry sector represents just 4% of agriculture related ammonia emissions. Poultry litter offers further potential to reduce the need for chemical fertilisers, which would limit overall ammonia emissions.

CASE STUDY

Manor Farm Nutrition Centre and Cefetra Certified Responsible Soya

The Manor Farm Nutrition Centre is the only dedicated poultry feed mill currently in operation in the Republic of Ireland. Manor Farm through their parent company Scandi Standard have invested heavily in the Nutrition Centre in recent years as it is a unique facility within the Group.



Procurement of quality raw materials is vital in the operation of any feed mill and Manor Farm has worked closely with the Cefetra Group for many years in the procurement of such raw materials.

All Manor Farm broiler feed is produced at the Nutrition Centre and soya constitutes a large proportion of the raw material in the form of soya bean meal (SBM) and soya oil. In recent years, there has been a global increase in soya production which in turn has seen an increase in demand for soya that is **responsibly sourced**.

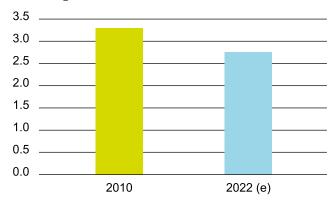
In 2008, Cefetra developed the **Certified Responsible Soya (CRS)** programme with the aim of achieving a broad implementation of sustainability certification in the soya sector 'by working together with customers, suppliers and others involved in the soy supply chain willing to push the bar to a more sustainable future.' The CRS Standard is a high-level standard and includes important indicators such as zero-conversion/zero-deforestation.

Since 2018, all Soya Bean Meal purchased by the Manor Farm Nutrition Centre is supplied through the Cefetra CRS programme. This means that we can be confident that the 35,000+ Tonnes per annum of Soya Bean Meal we take in, has been responsibly sourced, in keeping with our vision of a sustainable future for *Our People, Our Chickens and Our Planet*.

Energy efficiency has remained a key focus of the poultry sector with further investment assisted by Government supports. DAFM's Pig & Poultry Investment Scheme has provided 40% grant funding since 2015 aimed at improving energy efficiency at farm level. This has encouraged investment in energy efficiency measures such as water meters, boilers and solar panels, as well as upgrades to poultry housing such as roof and wall insulation, LED lighting and disease reduction facilities for existing poultry houses.

The combined impacts of these areas and enhanced productivity through bird performance suggests that the emissions intensity associated with broiler production was closer to 2.5kg CO₂e per kg of meat in 2022. This represents an improvement of up to 20% over the last 10 years.

Progress in Feed Conversion Ratios (Kg CO₂e per Kg meat)



Source: 2010 data – JRC; 2022 data – industry information

Similar trends have been evident for eggs helped by genetic improvements. The results of a recent Environmental footprint study for the egg sector in Denmark, undertaken by the Danish Egg Association, showed a drop of 44% in the carbon footprint of free range systems over the 2000 to 2020 period, helped by a reduced footprint associated with compound feeds due to a lower land use change impact and improved FCR. Irish egg production has shown similar trends over the period.

Strong flock health & welfare

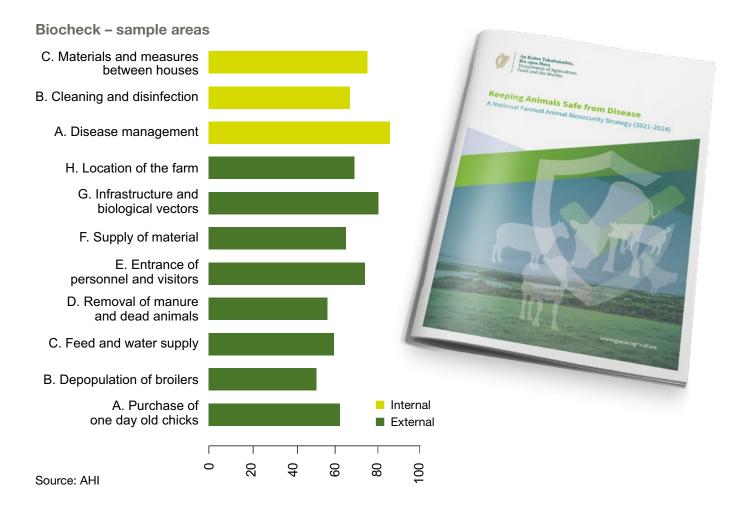
Strong flock health and welfare remains an absolute priority for the poultry sector recognising the role that it plays in driving performance. A core focus remains delivering the highest possible biosecurity standards across the Irish poultry flock. This ambition is highlighted in the *National Farmed Animal Biosecurity Strategy 2021 – 2024*, which builds on the One Health One Welfare approach. This strategy focuses on further embedding routine farm biosecurity practices and is built on a number of strategic action areas including:

- Collaboration between the competent authorities in Ireland and Northern Ireland in relation to the biosecurity status of the Island of Ireland to give full effect to its status as a single epidemiological unit.
- Online central information hub for key biosecurity information
- Codes of Good Practice for farm biosecurity and use of risk assessment tools

The sector retains a strong focus on biosecurity training and assessments at farm level. This is delivered through veterinarians trained in Animal Health Ireland's Targeted Advisory Service on Animal Health.

The Biocheck review follows a standard approach developed by Ghent University to assess both bioexclusion and biocontainment. This involves a risk based biosecurity scoring system and allows tracking over time and comparison across flocks.

The free assessment involves 79 questions for broilers and 120 questions for layers. The final



report contains recommendations in relation to potential enhancements. The vast majority of broiler farms have undertaken at least one assessment with a strong increase in the number of layer farms availing of the service over the last year.

The strength of biosecurity measures in place is demonstrated by the number of outbreaks of Avian Influenza (AI) across domestic flocks. Data from the European Food Safety Authority (EFSA) show that over the October 2020 to the end of June 2023 period when H5N1 outbreaks emerged, the number of AI outbreaks in Ireland per thousand tonnes of production was among the lowest in Europe with a lower outbreak rate than key producing nations such as France, Italy, Germany, Poland, the Netherlands and the United Kingdom.

There are a number of ongoing monitoring and control systems in place for the sector. This includes the rigorous implementation of legislation by the Department of Agriculture, Food and the Marine. This is supported by the implementation of programmes such as the National Salmonella Control and the Campylobacter Performance Improvement Programmes.

Routine monitoring for salmonella is undertaken by DAFM across all type of poultry production and feed mills manufacturing poultry feed. The results of this analysis over the 2016 – 2022 period were very positive.

The poultry sector in the EU is bound by strict legislation on welfare standards focused on stocking density, lighting, litter, feeding, noise, inspections, and ventilation. The Directive outlines 'welfare indicators' to be monitored to help inform decisions taken on farms. There continues to be strong collaboration between DAFM and the poultry industry to help maintain the highest possible health and welfare standards.

Similarly, Bord Bia's Assurance Schemes for poultry and eggs include significant criteria across these areas culminating in an Animal Health and Welfare Plan that is developed by a veterinary practitioner and reviewed at least annually.

Bord Bia Animal Health and Welfare Plan



Low and improving antibiotic use

The Irish poultry sector's approach to animal medicines is guided by the *One Health National Action Plan on Antimicrobial Resistance 2021 – 2025*. The animal health actions outlined focus on preventing illness and disease to reduce the use of antibiotics and effectively tackle antimicrobial resistance (AMR) from an animal and public health perspective.

The poultry sector has focused on a number of action areas, including:

- Reducing the spread of infection and disease
- Improving awareness and knowledge of AMR

"Data from the European Food Safety Authority (EFSA) show that over the October 2020 to the end of June 2023 period, the number of Al outbreaks in Ireland per thousand tonnes of production was among the lowest in Europe."

CASE STUDY

Innovating to reduce antibiotic usage

Western Brand has implemented an innovation programme across its value chain to reduce antibiotic use that has delivered a halving in antibiotic usage over the last three years relative to the 2015 – 2017 period.

The programme starts by focusing on delivering the highest possible health status for breeders and eggs to minimise the bacterial challenge when chicks are hatched. Targeted vaccination of chicks has also helped to improve feed conversion ratios and reduce mortality levels.

Maintaining an optimum environment for birds plays a key role, starting with strong biosecurity. Litter dryness has been a key area with a focus on trialling bedding types and drinker placement. Other factors included in the programme involve effective flushing and cleaning of water lines and drinkers to maintain hygiene levels.

Western Brand works with its feed suppliers to ensure high quality ingredients are used that deliver high digestibility and maintain strong bird health. The selective use of nutraceuticals also forms part of the programme.

Key learnings to date include the importance of ongoing education and innovation to drive flock health and minimise the need for antibiotics. The programme has delivered impressive results with more than 90% of birds antibiotic free in 2022 with overall usage averaging around 3mg/kg over the last three years.



Trends in antibiotic usage (2020-2022 vs 2015-2017)



- Enhancing surveillance of antibiotic resistance and antibiotic use
- Optimising antibiotic use

Core to minimising antibiotic usage is building awareness at farm level on the practices that can prevent infection and disease. Irish farmers, veterinary practitioners and Teagasc with the support of the poultry industry and other stakeholders came together to develop a Code of Good Practice regarding the responsible use of antimicrobials on poultry farms.

This focuses on the following preventative actions:

- Preventative strategies
- Enhanced biosecurity
- Improved husbandry

- Strategic use of vaccination
- Vet driven antibiotic usage

In addition, antibiotics can only be administered following a veterinarian examination of the flock and all prescribed withdrawal periods must be observed.

The role of the poultry industry in minimising antibiotic use has focused on supplying good quality chicks and feed, biosecurity protocol oversight at farm level, monitoring of hygiene and disinfection on farms and the ongoing provision of advisory support to help maximise farm productivity and reduce the probability of antibiotic therapy.

This approach has helped the Irish poultry sector deliver relatively low levels of antibiotic usage over recent years. Data from the ESVAC report on Sales of veterinary antimicrobial agents in 31 European countries show that sales of



the four main antimicrobial types prevalent in poultry systems in Ireland were 40% lower than the average in 2020. The trend in sales of these products showed a decline of 10% during the 2015 to 2020 period.

Industry data in relation to antibiotic usage trends for poultrymeat production over recent years indicates significant like for like improvements with strong double digit reductions recorded over the 2015 to 2022 period. It leaves antibiotic usage in Ireland below the EU/UK average and highlights the ongoing improvement evident over the period.

Water

The mild temperate climate in Ireland lends itself to a low water footprint for food production systems, with most of the water used in production being "green", that is rainfall water rather than abstracted from rivers.

The poultry sector performs strongly from a water use perspective. From a protein perspective, poultrymeat and eggs are among the most water efficient, using less than one fifth the volume of water per 100 grammes of protein than products such as nuts.

Maintaining high water quality remains a challenge across Europe. A report from the European Environment Agency in 2021 suggested that good ecological status had been achieved for only around 40% of surface waters across the EU by 2015.

The percentage of water bodies with less than good ecological status varies across Europe. Surface water bodies in north-western Europe have the lowest status. Ireland was among the countries with a high proportion of water bodies with good or better (high) ecological status.

As well as proactively managing water usage levels, safeguarding water quality remains a priority for the poultry sector, particularly in relation to litter management. Both the Nitrates and Water Framework Directives are in place to protect water quality while EPA environmental licensing requirements ensure farm and processing facilities proactively protect the local environment.

While most poultry production takes place in a small number of clusters, the majority of litter is transported away from production areas to other parts of the country for spreading on tillage land. Regulations implemented by local authorities, the Environmental Protection Agency (EPA) and DAFM require all storage, handling and use of organic fertilisers to be conducted such that nutrient loss and any potential adverse impacts on water quality are mitigated.

The Water Quality in Ireland 2016 – 2021 Report from the EPA found that 50% of the river bodies assessed in Ireland over the period were in high or good biological quality with a further 32% in moderate quality.

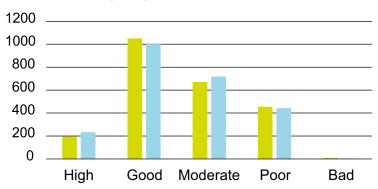
Of the 2,401 river water bodies assessed over the period, 398 improved in quality and 369 declined, resulting in a net improvement in 29 river water bodies.

The most recent indicator report from the EPA for the 2019 – 2022 showed that 56% of river bodies were in high or good biological quality with a further 27% in moderate quality.

While undoubtedly there is significant work to be done to improve water quality in order to meet EU and national targets, **Ireland currently has the highest water quality among major meat producers across Europe**.

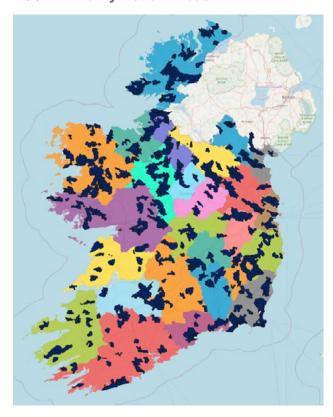
The roll out of programmes such as the Agricultural Sustainability Support and Advisory Programme (ASSAP) which involved an advisory programme for farmers in the 190 priority areas for action identified in the National River Basin Management Plan represents an important initiative in boosting water quality.

Ireland's river quality



Source: Environmental Protection Agency, Water Quality in Ireland 2016 - 2021

ASSAP Priority Action Areas



This free programme, available to all farmers, was built with a focus on delivering improved nutrient management and reduced nutrient losses through a targeted management plan developed by an advisor in conjunction with participating farmers.

Biodiversity

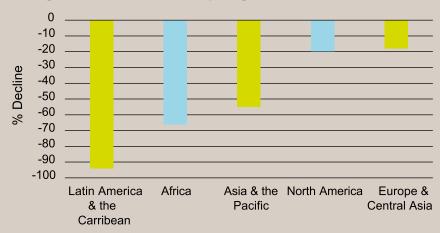
Addressing the global biodiversity crisis was the focus of the COP15 meeting in Montreal in December 2022. The aim of the meeting was to agree measures to reverse the biodiversity loss that has led to one million species of plants and animals facing extinction across the globe. The scale of the challenge was highlighted in WWF's Living Planet Report 2022, which tracked developments in the Living Planet Index (LPI) since 1970. The report showed the following key trends across the globe (see graph on next page).

Ireland is not insulated from these negative trends. A National Parks & Wildlife Service report in 2019 provided a status update on Ireland's 59 protected natural habitats and 60 protected species. It showed most had an unfavourable status with half showing ongoing declines, including grassland and woodland habitats.

However, some progress is being made with the population of 72% of species protected under the EU Habitats Directive stable or improving with 30% of Ireland's breeding bird species stable or increasing while a fifth were in long term decline, including breeding farmland songbirds. One third of bee species are threatened with extinction in Ireland. These trends, while not as severe as some other regions, highlight the need for urgent, ongoing corrective action.

While not as land based as other livestock enterprises, there is a commitment from the poultry sector to play its part in conserving, restoring and enhancing biodiversity in a way that allows the sector to maintain strong biosecurity at farm level.

Living Planet Index Trends by Region, 1970 to date



Source: WWF Living Planet Report, 2022

Progress at processing level

At processing level, the sector has made significant progress in relation to sustainable sourcing, decarbonising processing and maintaining its support for local communities.

Raw Material Sourcing

The poultry sector consistently sources birds and eggs from farms and growers that are members of Bord Bia's Sustainable Assurance Schemes. In 2022, almost 100% of all poultry and eggs were sourced from member farms and growers.

The integrated nature of the poultry sector means there is a consistent focus across the grower base to drive production efficiency and enhance sustainability. This is driven by a network of industry field officers that ensure best practice through ongoing advice and guidance while the co-ordination of inputs also helps to enhance performance.

Significant progress has been made in relation to **packaging** since 2015 with a strong focus on increasing the proportion of packaging that is recyclable and the proportion of recycled content in plastic packaging.

In total across poultry and egg producers, the following savings have been made:

- 89% of packaging used in 2022 was recyclable.
- Over 70% of plastic packaging now consists of recycled content.
- Approaching 100% Forest Stewardship Certified (FSC) paper and board.



CASE STUDY

Silver Hill Duck & Lidl Ireland Deposit Return Scheme (DRS)

DRS - Packaging Collaboration - Plan



In 2021, Lidl was the first retailer in Ireland to introduce a reverse vending machine, piloting the deposit return system in Ireland in two of their stores. By September 2022, in the two stores alone, Lidl had processed over half a million containers, made up of over 780,000 bottles and cans as customers were incentivised to recycle their bottles by receiving 10 cents in store credit for every empty PET beverage bottle returned.

Working with Silver Hill initially, Lidl was the first Irish retailer to introduce the PET bottle material into the packaging for their products. Silver Hill Duck led the coordination with multiple stakeholders in their supply chain to ensure there was no deviation on the current product specifications.

Results include 30% of the total tray weight made from collected bottles with these trays being 100% recyclable. Up to February 2023, 35,420 units of Crispy Duck and Pancake have been supplied by Silver Hill Duck to Lidl via the Deposit Return Scheme. This allows customers to buy back the material they inserted into the reverse vending machines and be part of the Irish circular economy.

More information available at fb.watch/ioA3SPCabp/

CASE STUDY

Innovating To Reduce Plastic Tray Use – Advanced Sustainable Packaging

Manor Farm launched the Sicín Sásta chicken brand in 2021. The values intrinsic to the brand include both animal welfare and sustainability which are targeted towards the increasingly environmentally aware consumer.

Many changes were made to traditional chicken packaging with an emphasis on "less" as well as recyclability. An innovative board tray was developed / commissioned for 3 of the 6 Sicín Sásta products initially launched. This board based tray is up to 60% less packaging than the traditional plastic trays that were being used and using a patented design this MAP tray contains >80% renewable & recycled cardboard. All board is FSC accredited.

The tray itself is easily recycled in a domestic setting and is straightforward for the consumer with clever on-pack messaging on how to recycle the tray. Once the chicken is removed there is an easy peelable thin inner liner on the tray and once removed, leaves a flat and renewable cardboard that suits recycling requirements.

The inner and top layers of film once clean can be disposed in the plastic recycling bin.





CASE STUDY

Shannon Vale – Renewable Energy in Action

Agri Gen Bio Gas

Working with Timoleague Agri Gen Ltd, Shannon Vale are now supplying waste products as feedstock on daily basis to a local AED plant. Over the 2020 – 2022 period almost 5,000 tonnes of waste have been converted into Biogas, producing 68,000 Nm3 (approx. 450,000Kwh).

This development followed a series of feedstock trials throughout 2019 to determine the most suitable mix of feedstocks for the AED plant. The partnership has proved very successful with Shannon Vale feedstock generating renewable energy while also producing over 4,000 tonnes of organic fertiliser as part of Shannon Vale's contribution to the circular economy.

Solar PV panels

Solar panels were installed on the roof of the food production plant by Shannon Vale in 2019. The panels contribute more than 200,000kwh of electricity annually, which equates to around 8% of the annual electricity requirement.

Following the success of this project, it was extended to Shannon Vale's hatchery in Newcastlewest where they have also operated successfully. Additional solar panels are due to be installed at the processing plant in 2023 as part of the company's transition towards net zero operations.

Resource Efficiency

Improving resource efficiency has been an ongoing focus for poultrymeat and egg producers for many years with significant progress recorded.

Emissions

Processors have made considerable progress in reducing Scope 1 and 2 emissions since 2015 with an average decline in emissions intensity of 20% delivered across the sector. The sector has also been focusing on the progressive phasing out of F gases from refrigeration systems to reduce emissions.

They are increasingly accredited to ISO14001 and 50001 covering environmental impact, the reduction of greenhouse gas emissions and energy management. The ISO framework enables processors to follow a systematic approach to measuring, tracking and enhancing performance.

Energy

Energy is typically the main source of emissions at processing level with the following progress delivered:

- Reduction in energy intensity of almost 20% over the 2015 2022 period.
- Investment in heat recovery technologies to reduce energy requirements.
- Increased investment in solar panels on site.

Waste

Significant efforts have been made by processors and producers to minimise waste, increase the level of recycling and elimination of waste to landfill. Some of the key achievements of the sector since 2015 include:

- 60% increase in quantity of waste being recycled
- More than 45% of waste is now recycled

Water

All major producers have invested in driving further progress in relation to water usage levels, water recycling and water quality. Since 2015, the following improvements have been delivered:

■ 10% reduction in absolute water usage, delivering an annual saving of almost 200,000m3, which equates to 80 Olympic sized swimming pools.

Priorities to 2030

The future direction of the poultry sector, like all parts of society, is increasingly being shaped by the global climate challenge. The outcomes from recent COP meetings, particularly the Glasgow Climate Pact provide the global framework to accelerate action.

In Ireland much of this ambition is captured in the National Climate Action Plan. The July 2022 Government decision on a 25% reduction in the emissions associated with agriculture by 2030 equates to 5.75 MT CO₂e annually and represents a significant challenge. In addition, the industry sector, which includes poultry processing has a legally binding target to deliver a 35% reduction, which equates to around 2.5MT CO₂e on annual basis.

In tandem with policy commitments, the marketplace is driving an ambitious roadmap to secure net zero supply chains over the period ahead. Many global, European and national customers have made commitments of achieving net zero operations by 2035 and a carbon neutral supply chain by no later than 2050.

Consistent across these commitments is their intention to work with suppliers to deliver on their ambitions. This provides a potential opportunity for the Irish poultry sector.

Notwithstanding the strong sustainability performance of the poultry sector due to the ongoing efforts made throughout the value chain, the sector remains committed to delivering further, significant progress up to 2030. However, it should be noted that the scale of ambition set out in the agriculture and industry targets for 2030 will require strong Government policy support and investment in order to ensure delivery.

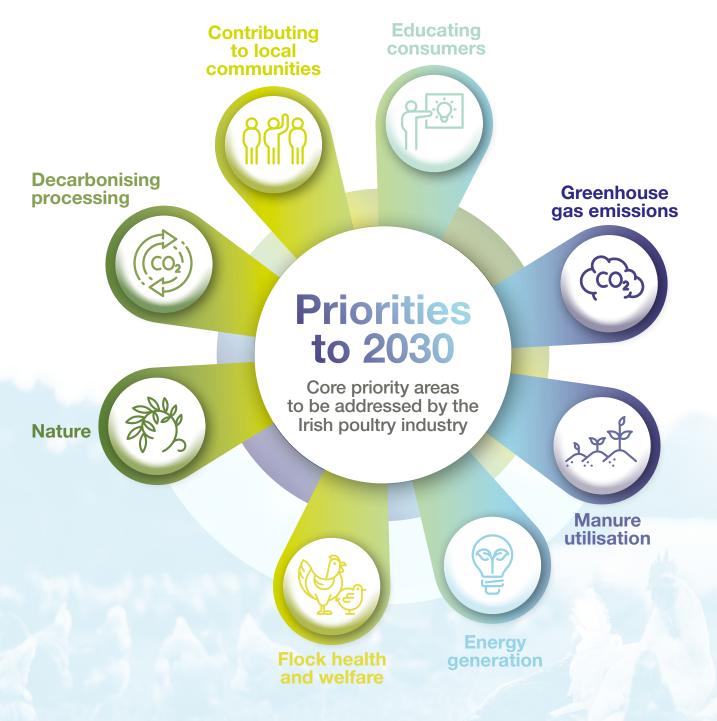
Priority areas

The policy and market imperatives to deliver ongoing progress are clear. The following pages outline priorities areas for the Irish poultry industry and outlines its commitments to work with stakeholders to ensure strong delivery across the value chain.

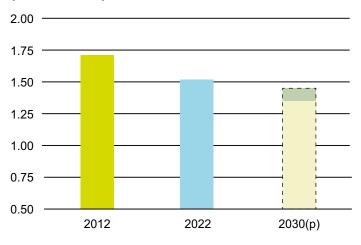
Driving further reduction in GHG emissions
The focus for the period ahead will be to build on
the considerable progress over the last decade
in reducing the carbon footprint associated with
poultry meat and eggs.

Bord Bia's introduction of a carbon footprinting model for poultry and eggs provides an important infrastructure that the industry can use to measure and track progress. A priority for the poultry sector will be to work with Bord Bia to further develop their carbon footprinting model to ensure it captures robust carbon footprint data, tracks individual performance against national averages and delivers a reporting mechanism that provides a uniform approach across the sector. This will be supported by field officers to ensure that growers and farmers are provided with technical advice and support to optimise performance. An extended focus on poultry as part of the Signpost programme would also provide further impetus to ensuring best practice adoption at farm level.





Potential feed conversion ratios (Irish broilers)





Source: Industry information (2030 data is potential range)

Genetics and feed conversion ratio

Further potential exists, particularly for poultrymeat, to reduce GHG emissions intensity through further investments in genetics that help to increase productivity and reduce feed conversion ratios. In addition, feed formulation has a role to play in boosting the efficiency of poultry production.

Every two point improvement in feed conversion ratios for chicks for poultry meat production translates into a 1% reduction in greenhouse gas emissions and also reduces the amount of land required for feed production by a similar proportion.

The industry, through ongoing research, will continue to work to drive further reductions in feed conversion ratios in the period to 2030 with an ambition to deliver double digit progress for poultry meat production over the period.

Similarly for eggs further potential genetic gains are expected to further extend the laying period for hens and boost productivity while limiting feed intake per egg.

Feed formulation

In addition to the feed conversion ratio's, the formulation and source of feed ingredients can have a substantial impact on emissions associated with poultry production.

Feed is one of the key inputs for the poultry sector with more than 600,000 tonnes of poultry feed used annually. Rations typically consist of wheat, maize, soya, rapeseed or distiller's grains. Soya typically makes up around 20% of rations and represents the main protein source.

The emissions factors associated with soya vary greatly depending on its deforestation status. The industry has commenced a number of research projects to explore the potential to reduce reliance on soya. This reflects the national ambition to double the area of protein crops in Ireland to 20,000 hectares by 2030 helped by increased CAP supports payments of the up to €583/hectare from 2023. This is part of the commitment outlined in the Climate Action Plan to boost the tillage area by more than 15% to 400,000 hectares by 2030.

Halving the reliance on soya with land use change emissions through the utilisation of domestic protein sources or soya with no land use change emissions would offer the potential to reduce overall greenhouse emissions for poultry production by more than 20% according to research undertaken by the Centre for Innovation in Livestock in the UK.

Industry members will work with feed ingredient suppliers to further explore the potential to reduce reliance on soya through increased utilisation of native protein sources. This will require considerable technical research to ensure that feed utilisation, bird performance and the economic performance of the sector is maintained while emissions are minimised. A strong market demand for products that utilise a high proportion of native protein will be needed to make it an economically viable option.

Investment in national research and knowledge transfer to ensure findings are implemented at farm level will be critical to help the sector realise potential opportunities in the period ahead.



"However, it should be noted that the scale of ambition set out in the agriculture and industry targets for 2030 will require strong Government policy support and investment in order to ensure delivery."

Manure Management

The poultry sector has continually focused on strong litter management through investment in storage facilities and creating linkages to ensure good utilisation of this valuable resource on tillage land or more recently through piloting its use as feedstock in anaerobic digestion.

Litter in many ways represents an underutilised resource given its nutrient value and the potential role it can play in contributing to Ireland's Climate Action Plan and circular economy ambitions.

There is real potential to turn litter from a product that costs more than €20 per tonne for disposal to a situation where it delivers value to the sector by creating a circular economy loop. There are a number of potential uses for poultry litter that the industry is committed to exploring with relevant stakeholders. These include:

- The Climate Action Plan calls out the ambition to have 200 AD plants of scale operating in Ireland by 2030. Poultry litter could provide a valuable feedstock for such plants to produce renewable energy while also producing a nutrient rich digestate for land spreading.
- Biochar from poultry litter has the potential to offer a higher nutrient organic fertiliser while also offering an environmentally positive means of boosting land productivity.
- The nutrient rich nature of poultry litter makes it a potentially valuable organic fertiliser for gardening. This would involve the litter being dried, sterilised and pelletised. There is currently no infrastructure in Ireland to enable this development.
- Work with feed suppliers to explore the potential to further develop a circular loop where poultry litter provides the organic nutrients for tillage crops, which in turn produce ingredients for poultry feed.

A common requirement for each potential end use is the supported development of the infrastructure needed that make them accessible to farmers and help generate revenue for the poultry sector while minimising emissions.

An additional benefit to the sustainable energy and nutrient solutions outlined above is the role that they can play in maintaining and improving water quality to ensure that Ireland delivers it commitments in relation to the Water Framework Directive.

Ammonia

Notwithstanding the decline recorded in 2020, the poultry sector recognises the fact that ammonia emissions remain a challenge at a national level

and will proactively support further research in infrastructure and technology solutions that can help reduce ammonia emissions.

The supported investment to upgrading existing housing offers the potential to considerably reduce ammonia emissions per kg produced. The opening of the TAMS 3 Pig and Poultry Investment Scheme represents a welcome development and it's important that positive funding remains available to support housing upgrades in the period ahead.

Recognising local challenges, the poultry sector is committed to following EPA guidance in relation to Natura 2000 sites and will proactively explore opportunities to produce outside of these areas.

The potential for poultry litter to reduce the need for chemical fertilisers, which would reduce overall ammonia emissions needs to be recognised. The poultry sector will work with other stakeholders to formalise an approach to optimise the value of poultry litter in a way that minimises ammonia emissions.

Genetic improvement

The poultry sector has been at the forefront of genetic development to product birds that offer the potential to efficiently convert feed into highly nutritious protein. Ongoing improvement in genetics has helped the sector make significant efficiency gains over the last 10 years. Further improvements are expected in the period ahead and can play a role in further reducing the carbon footprint generated through lower feed and energy use while reducing litter output.

The sector will continue to invest in genetics to deliver breeding stock that deliver highly efficient production of meat and eggs.

Energy generation

There is considerable opportunity for the poultry sector at both farm and processing level to play a proactive role in the development of solar infrastructure as part of Ireland's renewable energy ambitions.

The recent opening of the new Targeted Agricultural Modernisation Scheme (TAMS 3) included a ring fenced solar scheme offering a 60% grant rate up to a ceiling of €90,000. This will help provide further impetus to investments at farm level support and enable farmers to generate their own electricity.

The sector is committed to encouraging the installation of solar technology at farm level and enhanced solar investment at processing/production level.

Flock Health and Welfare

The consistent delivery of strong flock health and welfare practices remains a priority for the period ahead. This involves a number of core elements as follows:

Biosecurity

Maintaining strong biosecurity at all times remains a core focus for the sector. This will involve the ongoing implementation of good practices guidelines, assessment against agreed criteria as part of Bord Bia's Assurance Schemes and the ongoing rollout of the Targeted Advisory Service on Animal Health (TASAH) service by Animal Health Ireland. The Biocheck service had been delivered on almost 500 units by the end of 2022 with many having undertaken multiple assessments.

This DAFM funded service delivered by Animal Health Ireland supports the collective efforts to mitigate against incursions of avian influenza and to contribute to reducing the incidence of campylobacter.

Supporting the further delivery of this service across broiler, turkey and layer farms will be a priority for the poultry sector in 2023 and beyond. The sector will also work with DAFM and AHI to expand the scope of the programme to include duck farms.

It will also engage with DAFM and AHI to explore the potential to develop a database that allows benchmarking between flocks, companies and nationally in order to allow performance over time and relative to peers to be monitored to identify potential improvements.

Animal welfare metrics

DAFM is continuously monitoring flock welfare at plant level against indicators such as footpad dermatitis. This provides an ongoing reporting of performance and allows the identification of any potential issues at farm level. In addition, processor supply agreements include a focus on welfare parameters and drives a coordinated industry approach to maintaining high welfare standards.

The poultry sector is committed to working with stakeholders to agree relevant welfare indicators for each species and coordinate data tracking at national level, which combined with biosecurity data would provide a complete picture of national performance over time.

Future developments will be guided by revised EU animal welfare legislation. The publication of EFSA's Opinion on the welfare of broilers and layers on farm outlines a number of concerning recommendations in relation to limiting growth rates, reducing stocking density and cage free systems. If implemented, they would severely impact on the economic sustainability of the poultry sector while also leading to a higher environmental impact through increased feed consumption and energy usage and higher litter output. Analysis by Aviagen suggests that they would result in an increase of 28% in GHG emissions from the sector.

The Aviagen analysis suggests that implementing these recommendations would require an additional 116,000 poultry houses to be built across the EU, which is not economically viable given the tight margin nature of the sector. This would lead to a marked decline in output with the EU relying on imports for up to 70% of poultry demand compared to less than 10% currently. This would result in a decline in welfare standards associated with poultry consumed across the EU, which is contrary to EFSA's stated objective. The lower availability of poultry would also result in real affordability challenges, especially for lower income consumers.

The challenges outlined above highlight the need for a holistic approach to regulatory developments that is informed by robust scientific advice,

"The poultry sector is committed to working with stakeholders to agree relevant welfare indicators for each species and coordinate data tracking at national level, which combined with biosecurity data would provide a complete picture of national performance over time." recognises day to day production practicalities and ensures legislation helps deliver on all elements of sustainability – environmental, economic and ethical, including the ongoing delivery of high welfare standards.

The organic egg sector faces additional challenges in relation to a longer duration production cessation period for parasite treatments. This is leading to additional costs for producers and creating significant viability challenges.

Flock health

In-depth controls have been in place across the poultry sector for many years to ensure strong flock health while protecting public health at all times built on the principle of prevention. DAFM monitoring at production level shows a consistently strong performance by the sector. This reflects ongoing investment at farm and processing level to ensure high quality housing and facilities.

In terms of future priorities, the poultry industry will support the roll out of ante and post mortem checks by DAFM with results being made available to producers on an ongoing basis to help track performance and identify potential issues at an individual flock level.

In addition, the increase in funding for the pig and poultry capital investment scheme as part of TAMS 3, which offers a 40% grant rate up to an investment ceiling of €500,000 will help support the next phase of investment in facilities to help maintain strong flock health.

Animal medicines

Data collected on animal medicines shows a strong performance by the Irish poultry sector with a low level of usage by EU standards. The collection of data is being boosted by the implementation of an electronic medicines prescription system. This went live in January 2023.

Analysis undertaken by DAFM suggests that around 90% of birds don't receive any antibiotics. In addition, HP-CIA's have been removed from use. These developments combine to result in low levels of antimicrobial resistance.

The policy direction in relation to antimicrobials is being guided by the EU Green Deal, which calls out the ambition to reduce sales of antimicrobials for farmed animals by 50% by 2030.

The poultry sector will work with DAFM, AHI and other stakeholders to explore options to track antimicrobial usage nationally and support investment in research and knowledge transfer programmes at farm level to ensure that usage is minimised while maintaining strong animal welfare.

The poultry
sector is committed
to working with other
stakeholders to deliver
strong data tracking at
a national level, explore
mechanisms to enhance
national research capability
and support strengthened
knowledge transfer of best
practice across a range
of health and welfare
measures.



Nature

Protecting nature though boosting biodiversity, soil health and maintaining water quality is a critical part of delivering a sustainable food system. It requires co-ordinated activity across the agriculture sector and broader society.

From a poultry perspective, there are a number of priority areas that will inform the initiatives undertaken by the sector in the period ahead. These include:

■ Biodiversity

The considerable investments being made through Eco-Schemes and Environmental programmes under the new CAP in relation to space for nature, habitat enhancement and watercourse protection will help to encourage farm practices that can enhance biodiversity.

In addition, the All Ireland Pollinator Plan provides clear actions that can deliver real progress at farm level focusing on:

- · Maintaining native flowering hedgerows
- Allow wildflowers to grow around the farm
- Provide nesting places for wild bees
- · Minimise artificial fertiliser use
- Reduce pesticide inputs

The poultry industry is committed to working with its farm suppliers to encourage practices in the areas listed above while ensuring strong biosecurity is maintained at farm level.

■ Soil health

The nutrient value of poultry litter means that it can provide an invaluable source of organic fertiliser for tillage crops while byproducts from renewable energy generation and biochar offer the potential to broaden the access to these nutrients across farming enterprises. Such developments have a key

role to play in boosting soil health and fertility. Additionally, such initiatives can play a key role in maintaining and enhancing water quality.

The poultry sector will work to support the development of infrastructure and supply chains to deliver on this potential.

Decarbonising processing

The Government target of reducing greenhouse gas emissions from industry by 35% by 2030 relative to 2018 represents a significant challenge for the poultry sector given the considerable progress in resource efficiency already delivered. Industry's first responsibility is to reduce its own carbon footprint. However, industry is also a key enabler of decarbonisation and the poultry sector remains fully committed to delivering further progress.

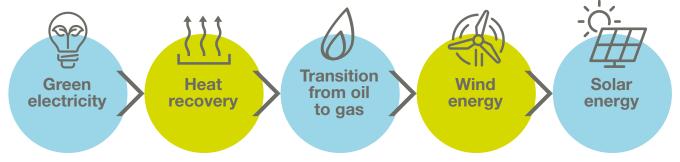
Through the provision of sustainable finance, and the development of sustainable infrastructure, the Irish poultry industry can play a proactive role on driving further change.

The motivation for decarbonisation is not purely environmental. The transition to net-zero is fundamental to securing long-term industrial competitiveness, energy security, and quality of life. Efforts by the poultry sector will be focused across a number of core areas as outlined above.

A number of poultry companies are exploring Science Based Targets encompassing Scope 1, 2 and 3 emissions to help guide their direction towards net zero over the longer term.

The immediate focus is to further increase utilisation of renewable energy from certified sources, heat recovery technology and investment in wind/solar energy. In addition, an ongoing emphasis on waste recycling and minimising water use will help drive further gains in resource efficiency and minimise environmental impact.

Approach to decarbonising processing







Building on a long tradition of utilising by-products, poultry companies will continue to invest in technologies that support the utilisation of the broadest range of by-products possible and contribute positively to the delivery of Ireland's Circular Economy ambitions.

Further progress in relation to recyclable packaging and materials made from recycled content offers clear potential to minimise plastic usage provided the necessary investments are made in Ireland's plastic recycling infrastructure.

Poultry processors will engage with Meat Technology Ireland to embrace its work programme in relation to packaging and shelf life extension as part of efforts to minimise product and packaging waste.

Contributing to local communities

The poultry sector remains the lynchpin of many local communities across Ireland in terms of its economic contribution to rural economies. However, it's involvement in these communities stretches well beyond economic criteria.

The 10 poultry members of Origin Green have set clear measurable targets to quantify their broader contribution to social sustainability. These targets span supporting local community initiatives, employee wellbeing programmes and a focus on diversity and inclusion within their businesses.

The sector is fully committed to continuing and enhancing its role in supporting the future health of its local communities and contributing strongly to the development of the circular economy.

Educating consumers

The role of animal protein in a healthy balanced diet seems set to come under further scrutiny in the period ahead. The inherent nutritional strengths of poultry and eggs in relation to protein, essential minerals and vitamins and low fat combined with its low emissions intensity provide a powerful platform to position the sector positively with consumers.

The poultry industry will engage with Bord Bia and Safefood to strengthen communications to consumers around the nutritional and environmental attributes of poultry and eggs to help them make informed purchase decisions.

This will also involve educating consumers on factors such as the potential benefits from initiatives such as mixed weight egg packs and white eggs to help to further minimise environmental impact.

This will also require investment in scientific evidence to further strengthen the fact based foundation for communicating the credentials of poultry and eggs. The Ibec Poultry Group will also engage with Meat Technology Ireland to explore the potential for poultry to be part of its work programme.

Issues to be addressed

Safeguarding the environmental, economic and social sustainability of the poultry sector in Ireland remains at the heart of the efforts being made by all actors in the industry. The priorities outlined provide a sense of the commitments being made. However, there are a number of issues that need to be addressed in order to secure a positive future for the sector. These include:

Recognition of the sector at a policy level

Notwithstanding the support provided though programmes such as TAMS, the level of priority given to the poultry sector at a policy level is limited. The absence of poultry within the Climate Action Plan indicates a limited focus on the role the sector can play in delivering on Ireland's climate ambitions. To overcome this, there is a need for a national roadmap to guide the future sustainable development of the sector as part of the implementation of Food Vision 2030. This is even more important given the increasing role that poultry meat and eggs play in terms of providing nutritious and affordable protein while having one of the lowest carbon footprints across protein categories.

Increasing supply chain transparency

As highlighted earlier, an increasing proportion of the growing consumer demand for poultry products is being met by imports with volumes averaging 130,000 tonnes over recent years. Most of this product is destined for the foodservice, butcher and manufacturing channels.

Expanding its share of the domestic market and in particular the foodservice and butcher channels represents a significant opportunity for the Irish poultry sector to help grow the value of output and service the needs of Irish consumers with locally produced products. Delivering on this opportunity requires greater transparency across the supply chain in the form of stronger country of origin labelling for loose meat cuts and particularly in foodservice. Labelling allows consumers to make informed purchase decisions and builds confidence.

There is a need strengthen the implementation of country of origin labelling to ensure it is being enforced fully across all parts of the supply chain. Similarly, there is a need to ensure that controls around the Quality Mark are robustly enforced to maintain the trust of consumers and ensure that Irish producers benefit from its strong reputation.

In addition, marketing claims and labelling in relation to poultry and egg products of non-lrish origin need to be grounded in fact with any misleading claims addressed by relevant authorities.

Consistency of standards

Ireland rightly prides itself on our high food production standards and controls. The strength of these controls has helped the industry maintain its reputation as a high quality food producer and ensures that it meets the exacting expectations of consumers. Safeguarding this hard earned reputation is critical to the future of the sector.

There is a real fear that standards associated with imported products are often at a lower level than domestic production, which creates a potential risk to the food chain and also leads to imports being more competitively priced. This needs to be addressed at an EU level to ensure full equivalency of standards for imports into the EU. Similarly, the decision of the UK to leave the EU creates the potential for different food standards to be implemented in future. Given the All Island nature of the Irish poultry sector, it is vitally important that the same standards are consistently applied across the Island to avoid any competitiveness issues due to regulatory divergence.

Approach to welfare legislation revision

The recommendations outlined in EFSA's Opinion on the welfare of broilers and layers on farm include a number of areas of concern that if implemented would severely impact on the economic sustainability of the poultry sector while also resulting in a higher environmental impact. There is a real need for the voice of the sector to be heard more strongly in the development of revised animal welfare legislation to ensure it recognises day to day production realities, the economic impact of potential changes and considers all elements of sustainability – environmental, ethical and economic. DAFM needs to urgently engage with the sector and the EU Commission to ensure any changes to current legislation take these factors into account.

Market access

Optimising the value of poultry output requires access to the widest range of markets possible for different cuts and products. While some progress has been made over recent years, there is a need for increased efforts in advancing market access negotiations with a number of Asian and Middle Eastern markets in particular that offer significant opportunities to grow the value of Irish poultry exports. Delivering on this requires poultry to be part of a multi-product, multi-species strategy.



Processing broiler breeders and layers

In order to fully protect the reputation of the Irish poultry sector there is a need to ensure that broiler breeders and laying hens at the end of their productive cycle are processed in Ireland. Exporting these animals creates an unnecessary potential risk in the supply chain.

There is a need for all relevant actors to work together to ensure the availability of an end market on a consistent basis throughout the year to provide market certainty to farmers, ensure strong welfare standards and offer the potential for the Irish poultry sector to add value to this product.

Research and knowledge transfer

There is currently a limited national infrastructure in place to support the delivery of poultry specific research and knowledge transfer, which impacts on the potential for the sector to drive the development and implementation of emerging best practices technologies in a way that works best for Irish production systems.

There is a need to secure additional funding and resources to address this challenge as a matter of urgency. Further research and trialling of potential technologies in areas such as feed conversion, health and welfare, antimicrobials and biosecurity is required to ensure the sector maintains best practice. From a knowledge transfer perspective there is a need to expand the number of poultry farms that are part of the Signpost programme and increase the number of advisors dedicated to the sector.

Enabling the decarbonisation of poultry processing

The poultry sector is committed to decarbonisation with an increasing number of companies setting ambitious targets. But they face financial and non-financial barriers to decarbonisation. Targeted supports are needed to help overcome high technology costs, build greater carbon and energy literacy and bring greater certainty to technology solutions. Existing supports need to be strengthened, expanded, and made more user-friendly.

There is a need for a clearer framework to encourage the adoption of technologies such as Anaerobic Digestion and Biochar with incentives in place to deliver a co-ordinated infrastructure that poultry farmers can access. Similarly ongoing grant supports for the adoption of solar photovoltaic technology (PV) and Biomass are needed to provide greater certainty regarding the return on investment at farm, packer and processing level.

Planning reform is badly needed to aid the buildout of critical sustainable infrastructure projects in a timely manner across wind, solar and anaerobic digestion.

There is also a need for strengthened financial incentives and access to finance to accelerate investment in renewable energy technologies.

Appendices



Appendix 1 **Priority Action Areas**

Action No.	Action	Timeline
1.	Engage with Bord Bia to further develop their carbon footprinting models and reporting to ensure the delivery of robust data in a uniform manner across the sector.	H2 2023
2.	Deliver individual initiatives to further reduce feed conversion ratios in the period to 2030.	Ongoing
3.	Undertake research with feed ingredient suppliers to explore the potential to reduce reliance on soya through increased utilisation of native protein sources while maintaining performance.	H2 2024
4.	Engage with relevant stakeholders to develop a wider range of uses for poultry litter and work to secure the supports needed to develop an accessible infrastructure for farmers and growers.	H1 2024 – Stakeholder forum
5.	Encourage the installation of solar technology at farm level and enhanced solar investment at processing/production level.	2023 / 2024
6.	Supporting the further delivery of Animal Health Ireland TASAH service for biosecurity assessments throughout 2023 and beyond.	Engagement plan agreed by end of 2023
7.	Work with stakeholders to agree relevant welfare indicators for each species and coordinate data tracking and reporting at national level.	H1 2024
8.	Support the roll out of ante and post mortem checks by DAFM with results being made available to producers on an ongoing basis.	Ongoing
9.	Work with DAFM, AHI and other stakeholders to explore options to track and report antimicrobial usage nationally.	2024
10.	Engage with Meat Technology Ireland to embrace its work programme in relation to packaging and shelf life extension to minimise product and packaging waste.	2024
11.	Engage with Bord Bia and Safefood to strengthen communications to consumers around the nutritional and environmental attributes of poultry and eggs.	H2 2023
12.	Ongoing engagement with stakeholders at a national and European level to ensure a fit for purpose regulatory agenda is in place.	Ongoing





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