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**REVIEW OF THE
AGRI-FOOD INDUSTRY
IN 2022**

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Introduction

In 2021, the Republic of Ireland had 135,037 farms, 808,848 hectares (ha) of forestry and around 1,900 fishing vessels and aquaculture sites. 13.4% of farm holders or 18,000 are female but they make up 27% of the agriculture labour force. Average family farm income for 2021 was €34,367, a record year, and up by 26% on 2020. During 2021 Irish farmers received close to €1.9 billion in direct and capital payments under EU and nationally funded schemes. The operating surplus in agriculture for 2021 was €3.5 billion, up 18% on 2020.

The land area of the Republic of Ireland (ROI) is 6.9 million hectares (Ha), of which 4.4m ha is used for agriculture and a further 0.73 million ha for forestry. 80% of agricultural area is devoted to pasture, hay and grass silage (3.6 million ha), 12% to rough grazing and 8% to crops (including cereals, fruit & horticulture production).

The agri sector employs 170,400 people, or 7.1%, of the total workforce on the island. This figure was 163,400 in 2020 so employment has increased by 4.3 % over the previous year. According to the CSO in 2020, almost one third of all farm holders were aged 65 or over compared to just above one fifth in 1991. This obviously impacts on farm health and safety as older farmers are in a higher risk category. The proportion of farm holders under 35 has been falling since 1991 but there was an increase in the youngest age category between 2010 and 2020 (from 6.2 to 6.9%). Despite increasing input costs (fertiliser, fuel, feed and energy), farm gate prices of milk, beef, and cereals have been at record levels during 2022. This has given dairy farmers in particular an extremely profitable year. The annual Genfitt Knowledge Report compiled over July to September 2022 reported that there was significant confidence in the dairy sector – 71% of respondents being very confident. Tillage was placed at 76%, whilst beef scored 74%.

Agri-Food Sector Doing Well

The Agri-Food sector has some 2,000 food production and beverage enterprises. The value of agri-food exports (90% of the food we produce) for 2021 was a record €15.4 billion, which was 51% up on 2012. We export food and beverage products to over 180 countries; our largest exports were dairy products, which exceeded €5 billion for the third year in a row. Agri-food exports accounted for 9.5% of our total merchandising exports and the sector had a trade surplus of €5.6 billion.

Beyond direct employment, the sector plays a key role in the wider rural and local economy, with estimates for output multipliers ranging from around 2.5 for beef, 2.0 for dairy and food processing and 1.75 for seafood. This compares with an average output multiplier of 1.4 for the rest of the economy and 1.2 for foreign-owned firms. The food and drink

sector accounted for 38% of all exports of Irish-owned firms in 2020.

Brexit impacted the agri-food sector more than most other sectors. This was particularly evident during the early months of 2021, when trade between Ireland and Great Britain was operating at a fraction of normal trade. Despite these setbacks, the agri-food sector had record exports in 2021 and Family Farm Incomes have increased for the third year in a row.

2022 has seen a significant humanitarian crisis with the invasion of Ukraine. This crisis has had significant implications across all sectors, including the agri-food sector, and in particular on the cost of fertilisers, energy and feeding stuffs.

Linked to this series of challenges is the rise in inflation with June 2022 seeing inflation in Ireland reach 9.1%, the largest annual increase in the consumer price index for 38 years. In March 2022, the FAO Food Price Index (FFPI) reached its highest level on record since 1990, at 159.7 points. Global oil and gas prices which were on an upward curve since the low prices of 2020 increased rapidly early in 2022, leading to significant price rises in energy products and fertilisers.

EU Agri Outlook for Markets, Income and Environment 2021 – 2031

This outlook is published once a year and presents the outlook for major EU agricultural markets, income and environment over the next ten years to 2031. According to this report the strongest dairy demand growth will be in Asia, driven by rising incomes and westernisation of diets. Increasing demand will include products such as cheese and fresh dairy products, but potentially also value-added commodities for further processing domestically. Demand for organic dairy products is growing worldwide and creating considerable opportunities, including for the EU. However in the short-term, current high food prices are likely to have a negative impact on organic food which is more expensive. World meat consumption is expected to continue growing by 1.4% per year, thanks to increasing population and higher income in developing countries. An additional 3.4 million tonnes of meat imports globally will be needed to close the gap between domestic consumption and production in many countries.

The EU production and consumption of sheep and goat meat are projected to increase slightly while Australia and New Zealand will focus more on Asian markets.

The main drivers of the increase in the value of goods output were milk, up in value by €642m (23%) to €3.4 billion, cereals which were up by €145m (50%) to €434m and cattle which was up by €290m (13%) to €2.6 billion. Not surprisingly, given the

industry problems, the value of pig output was down €47m (8%) to €555 million.

On the input side, the increase in intermediate consumption was driven by a rise in feed costs of €273m (18%) to €1.8 billion, an increase in energy and lubricants of €79m (21%) to €456m and an increase of €73m (14%) to €606m in the cost of fertilisers. Feed, energy and lubricants, along with fertilisers, accounted for 46% of the total costs of intermediate consumption in 2021. These areas of expenditure saw further significant cost increases in 2022. The cost of contract work, which represents about 7% of total intermediate consumption, increased by €33m (8%) in 2021 to €464 million.

In 2021, the total estimated value for goods output at producer prices was a record €9.7 billion, up from €6.5 billion ten years earlier in 2012, a 48% increase. This comprised of €4 billion for livestock, €3.5 billion for livestock products (mainly milk) and €2.2 billion for crops which include cereals, horticulture, and forage such as silage and hay used on the farm. Goods output at producer prices were up by 15% in 2021. While the value of goods output at producer prices increased by 15% in 2021, some of this additional value to farmers was taken up by a 9.4% increase in intermediate consumption. This is the value of all goods and services used as inputs in the production process, excluding fixed assets.

In summary, 2021 was a good year. It resulted in the operating surplus increasing by 18%, the highest increase since 2017. Over the past ten years, goods output at producer prices has increased by 48% while intermediate consumption has increased by a more modest 23%, resulting in the operating surplus increasing by 53% since 2012.

Food and Beverages Enterprises

The latest data available from the CSO is up to 2019. In that year there were 1,966 active food products, beverage etc enterprises. Between 2015 and 2019, the number of persons engaged in these enterprises grew by over 6,250 or 13%. The 52 larger enterprises had 29,760 (53%) of total people engaged in active food, beverage and tobacco enterprises.

Value-added per person employed in Food and Drink Manufacturing is estimated at €79,300 in 2020, an increase of 4.1% per annum in nominal terms since 2000. Within the Food, Drink & Primary Production sector, Irish raw materials at €9.0 billion accounted for 80% of the total materials spent in that sector.

It is noteworthy that the proportion of Irish services purchased by Irish-owned firms, ranges from 38% for Business, Financial and Other Services firms to 83% for Food, Drink & Primary Production firms.

Food Vision 2030 – A World Leader in Sustainable Food Systems

The development of a new ten-year strategy for the agri-food sector is a key commitment of the Programme for Government, which called for an ambitious blueprint for the sector for the years ahead, adding value sustainably into the future, with a strategic focus on environmental protection. In late 2019, a committee with 32 members representative of the sector, and chaired by Tom Arnold, was established, and tasked with developing the agri-food strategy to 2030. Following the publication of a draft Strategy and associated environmental assessments for public consultation, a final Strategy was agreed and published in August 2021.

Its Vision is that “Ireland will become a world leader in Sustainable Food Systems over the next decade”. This should deliver significant benefits for the Irish agri-food sector itself, for Irish society and the environment. In demonstrating the Irish agri-food sector meets the highest standards of sustainability – economic, environmental, and social – this should also provide the basis for the future competitive advantage of the sector.

The number of farms and the average size remained relatively stable between 2013 and 2016. Farmland prices are forecasted to rise by 6% on average in 2022. Average non-residential farmland prices in 2021 range from €5,308 per acre for poor quality land to €10,962 for good land. The most expensive land was in Kildare and the least expensive was in Leitrim.

According to the Society of Chartered Surveyors Ireland / Teagasc Agri Land Market Review and Outlook Report 2022 demand for rented ground remains strong with rents this year expected to rise by 10% nationally.

Record Low Farm Bank Debts

Strong cash flows bolstered by low input costs are the order of the day in the Irish farming world, according to Eoin Lowry, head of Agri at Bank of Ireland (BOI). Farmers continue to deleverage as record agri commodity prices support strong profits and cash flows on farms.

In the 12-month period to the end of June 2022, the outstanding level of debt on Irish farms fell by €235m to €2.8bn – the lowest level in more than 10 years. Farmers are also borrowing less – in the 12 months to end of June 2022, new loans to farmers fell by 25%.

Compared to the rest of the world, Ireland has one of the lowest levels of farming debt (having paid it back over recent years) compared to markets such as Denmark and New Zealand. This is a good position for Irish farmers, as interest rates are predicted to increase.

This is unsurprising as high farm gate prices coupled with relatively low input costs supported strong cash flows. Since the onset of Covid (March 2020), agri deposits with BOI have increased 60%.

Teagasc Situation and Outlook Report for Agriculture (Sept 2022)

The international economic impact of the Ukraine war has resulted in a substantial increase in a broad range of commodity prices. Initially prices in the wheat, maize, barley, sunflower seed and rapeseed markets rose sharply, reflecting the tightening of supplies.

The consequences of the war have also prompted sharp increases in energy and fertiliser prices. The high cost of agri inputs has driven increases in dairy and meat prices also.

While weather conditions thus far in 2022 have not been good for grass growth, they were favourable for cereal crop establishment and growth.

Furthermore, warm, dry weather at harvest time resulted in cereal crops with lower moisture levels than would normally be obtained.

Across the first half of 2022 feed usage volumes on dairy farms seem to be broadly in line with the same period in 2021. However, low rainfall levels across the summer particularly in the South and East have had an adverse impact on grass availability, so higher feed sales or the use of silage in Q3 cannot be ruled out.

Averaging across the full year, it is likely that farm gate feed prices in 2022 will be approx. 25% higher than in 2021. Overall, global cereal and oilseed market developments, indicate an increase in Irish cereal prices relative to 2021. A 35% increase in farm-gate cereal prices for the 2022 harvest is forecast.

Prices for fertilisers have risen very dramatically over the last 12 months. In spite of the reduction in fertiliser use, the expenditure of fertiliser across most farms in Ireland in 2022 will have more than doubled relative to 2021. The available official data on fertiliser sales in Ireland covers the Oct 2021 to June 2022 period. For this nine months there has been a sharp volume decrease in nitrogen, phosphorus and potassium sales.

The evidence suggests that grassland farmers have reduced fertiliser usage considerably in 2022. They seem to be relying on silage stocks already built up as a means of ensuring the supply of fodder for the coming winter. Fertiliser use on tillage farms have remained closer to normal, given that reductions in use can easily impact on yields. As in other sectors of the economy, energy expenditure is a production cost in agriculture, particularly for more intensive farm systems, particularly, pigs and poultry. However, it is also a notable cost in dairy production and tillage.

Good Prospects for World Milk Prices

Adverse weather in a number of production regions, and a sharp rise in input costs internationally, has put a brake on global milk production growth. The tight dairy market situation is contributing to a sharp rise in dairy product prices.

Butter and SMP prices surpassed the €7,000 and €4,000 per tonne respectively for the first time ever in August 2022. Cheese prices have also risen sharply in recent months. Total milk production costs/litre in 2022 could be up by 35%, at around 36 cent/litre on average. However higher feed, fertiliser and fuel expenditure in 2022, were more than offset by higher milk prices.

In 2022 the average Irish dairy farm should see a net margin per hectare of over 22 cent/litre, an increase of 60%. This average net margin should translate into an average income in excess of €130,000, an increase of over 30% compared on 2021.

There are around 17,000 milk producers in the Republic and over 3,200 in Northern Ireland (NI). The NI dairy herd expanding by just over 1,000 head to 318,372 cows as of June 2021. The average dairy cow yielded just over 7,900 litres, up from an average yield of 6,900 litres/cow in 2016. This compares with an average less than 6,000 litres pa for the mainly spring calving herds in the Republic. Dairy cows in NI receive over 2 tonnes of feed per cow pa compared with only one tonne per cow in the Republic. Average herd size in the Republic is 84 cows and 100 in NI.

Another Good Year for Irish Beef Exports

Just over 1.39 million head of cattle have been processed to date in 2022, an increase of approx. 106,000 head (8%) on the same period last year. This increase in supply has been driven by higher availability of all categories of animals. Most notably, cow throughput has risen by 13% (40,172 head). A majority of these additional cows have been from the dairy herd, as opposed to cull suckler cows. Prime cattle categories (steers, heifers and young bulls) are each running approximately 6% above 2021 levels. Supply forecasts to the year end, taking the latest trends into account from the DAFM data, suggest that overall throughput for 2022 will have risen by 110,000 to 120,000 head on last year's levels. An extensive programme of Bord Bia beef promotions is underway across our priority markets including Britain, Italy and Germany, as well as growth markets such as Belgium, Sweden, Central and Eastern Europe and Greece. During 2022 livestock sales around the country were attracting record numbers and higher prices. There were record prices at Carrick on Shanon Winter Fair with 500 animals on sale during a non-stop 16 hour auction. The top price of €14,500 was paid for a May

2022 born, Belgian Blue heifer calf, BYU sired and weighing 331 kgs.

During 2022 cow kill hits a 20-year high with over 2,460 head/week in late November over the 2021 figure. Higher kill is due to higher dairy cow numbers, potential shortage of fodder for infertile or poor performing animal's livestock. There is a strong demand for manufacturing beef and the factories are short of prime cattle where supply has dropped by around 2,000 head/week.

According to Teagasc for 2022, Irish finished cattle prices are forecast to increase by 17% and weanling prices are forecast to increase by 8%. Store cattle prices are forecast to increase by 11% relative to 2021. For 2022 as a whole, Irish prime beef production is forecast to increase by 4% compared to 2021. Average gross margin on cattle finishing farms is expected to increase by 10% while the average gross margin on single suckling enterprises in 2022 is forecast to decrease by approximately 10%.

However, total costs of production on single suckling and cattle finishing enterprises are forecast to increase by 23% and 29% respectively in 2022.

Record Sheepmeat Exports

Total Irish Sheepmeat exports for the first eight months of 2022 were valued at €310 million, a 20% increase from the previous year. This was driven by higher average deadweight prices for the year-to-date combined with the sharp increase in sheepmeat production in the first six months of the year. The EU is the most important market for Irish sheep meat exports, absorbing 74% of our exports in value terms with Britain accounting for a further 17% for year to date.

Between January and August 2022, Irish exports to the EU were €230m, up 20% on last year and up 18% on volume to 35,199t. Exports to Britain were up 20% in value to €51m and 12% in volume to 9,798 tonnes. Germany is a significant market for Irish sheep meat (valued at €50.6 million from January to August 2022). France remains our main export market for lamb while Belgium has been developing steadily over the past decade. Italy is primarily a food service market for Irish lamb. Bord Bia are also actively engaged in Denmark, Sweden and Switzerland, which have growth potential.

The world demand for lamb, driven mostly by China, is absorbing more of NZ and Australian output. Reduced British production and exports have reduced supplies to the EU market. EU demand for sheep meat is stable, with lower supplies reflected in higher prices. Average Irish lamb prices for the year to date are over 6% higher than in 2021, remaining well above the 5-year (2017-2021) average price levels. With higher prices and increased output volume, sheep output value is forecast to increase in 2022.

The large increase in fuel, fertiliser and feed prices

coupled with some modest increase in feed use, is expected to lead to a 33% increase in total costs of production for 2022. For 2022, margins earned from sheep production are forecast to decline from the record levels achieved in 2021.

Cereal Growers Reduced Incomes in 2022

There was an overall increase in tillage area in 2022. Cereal area increased by 4.3%, winter oilseed rape increased by 45% and the total area of beans was 11.5% higher than 2021. The area of winter oilseed rape is estimated to have increased to 19,000 ha due to a combination of an early harvest, planting opportunities in late August and a strong market for oilseeds.

The area of winter wheat was 60,332 ha – an increase of 4,268 ha on 2021 and 7,000 ha over the five-year average of 53,200 ha. Average yield was 11.0t/ha which equals the previous wheat record set in 2015. This year's yield is 1.1t/ha over the five-year average yield for winter wheat of 9.9t/ha.

The area of winter barley increased by 9% to 73,605 ha due to the favourable planting conditions in the autumn of 2021. Average spring barley yield in 2022 was 8.1t/ha surpassing the previous record of 8.0t/ha in 2019. The overall oats area remained the same as 2021 at slightly over 28,000ha.

The Straw Incorporation Measure (SIM) was available again this year to support Irish tillage farmers who decided to chop and incorporate straw into the soil. It is expected that the area chopped and incorporated increased this year. Payment rates of €250/ha for oats, rye, wheat or barley, were available and €150/ha for oil seed rape.

Straw quantities were good in all cereals and the dry harvest weather allowed farmers to bale or incorporate straw without additional cost. The straw market was strong again this year with 4 X 4 round bales making €15-18/bales ex field.

Farm gate cereal prices on offer for 2022 are at least 30% higher than 2021 while dry weather at harvest ensured that moisture bonus payment will positively impact prices. DAFM Basic Payment Scheme area data indicate that cereal area increased in 2022 by 3.8% compared to 2021.

More than 70,000 farmers applied for the €56m Fodder Support Scheme before the closing date of 27th August 2022. The Minister for Agriculture introduced the Fodder Support Scheme to provide support to Irish farmers arising from the war in Ukraine. There was a high uptake with over 537,000 ha entered in the scheme and this will make a big contribution towards the winter fodder required by livestock. The support is capped at 10 ha per farmer, €100 per ha and the maximum payment is €1,000 per farm.

Total cereal production is estimated at 2.4 Mt tonne in 2022 – a 2% increase on 2021. It is estimated that total

costs on the average tillage farm in 2022 will be up by over 30%. With higher output prices for wheat and barley, coupled with an increase in production volume, Irish cereal output value is forecast to be up in 2022. However the significant increase in costs is expected to negate the increase in output value. Average income on tillage farms in 2022 is expected to be in the low €50,000s, a 10% decline over 2021. On a positive note EU pigmeat demand has been increasing since Q2 2022 and this trend is expected to continue due to tightening product supply and substitution from more expensive meats.

Chinese demand is expected to increase dramatically in Q3+Q4 2022 as their domestic pig price has increased by 80% over the last six months, due to their contracting sow herd. Irish pigmeat exports to Japan rose strongly (+25%) in the first 7 months of 2022. The Irish pig price has risen from a low level during Q1 2022 to an historic high price in Q3 2022. However it is still not generating a breakeven for producers given the inflationary cost environment. The price needs to rise to €2.20 /kg deadweight to produce a breakeven in Sept. 2022.

Tough Times for Pig Producers

The Irish sow herd has remained very stable over the last 20 years, ranging from 145,000 to 150,000 sows. However in Q2 2022, the national sow herd reduced dramatically. Pig units with a combined 12,500 sows began destocking. In the Republic of Ireland, the breeding herd has fallen by 10% or 15,000 head to 137,000 head in the last year.

The very high level of debt that these destocking farms have accumulated, due to recent historic losses, will preclude the possibility of restocking. The potential loss of pigmeat exports (primary & secondary) arising from the loss of 12,500 sows is forecast at €65 million.

Feed is the largest input in pig production, currently representing 76% of the total cost of production. The pig sector has had an income loss for 13 consecutive months (August 21/September 22). Historic high feed prices, a relatively modest pig price and increasing energy costs imply an annual estimated loss in 2022 of €339,000 for the average 600 sow unit.

Margin over feed was at an historic low of 6c/kg in March 2022 but has since began to recover to 46c/kg (September 22). It is expected that the sector will return to profitability from October 2022 onwards. The 2023 outlook is for profitability with high pig prices expected. The level of profitability will depend on the extent that feed ingredient prices fall during 2023.

To help hard pressed pig producers the Irish Government launched a €13 million Pig Exceptional Payment Scheme during 2022. This scheme is open to commercial pig farmers who are able to meet the eligibility conditions and commit to the conditionality. A maximum pay rate of €100,000 applies.

Pig farmers will also get supports similar to small businesses to help them cope with energy costs this winter. The measure will compensate farmers based on energy usage and will be part of the business energy support scheme.

As with other businesses, it will be subject to a €10,000 monthly cap for each farmer. Farmers will be able to claim up to 40 per cent of the increase in their energy bills as long as those bills have jumped by more than 50 per cent over the past year.

The Republic of Ireland has 280 commercial pig farms comprising ~200 sow breeding/integrated farms with an average herd size of ~700 sows and ~80 specialised finishing farms, and a national output of 3.8 million pig's pa.

The pig sector is very efficient as can be seen from current data. The increase in pigs produced/sow per year and carcass weight of each pig has contributed to more pig meat sold/sow per year (an increase of 66% between 2000 and 2020). The amount of feed required to produce each kg of carcass has also reduced from 3.66 to 3.50 kg of feed.

Irish pigmeat production increased by around 5% to 336,000 tonnes in 2021, as productivity at farm level continues to improve. Overall, pigmeat exports from the Republic of Ireland increased by 3% to 248,000 tonnes during 2021. Shipments of Irish pigmeat to Asia now account for 67% of the total value of exports at €360 million an increase of 42% on 2020 levels.

Poultry Sector

The poultry sector in the Republic of Ireland supports 6,000 jobs mainly in rural areas. There are some 450 poultry farms which provide birds for processing in seven processing plants. However it is concentrated in two main areas – Cavan/Monaghan and Cork/Limerick. Annual poultry supplies are about 70m chickens, 2m hens laying eggs and 4m turkeys. We are the highest consumer of poultry meat in the EU. Poultry numbers in Northern Ireland (NI) increased by 27% between 2012 and 2020 to almost 25m. Moy Park is the biggest private sector employer in NI, with around 6,300 employees. It is the largest meat producer in NI and is supplied by 800 poultry farmers. Due to increased feed and energy prices poultry producers were under financial pressure during 2022. So the IFA organised a protest during late September outside Lidl and Aldi stores in Cavan town in a protest over low egg prices. Within a few days Aldi promised a price increase that “substantially exceeds” the two-cent-per-egg hike that suppliers were demanding.

Agricultural Price Index

The agricultural output price index measures trends in the price of agricultural produce sold by farmers. This index is designed to measure trends in the price of farm inputs purchased. Overall, 2021 saw an increase in the price index for most sectors, except the pig

sector. However, fertiliser prices increased by 14% in 2021, with further substantial price increases in 2022. The Teagasc National Farm Survey (NFS) represents 85,000 farms nationally. Over the past ten years Family Farm Income (FFI) has fallen in three years, held steady for one year and increased in six of the ten years. However, 2021 is the only year in the past ten years where each sector saw an increase in FFI. The average dairy farm in 2021 was 64 ha, with the average tillage farm at 70 ha, while the average cattle farm was closer to 34 ha. The 2021 National Farm survey issued in June 2022 shows that the average FFI for 2021 was €34,367, a 26% increase on 2020 figures. In general, farms experienced an increase in production costs, as prices for fuel, feed and fertiliser all rose in 2021. According to the CSO spend on fertilisers increased by 14%, feed by 18% and energy costs by 21% during 2021.

Fruit & Vegetable Sector

The Irish mushroom industry relies on the British market for 85% of its sales. Annually, 60,000 tonnes of mushrooms are exported to Britain worth approx. €151 million in 2021. There are around 300 larger commercial potato farms. According to Bord Bia the potato industry has a farm gate value of about €117m pa. Over the last three years the area planted has increased and in 2021 it was 8,695 ha.

Our average annual potato consumption is 85kg a person, (2½ times higher than the world average). Household spend on fresh potatoes is currently valued at €232m annually with 220,000 tonnes being purchased. There was a significant rise in market demand on the back of two industry/EU funded consumer promotion campaigns, in the 2020-21 season.

Improved Prospects for Forestry Industry

A major report, “The Economics of Afforestation and Management in Ireland: Future Prospects and Plans” - compiled by Professor Cathal O’Donoghue, Chair of Social and Public Policy at the University of Galway - was launched last September and received a lot of media coverage, industry and political support. His well-researched report highlighted the opportunities and challenges of delivering national forestry goals to deliver carbon neutrality by 2050. Professor O’Donoghue is a former Head of the Teagasc Rural Economy and Development Programme and is well respected by farmers and the industry.

Although the national afforestation policy has been a success over the past century, planting 690,000 hectares (11% of the land area), there has been a substantial decline recently with only about 2,000 hectares planted in 2021 which is only 8% of peak planting in 1995.

The national Climate Action Plan, that sets a roadmap to reach net zero emissions no later than 2050, identifies afforestation as the single largest land-based climate change mitigation measure available to Ireland. The area of new forestry required to achieve carbon neutrality by 2050 is 18,000 hectares per annum and this level of planting has been achieved in the past.

The Climate Action Plan sets a target of 8,000 hectares per annum, which is actually 10,000 hectares below what is required. Ireland is currently missing the required planting by 16,000 hectares per year. The cost in terms of the State carbon price of missing afforestation targets by 6,000 hectares is more than €400m at a €100 carbon price per ton over a 40-year forest rotation and €1bn relative to what is needed. According to Professor O’Donoghue “the more we fall short of the afforestation target the greater will be the need to deliver CO₂ reductions from other sources including agriculture unless there was a major reduction in animal numbers with consequential economic impacts.”

The study finds that if the afforestation target had been met, it would have allowed for carbon neutral dairy expansion. Given the existing fall off in afforestation levels over the past two decades, the forest estate will move from being a carbon sink to a carbon source. However, the more we can plant in the immediate term, the less deep the impact will be. Delaying planting decisions as a result has a major impact on the capacity to reach carbon neutrality by 2050.

The report highlights the opportunity to enhance the financial incentives for afforestation and to overcome some of the challenges in relation to replanting. It provides a comprehensive economic and cost benefit analysis of such incentives. Professor Cathal O’Donoghue makes 14 key cost-effective recommendations which can help achieve the planting targets required for carbon neutrality.

According to the CSO the share of afforested area planted by farmers in 2021 was only 18% a sharp decline from their 2014 share of 97%. Cork had the largest afforested area every year from 2007 to 2016, and from 2019 to 2021. Cork accounted for 17% of the total afforested area in 2021 followed by Roscommon (9.4%), Clare (8.6%), and Cavan (7.9%). The highest average parcel size planted was 8.4 ha in 2009. In 2021 it was only 7.1 ha.

The IFA say “there is plenty of land available for afforestation. Ireland has the lowest forest cover in Europe. If we are to increase forest cover, we must allow farmers to plant available land including some ‘unenclosed land’ and other farmland currently restricted.”

According to the IFA “the Forestry Act needs to be amended urgently to remove management operations such as road construction and thinning from the licencing system. The licencing of these

operations can be covered by a forest management plan that satisfies all regulatory requirements". Delays in issuing licences needed to plant, cut and transport trees have been squeezing the timber industry for over three years. In January 2022 there were almost 900 afforestation licences awaiting department approval, which takes 15 months on average.

The bottleneck has impacted house building, slowing the supply of timber, forcing many suppliers to import it. The Construction Industry Federation (CIF) calculates that these problems have added €15,000 to the cost of new homes.

SEEFA the Social Economic and Environmental Forestry Association, maintains that planting is now at its lowest level since 1949. According to SEEFA only 12%, of all the 4,035 forestry licences issued last year were for "afforestation", that is, planting. However the announcement of an increase in premium rates of 46 to 66% under the new forestry programme is a positive development but legacy issues (such as ash dieback etc) still need to be addressed if planting targets are to be met according to the IFA.

The new forestry package is worth over €1.3 billion and the duration of premium payments will increase to 20 years for farmers. Under the new forestry programme:

- The forest premium payment rates and duration have increased offering farmers the potential to earn a premium payment of up to €1,142 per ha depending on the forest type.
- Farmers that plant a mixed conifer forest will be paid €746 per hectare (an increase from €510) – equivalent of a payment of just under €15,000 per ha.
- Farmers that plant an agro-forestry type forest will earn €975 per ha (an increase from €645) for 10 years.
- Offers farmers greater diversity with several new forest type categories added including Forests for Water, Emergent Forests, Seed Orchards and Continuous Cover Forestry.

Increased Added Value Timber Exports

Over the period 1995 to 2021, there has been a substantial shift from exporting forest log towards processing the log removals from forests into products such as sawnwood, veneer sheets and wood-based panels before exporting them.

In recent years, export volumes of coniferous industrial roundwood/ sawnwood, veneer sheets and wood-based panels, and recovered paper have exceeded imports of these products. Exports of wood and paper products were valued at €1 billion in 2021. Exports of veneer sheets and wood-based panels were valued at €343m in 2021 or 33% of the total

value of wood and paper product exports. Coniferous sawnwood at €230m accounted for a further 22% in 2021. Exports of Secondary paper products in 2021 were €193m or 19%. From 1995 to 2021 exports of coniferous sawnwood increased by 212% while coniferous industrial roundwood increased by 109%. Around 80 Irish growers produce around 650,000 Christmas trees each year with 450,000 sold at home and about 200,000 exported abroad, mainly to Britain, France and Germany. The industry contributes €25 million to the Irish economy. The Nordmann Fir is the most popular species. It has glossy, rich green foliage and soft non-shed needles.

Farm Machinery Industry Doing Well

The Farm Machinery Industry in the Republic of Ireland is valued at almost €700m pa, covering both new and used machinery plus parts and services. Around 6,000 people are employed in the sector and exports are worth over €200m pa. For the future we can expect more jobs to be created in the area of sales, service and manufacturing.

According to James Maloney, from Enterprise Ireland, Ireland has rapidly gained a reputation around the world as an "Agritech island". Irish farm machinery has won numerous innovation awards in Britain EU and worldwide. Irish farm machinery is being shipped to places as far afield as Australia, Britain, Canada, France, Middle East, New Zealand etc.

Some well-known Irish farm machinery & equipment firms include Abbey Machinery, Cross, Dairymaster, Easyfix, Fleming, Future Grass Technology, Herdwatch, Hi-Spec, JFC, Keenan, Major, Malone Engineering, Mastek, McHale, NC Engineering, ProDig, Redrock, Samco, Slurryquip, Tanco etc.

There are about 300 machinery dealers on the island of Ireland. Some 250 of them are based in the Republic and about 50 are in N. Ireland. There are also 18 major manufacturers in the Republic and six in N. Ireland. Most of the successful Irish machinery companies have particular product expertise in grass, fodder, feeding/milking equipment and slurry spreading systems.

Sales of new and used grassland and tillage machinery has held up well over the last three years in spite of Brexit, Covid and more recently the war in Ukraine. Of course there have been supply chain issues which are improving and customers for new machinery can expect to wait up to six months for their new tractor or slurry tanker.

The ongoing trend is to purchase higher HP and hi-tech tractors to cope with labour problems and higher fuel prices. Some useful FTMTA data on new and used tractor sales over the last three years is as follows: Cork has the highest number of new tractor registrations at 303 units for year to date. Tipperary is second with 165 units, followed by Wexford at

141 units. The most popular power band remains in the 141 to 160hp category, which, for the year-to-date, now makes up for around 21% of all-new tractor registrations.

New Tractors (Year 2022)	
Month	Total
January	420
February	223
March	244
April	213
May	214
June	54
July	321
August	151
September	128
October	99
November	
December	
Totals	2067
FTMTA	2022

Used Tractors (Year 2022)	
Month	Total
January	227
February	258
March	221
April	219
May	261
June	237
July	178
August	220
September	216
October	206
November	
December	
Totals	2243

Tractor sales registrations for previous years were as follows:

Year	2021	2020	2019
New Tractors	2,366	1,910	1,968
Used Tractors	3,726	3,010	3,045

Tractor HP data for October ytd was as follows:

Under 100 HP	221 units	11%
101 to 120 HP	490 units	24%
121 to 140HP	394 units	19%
141 to 160 HP	424 units	21%
161 to 200 HP	351 units	17%
201 to 240 HP	139 units	7%
Over 240 HP	48 units	2%

Farm Contractors Growth Business

Farmers are short of labour and making more use of agri contractor services to get more work done and in a timely manner. This is because their local contractor has higher HP tractors, higher tech machinery and more experienced operators. It also reduces the level of capital tied up on farm machinery which is likely to be underutilised on most livestock farms.

According to the Association of Farm and Forestry Contractors in Ireland (FCI) agri contractors are the most important Irish farming partnership group, providing machinery services to 137,000 Irish farms in a business that is valued annually at over €800 million.

Farm and Forestry Contractors in Ireland have a key role to play in providing cost-effective and efficient mechanisation services to farmers. According to the Teagasc Farm Management Survey the average spend on Contractor services per farm is €4,585 pa.

FCI research has shown that farm and forestry contractors in Ireland employ close to 10,000 people operating machines on farms. They use more than 350 m litres of diesel annually (61% of total agri energy consumption) and operate more than 20,000 modern and fuel efficient tractors. Contractors harvest 90% of the silage crops each year along with spreading more than 20 billion litres of slurry, as well as establishing and harvesting many other crops.

CAP Strategic Plan and EU 2030 target for Greenhouse Gas (GHG) Emissions

The significant changes made to the Nitrates Action Plan, a new CAP Strategic Plan introduced in 2023, and a 25% emissions reduction target for 2030 will impact the agri sector. However farmers and agribusiness personnel are very resilient and better educated than ever. There are now a record 14 Universities/ Institution of Technology and six agricultural colleges in Ireland offering agriculture degrees and courses. Farmers want to produce quality, safe, traceable, sustainable food for consumers. They want to sustain the environment, reduce emissions, and become

more carbon efficient. What they need is technology, support, and the political direction to enable this. And this will be forthcoming so Irish food producers have a bright future.

The world's population is expected to increase by nearly 2 billion to 9.7 billion in 2050. So this is good news for food producers but does challenge farmers and the industry how to do so in an environmentally friendly and economically sustainable manner.

More and more farmers are now using multi-species grassland swards which can maintain a steady growth rate at reduced fertiliser application. A well-managed clover content in the sward (20-50%) can reduce mineral fertiliser application by more than half in summer, at a time when it is critical for greenhouse gases emissions.

Even if dairy cow numbers were culled by 20% we could still produce just as much milk. With improved genetics and better nutrition the average cow can produce much higher milk yields. The early finishing of cattle is recognised in the Climate Action Plan as a key environmental lever for the beef sector, with a target to reduce the average finishing age from 27 to 24 months. Along with genomic advances, this would reduce some 1.2Mt CO₂ equivalent of GHG emissions by 2030. To achieve this cattle would need more compound feed and farmers a better price to pay for same.

The major advantage of the more expensive LESS (Low Emission Slurry Spreading) system now being widely adopted by farmers is the lower level of contamination and faster recovery of grass/silage swards. This offers farmers some flexibility around the application of slurry on grazing paddocks, without having to worry about possible rejection or poor cleanouts from the cows. The LESS system is an effective way to increase the amount of nutrient available, for crop growth, from slurry application, while reducing the loss of nutrients to air or water. According to Teagasc more than two-thirds of slurry spread by dairy farmers is now spread using the LESS slurry spreading system.

Great Renewable Energy Prospects for Agri Sector

According to the IFA, solar energy is one of the most reliable ways to help cut energy costs and reduce carbon emissions on farm. As the largest energy services business in Ireland, Bord Gáis Energy has the technical and engineering capacity to deliver high class solar solutions for farmers.

Targeted Agricultural Modernisation Scheme (TAMS) support is now available to support up to 11kW solar PV on dairy, beef, tillage and sheep farms. This complements the 40% TAMS support already available to the pig and poultry sector, which is not limited to 11kW. Project Clover is a collaboration of leading agri-food companies that have declared their commitment to large scale, biomethane production on Irish farms, as the only commercially feasible and technically proven, means of

decarbonising the Irish food supply chain.

The vision is to use indigenous anaerobic digestion (AD) biomethane plants to decarbonise thermal heat processes, commercialises its by-product digestate to produce organic fertiliser, and monetises soil carbon sequestration on Irish farms.

In 2020/21 Danone, Wyeth Nutrition, Glanbia, Dairygold, Carbery, Lakeland Dairies and Tipperary Co-op, commissioned KPMG, with RGFI co-ordination, to examine the commercial and environmental sustainability of agri-based biomethane and biofertiliser production.

Further work by KPMG/Devenish, commissioned by Gas Networks Ireland, shows that the full potential of biomethane to reduce CO₂ emissions is over 1.9m tonnes pa. This is based on improved efficiency across land already in agricultural production. The work indicates that replacing all nitrogen use with digestate and growing multi-species swards on dairy farms, could reduce on-farm emissions by 66%, or 9.3 tonnes of carbon dioxide equivalent per farm.

There are now 76 farm AD plants operating in N.Ireland, generating electricity for the national grid. The 70 new plants planned for NI would inject gas into the national gas grid for use in heating and transport.

NI has the highest stocking density of livestock in the UK, with 25 million poultry birds, and intensive pig numbers at a 10-year high. But the disposal of animal waste and increasing levels of pollution may now halt the expansion of its multi-billion pound export-driven industry.

Whether spread on farmland as a nutrient-rich fertiliser for crop growth or fed into an anaerobic digester to generate biogas, every tonne of manure must be accounted for in planning applications for intensive farms.

Exporting truckloads of manure to the Republic of Ireland is seven times cheaper than alternatives – volumes exported to the Republic have jumped by 48% in the last decade. In the previous five years, this has totalled 280,000 tonnes of waste sent south. So these new AD plants should solve this problem in an environmentally friendly and economically sustainable manner.

Plans were outlined last November at a Biomethane conference by members of the Renewable Gas Forum Ireland (RGFI) to build 130 anaerobic digestion (AD) plants in the Republic of Ireland by 2030. This will create approx. 3,000 jobs, all of which requires capital funding of €1bn (at 2.5TWh).

Each plant would require around 405 ha of grass or wholecrop along with 10,000 to 15,000 tonnes of slurry from dairy, pig or poultry farms. This could suit many smaller and elderly farmers who could destock their livestock and grow silage on contract to fuel local AD plants, thereby generating a valuable new income source with a minimal investment. The digestate produced would also replace conventional fertilisers on their farms.

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