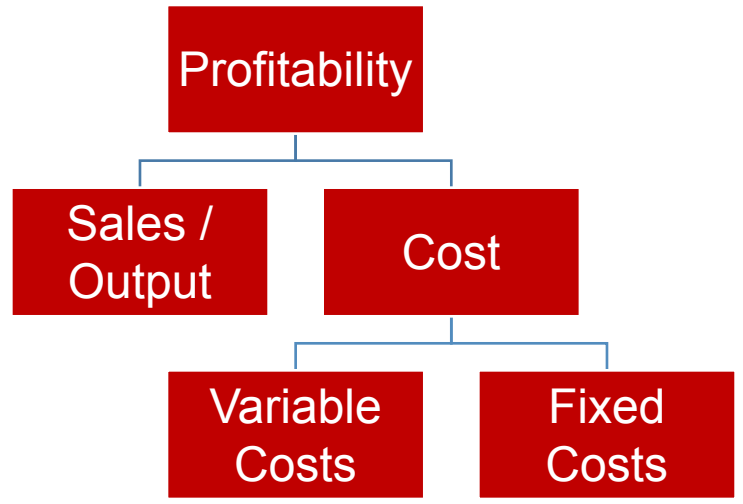


Farm Economics: The Dairy Economy – Profitability



Sales / Output:

- Milk Sales [Volume * Quality * Price]
- Cull Cow sales [Numbers * Price]
- Calf / store cattle sales [Breed / size / age]
- Dairy stock sales [In calf heifers]
- BPS Entitlements
- AEOS / GLAS
- Disadvantaged Area

Variable Costs:

- Fertiliser
- Feed
- Vet, Medicine & AI
- Contractor
- Dairy expenses/ haulage

Fixed Costs:

- Machinery running costs
- Household
- Land Rental
- Labour
- Professional fees
- Land & Buildings
- Repairs & Maintenance
- Depreciation
- Bank / Leasing

	Key performance indicators		
	Very Efficient	Average	Less Efficient
Spring Milk production - Variable costs	< 11 c/litre	12 – 13 c/litre	> 14 c/litre
Winter Milk production - Variable costs	< 13 c/litre	14 – 15 c/litre	>16 c/litre



Impact of Milk Quality on Milk Price



Milk Price System

In recent years there has been a gradual move away from volume based payment toward payment paid on milk constituents. The price farmers receive per litre is dependent on:

A
Fat
(kgs)

+

B
Protein
(kgs)

-

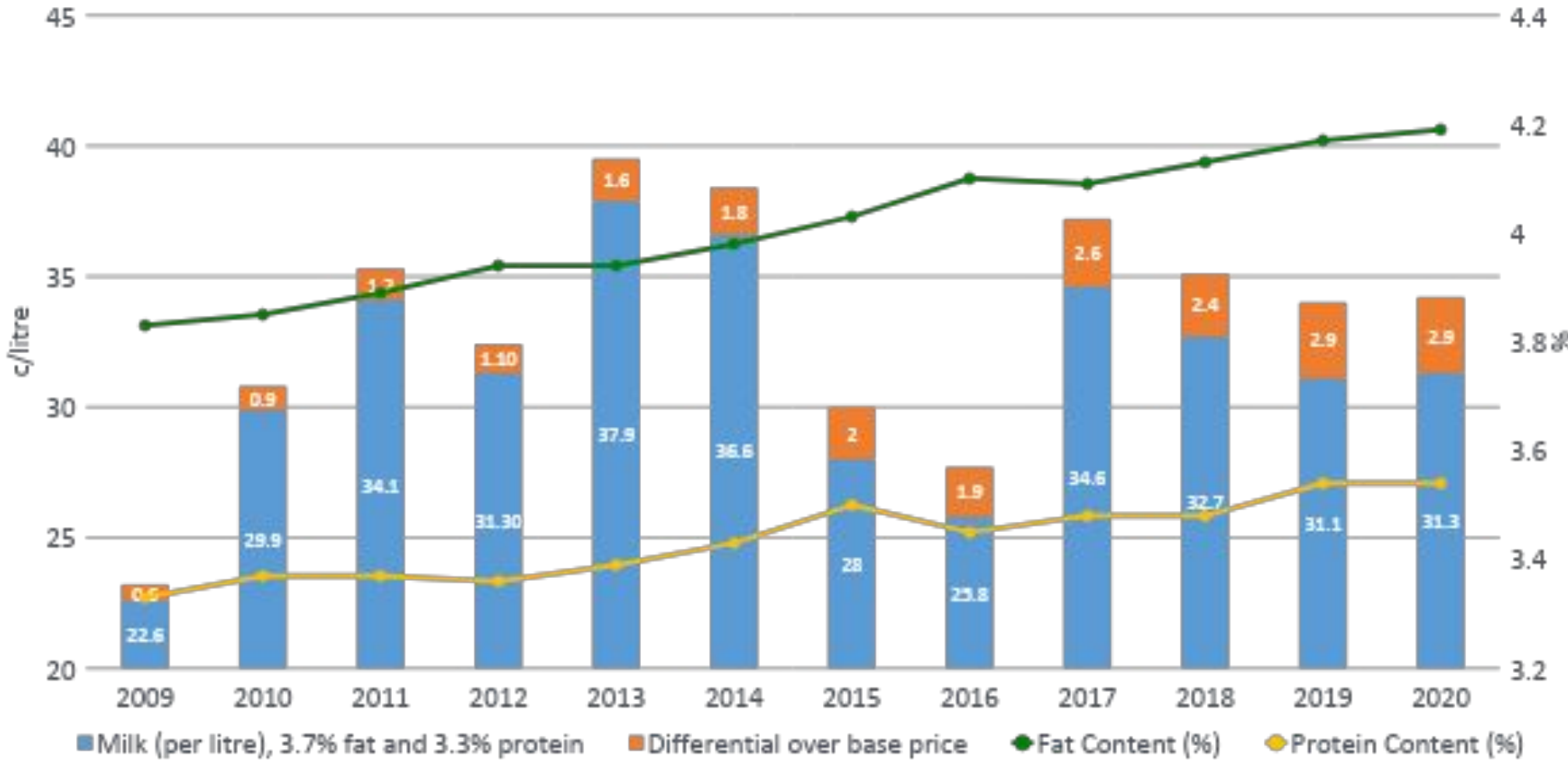
C
Water

For milk produced this month, farmers are typically paid in the middle (15th – 22nd) of the following month

Milk price is paid on a per litre basis and is determined by returns the processor received for the mix of products and commodities sold, both domestically and internationally.

The milk price a farmer receives will vary based on the milk constituents (fat and protein) supplied as well as the quantity of milk produced. Liquid milk farmers receive a higher price per litre to offset higher production costs incurred during the winter months.

Impact of Milk Quality on Milk Price



Top 20% in Profit Monitor:

- Fat: 4.06%
- Protein: 3.53% averaging
- 432kg MS / cow

(Source: CSO, multiple years)

Month **May 2019**

Learning Outcome 4.3.1(c)

The higher the better

Society Average						
	Butterfat	Protein	Lactose	SCC	TBC	Price
Supplier May 19	4.28	3.61	4.86	109	57	32.969
Society Average	3.83	3.43	4.85	167	24	31.469
Top 10% Avg	4.21	3.65	4.96	53	4	34.055

Monthly Volume													
1		6	9,583	11		16	9,197	21		26	9,782	31	
2	9,119	7		12	9,437	17		22	9,930	27		Total	143,281
3		8	9,341	13		18	9,792	23		28	10,147	May 18	145,452
4	9,354	9		14	9,239	19		24	9,697	29			
5		10	9,190	15		20	9,562	25		30	9,911		

Monthly Quality				
Total Bacteria Count		Somatic Cell Count		Thermoduric
TBC Average	2 Month Geometric	This Month	3 Month Geometric	Payment Result
57	28	109	109	2,490

The lower the better

Milk History														
May 18		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD 19
35,740	C/L	0.000	39.571	35.718	35.115	32.969								34.703
145,452	Litres		18,849	99,988	133,938	143,281								396,056
3.66	Protein		3.84	3.53	3.60	3.61								3.60
4.27	Bfat		5.06	4.79	4.47	4.28								4.51
5,482	Prot kgs		745	3,634	4,965	5,326								14,671
6,395	Bfat kgs		982	4,932	6,165	6,315								18,393
11,877	Total kgs		1,727	8,566	11,130	11,641								33,064
4.81	Lactose		4.64	4.85	4.87	4.86								4.85
86	SCC		166	103	118	109								124
20	TBC		40	17	15	57								32
100	Therm.		100	100	100	2,490								698

(Note: The format of co-op statements is not consistent but the key information of interest is within all)

ICBF - Dairy Herd Performance report



Dairy Herd Performance Report Jan - May 2019



Herd Owner:
Designator:
Supplier Number:

Table 1: Your Herds Milk Deliveries to Arrabawn for 2018/2019

Month	Litres			Fat %			Protein %			SCC ('000)			Total Cows	
	2019	2018	Diff '18-'19	2019	2018	Diff '18-'19	2019	2018	Diff '18-'19	2019	2018	Diff '18-'19	2019	2018
Jan	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A	147	168
Feb	18,849	20,972	-10.1%	5.06	5.08	-0.02	3.84	3.8	0.04	168	182	-14	180	194
Mar	99,988	89,988	11.1%	4.79	4.9	-0.11	3.53	3.43	0.1	104	133	-29	192	198
Apr	133,938	136,689	-2%	4.47	4.53	-0.06	3.6	3.54	0.06	120	103	17	191	198
May	143,281	145,452	-1.5%	4.28	4.27	0.01	3.61	3.66	-0.05	110	87	23	193	197
SubTot	396,056	393,101	0.8%	4.51	4.55	-0.04	3.6	3.57	0.03	115	108	7	181	191
Jun		117,814			4.38			3.56			88			196
Jul		105,033			4.86			3.55			114			196
Aug		108,933			4.9			3.69			117			194
Sep		97,038			4.7			4.04			117			193
Oct		79,159			5.18			4.38			99			193
Nov		42,603			5.74			4.7			179			178
Dec		816			6.07			4.76			202			148
Total		944,497			4.73			3.75			111			188

ICBF - Dairy Herd Performance report

Table 3: Arrabawn/ICBF Performance Score Card

	Your Herd	Arrabawn Average	Arrabawn Top 10%	Your Rank out of 100	Your Star Rating
Milk performance for 2019 (Jan - May) based on Arrabawn data					
Fat + Protein (Kg/cow) Average Fat and Protein yield per cow for your herd	183	147	195	83%	* * * * *
Litres per Cow per Day Avg litres of Milk per cow from Jan - May 2019	14.49	12.78	16.9	69%	* * * *
Fat % to end May 2019 Weighted average Fat % from Jan - May 2019	4.51	4	4.24	98%	* * * * *
Protein % to end May 2019 Weighted average Protein % from Jan - May 2019	3.6	3.39	3.54	96%	* * * * *
Average Milk Price (cpl) Incl. VAT Average milk price received from Jan - May 2019, (Includes Bonuses/Penalties, Excludes Levies)	34.7	31.8	33.6	98%	* * * * *
SCC (,000 cells/ml) The weighted average Somatic Cell Count for Jan - May 2019	115	176	78	71%	* * * *

¹ * = 0-20% ** = 21-40% *** = 41-60% **** = 61-80% ***** = 81-100%

ICBF - Dairy Herd Performance report

	Your Herd	Arrabawn Average	Arrabawn Top 10%	Your Rank out of 100	Your Star Rating ¹
Fertility & Calving data based on HerdPlus 2018 Calving Report					
Calving Interval (days) Average number of days between successive calvings for cows calved during the period	366	384	363	84%	* * * * *
Spring 6 Week Calving Rate Number of cows/heifers calved within the first 6 wks (171) as a proportion of all cows calved during the Spring (198)	86%	67%	87%	90%	* * * * *
% with known Sire and Calving Survey recorded Calves where sire (161) and calving survey (203) are recorded as a proportion of all births during the period (203)	90%	60%	100%	58%	* * *
%AI bred replacements Calves born in the period from dairy AI (71) as a proportion of dairy females born (73)	97%	53%	100%	71%	* * * *
% of Heifers Calved at 22-26 months No. of heifers calved (34) that were between 22 & 26 months of age (34)	100%	65%	100%	100%	* * * * *
EBI Statistics based on the latest HerdPlus EBI report 2019					
Herd EBI (2019) Average EBI for Cows (191) with EBI data	€149	€100	€135	97%	* * * * *
EBI of 2019 Inseminations Weighted Average EBI of dairy AI bulls recorded in Spring 2019	€293	€240	€305	76%	* * * *
Table of Terms					
Arrabawn Average	The average performance of all Arrabawn Suppliers				
Arrabawn Top 10%	The top 10% cut off point of all Arrabawn Suppliers				
Your Rank out of 100	Your performance expressed across all Arrabawn herds eg. 1% = Bottom Supplier, 50% = Average Supplier 100% = Top Supplier				
Your Star Rating	Your performance is displayed in stars e.g. 1 star is bottom 20% and 5 stars = top 20%				
Eligible Cows	Number of dairy cows in the herd on May 2019				
¹ * = 0 - 20% ** = 21 - 40% *** = 41 - 60% **** = 61 - 80% ***** = 81 - 100%					

Farm Economics: Beef/sheep Sector – Operator differences

Key indicator – how much Direct Payments are they retaining

Output:

- Quality of animals / value at purchase
- Grading of animal & carcass weight
- Stocking Rates
- Level of direct payments

Costs:

- Grassland Management – Live weight gain
- Type of land & fragmentation & rental charge
- Quality of operator – Mortality, calving interval, etc
- Weather
- Machinery
- Level of Debt

Bord Bia Quality Assurance Scheme

- Voluntary scheme
- Specified management practices are required; as is keeping and retaining a comprehensive up-to-date herd register
- Participants that demonstrate scheme requirements receive a price premium for slaughtered livestock relative to non-participants
 - +20c/kg for in-spec animals <30mths
 - +8c/kg for grade O- and fat score 4+ 30-36mths
- Participants audited annually to ensure compliance (max 18mth interval)

Cattle Prices

	1	2	3	4L	4H	5L	5H
E	+5	+10	+10	+10	+5	-15	-50
U+	+5	+10	+10	+10	15	-15	-50
-U	B	+5	+5	+5	B	-15	-50
R	-5	B	B	B	-5	-15	-50
O+	-10	-5	-5	-5	-10	-20	-60
-O	-20	-15	-15	-15	-25	-40	-70
P+	-30	-25	-25	-25	-35	-40	-80
-P	-30	-25	-25	-25	-35	-40	-80



Farm cashflow – key to have funds available when required. Can be profitable but fail!!

Dairy	<u>Spring</u>	<u>Summer</u>	<u>Autumn</u>	<u>Winter</u>
Cashflow In	Milk Sales Calf Sales Winter cattle sold	Milk Sales (Peak Output) Calf Sales	Milk Sales (declining) Basic Payment & Greening (50%) AEOS / GLAS (75%) Area of Natural Constraint (100%)	Milk Sales (small) Cull cow Sales BPS & Greening (50%) AEOS / GLAS (25%)
Cashflow Out	Feed Costs Fertiliser Drawings & Overheads	Fertiliser, Contractor, Vet & AI, Merchant Credit, Bank repayments, Drawings & Overheads	Fertiliser, Contractor, Bank repayments, Drawings & Overheads	Feed Drawings & Overheads

Drystock	<u>Spring</u>	<u>Summer</u>	<u>Autumn</u>	<u>Winter</u>
Cashflow In	Selling Stock	Selling Stock	Selling Stock Basic Farm Payment AEOS / GLAS (75%) Area of Natural Constraint (100%)	Basic Farm Payment Selling Stock AEOS / GLAS (25%) Beef Genomics payment
Cashflow Out	Feed & Fertiliser Buying Stock Drawings & Overheads	Buying Stock Feed & Fertiliser, Contractor, Repayments Drawings & Overheads	Buying Stock Feed & Fertiliser, Drawings & Overheads	Buying stock Feed Drawings & Overheads

Farm cashflow – key to have funds available when required. Can be profitable but fail!!



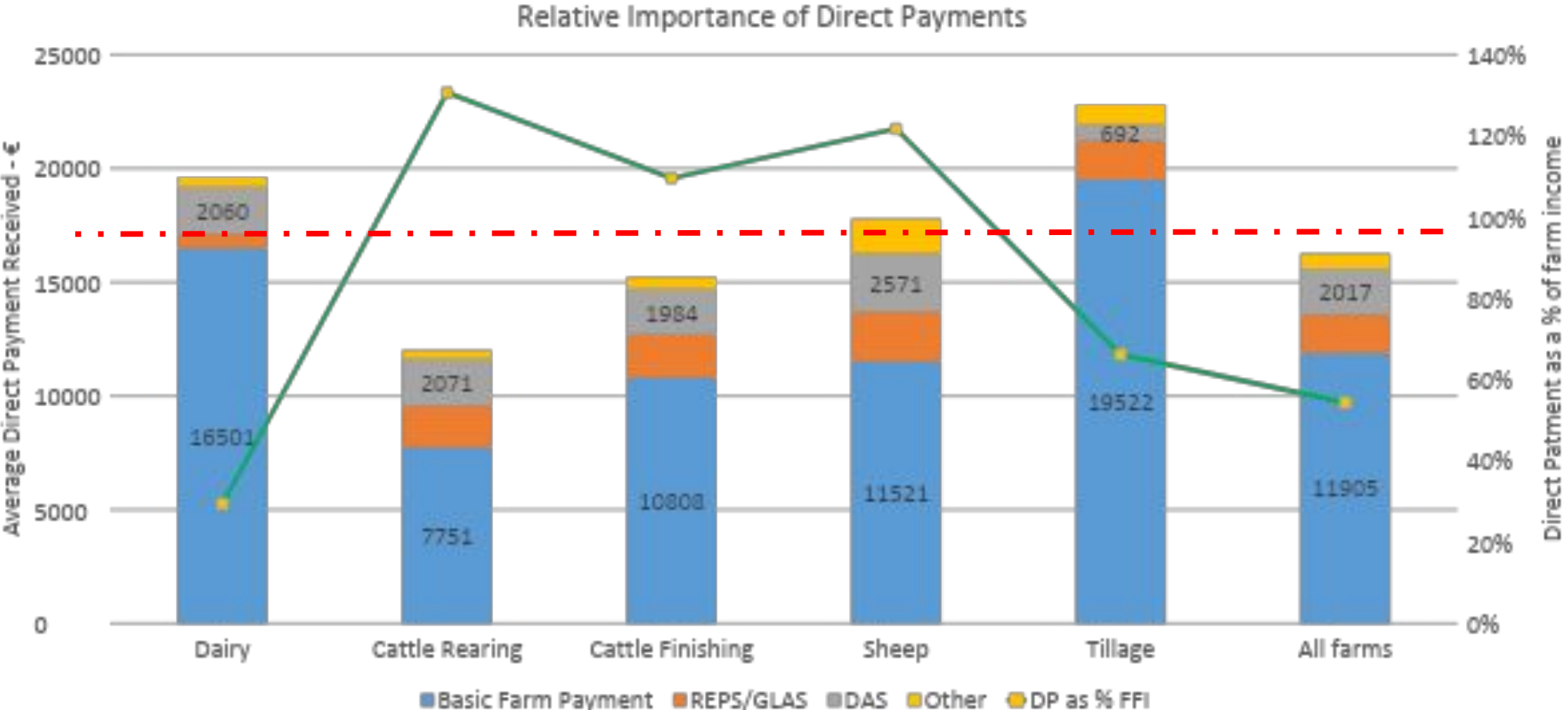
<u>Tillage</u>	<u>Spring</u>	<u>Summer</u>	<u>Autumn</u>	<u>Winter</u>
Cashflow In			Straw Sales Crop sales Basic Farm Payment & Greening Area of Natural Constraint	Crop sales Straw sales Basic Farm Payment & Greening
Cashflow Out	Seed & Fertiliser Contractor Drawings & Overheads	Fertiliser & Chemical sprays Drawings & Overheads	Contractor Drawings & Overheads	Drawings & Overheads

<u>Pigs</u>	<u>Spring</u>	<u>Summer</u>	<u>Autumn</u>	<u>Winter</u>
Cashflow In	Stock sales	Stock sales	Stock sales	Stock sales
Cashflow Out	Feed / AI Drawings Overheads Repayments	Feed / AI Drawings Overheads Repayments	Feed / AI Drawings Overheads Repayments	Feed / AI Drawings Overheads Repayments



KPI's – Pigs			
	Very Efficient	Average	Less Efficient
Margin over feed	50 c/kg	45 c/kg	< 45c/kg
Kgs of meat produced per sow	2,000+	1,800 – 2,000	< 1,800

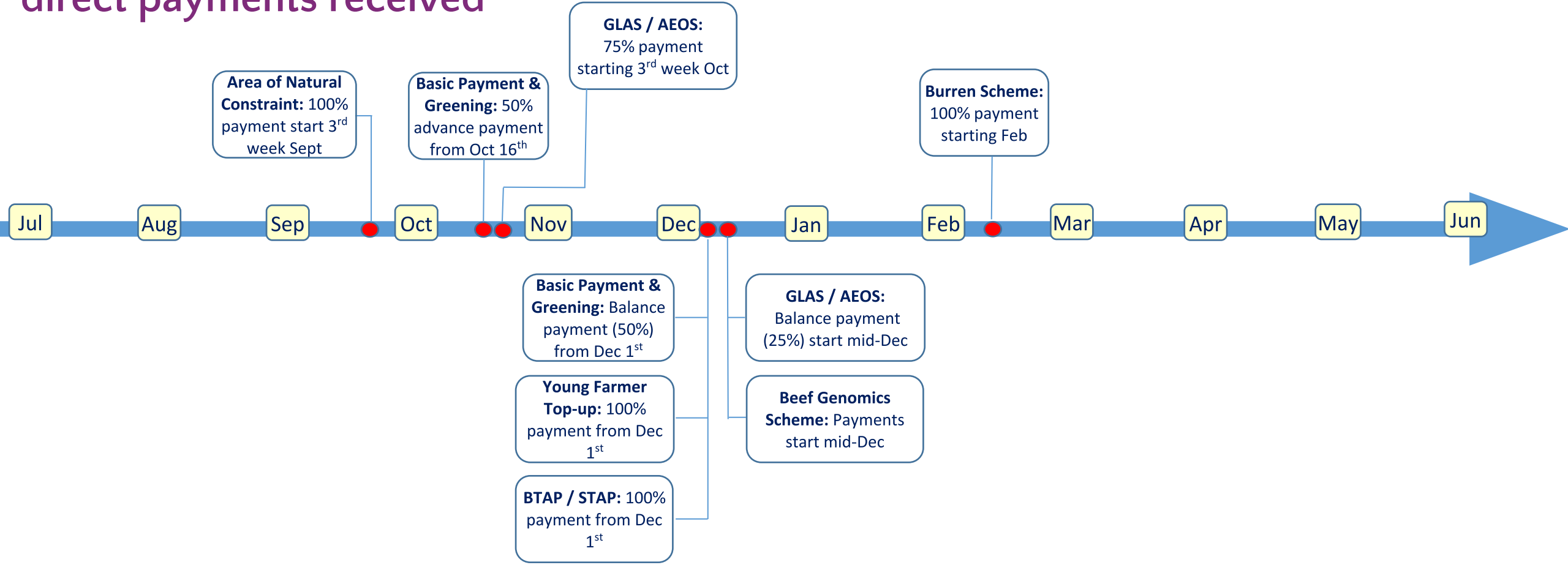
Important Policies/Schemes: Heavily dependent on Direct Payments some sectors more than others (& some schemes more than others)



(Source: Teagasc National Farm Survey, 2020)

Note: Graph depicts Direct Payments as a percentage of average Farm Income. Where Direct Payments are greater than 100% of farm income, part of payments received were utilised to meet the overall costs of production

Important Policies/Schemes: Type & typical timeline of main direct payments received



Important Policies/Schemes- Common Agricultural Policy (CAP)

Established in 1962, CAP is a common policy for all EU countries, managed and funded at European level from EU budgets.

It protects family farm incomes, supports the rural economy, and ensures the production of high-quality safe food for consumers, protects rural landscapes and the environment.

It has evolved overtime - the latest CAP reform (2021 – 2028) being no different - and in line with societal demands includes a very strong emphasis on the environment.

The CAP budget fixed for the period from 2014-2020 was €408.3bn, with €308.7bn intended for direct payments and market measures (the so-called First Pillar) and €99.6bn for Rural Development (the so called Second Pillar).

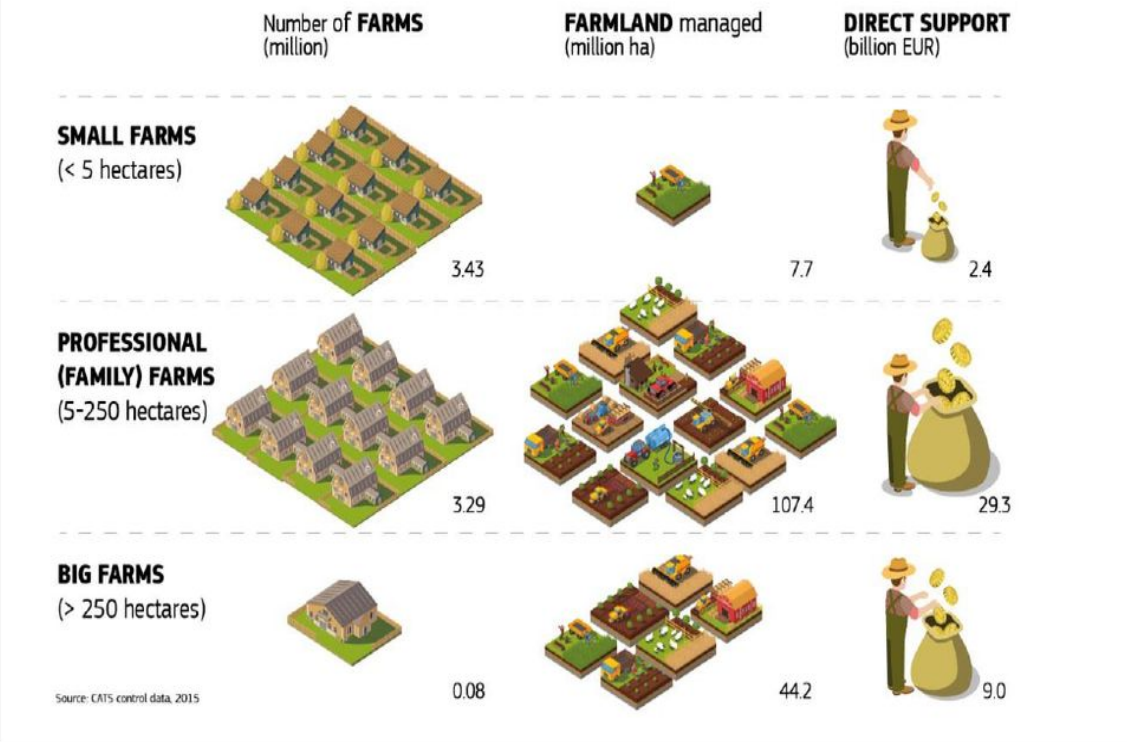
Ireland's estimated take in Cap funding between 2014 and 2020 is estimated to amount to €10.68 billion, while the State's estimated overall allocation for 2021-2028 is estimated to be €10.73 billion.

Member States control much of how the funding is allocated and have the option to transfer up to 15% of their CAP allocations between direct payments and rural development. This will allow them to better adapt the policy to their own farming sector's priorities and deliver on national and EU ambitions

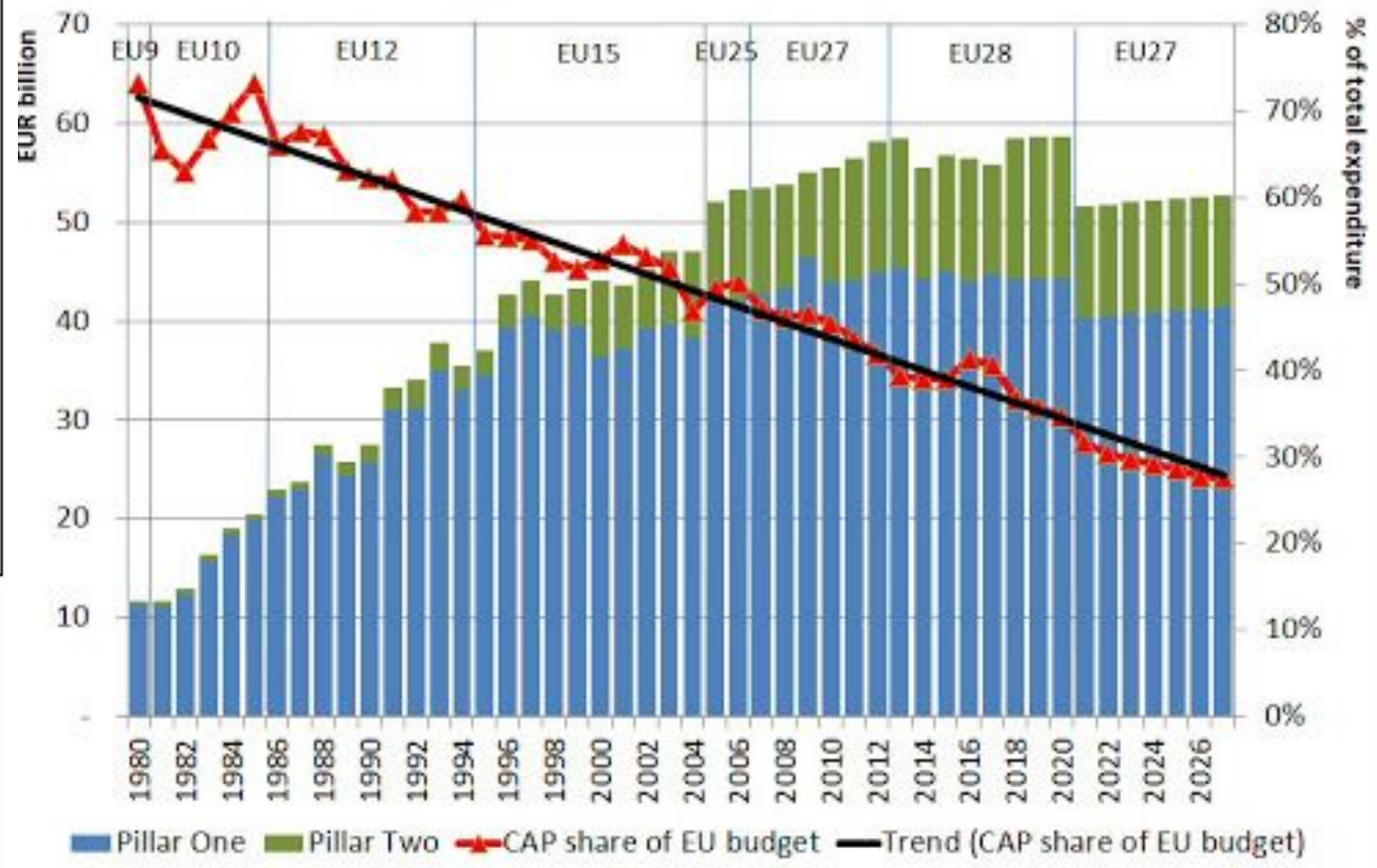


Important Policies/Schemes: Common Agricultural Policy (CAP)

DISTRIBUTION OF EU DIRECT SUPPORT TO FARMERS



Evolution of the CAP budget, 1980-2027



Important Policies: Common Agricultural Policy (CAP) – (2021–2028)

The European Commission has adopted two new strategies that will help the CAP deliver European Green Deal ambitions.

The **Farm to Fork Strategy** aims to make food systems fair, healthy and environmentally-friendly.

It sets concrete targets:

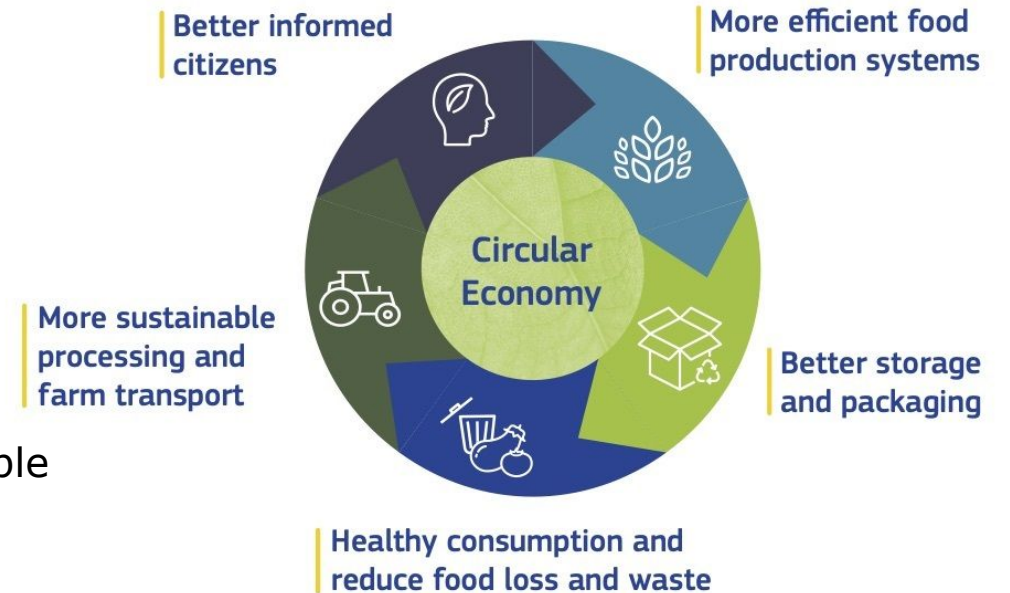
- halving the use of pesticides;
- reducing fertilizers by at least 20%;
- increasing agri land under organic farming to 25%;
- lowering farm animals antimicrobials use by 50%.

The new **Biodiversity Strategy** tackles biodiversity loss; unsustainable use of land, overexploitation of natural resources, pollution, and invasive alien species.

- bring back pollinators to agricultural land;
- enhance organic farming and other biodiversity-friendly farming practices
- establish binding targets to restore damaged ecosystems.

It also aims to transform at least 30% of Europe's lands into effectively managed protected areas and bring back at least 10% of agricultural area under high-diversity landscape features.

Farm to Fork will contribute to achieving a circular economy – from production to consumption:



Summary

- Dairying will likely remain the most profitability farm sector
 - Expect increased participants; increased herd & milk pool
 - Milk price volatility will remain a feature, albeit at higher plateau
- Beef & sheep farming will continue to be heavily reliant on direct payments
 - Typically lower margin enterprises with higher incidence of part-time farmers
- After dairying, tillage farming will likely be most profitable farm enterprise
 - Positive long term outlook – growing populations; rising affluence; biofuels
 - Grain prices will remain volatile, influenced by weather events and global production
- Pig farming will remain cyclical in terms of profitability; output & input price volatility
- Long term outlook for Irish agriculture is positive, underpinned by grass based system and lower cost of production

Resources:

- Irish Farmers Journal / Farming Independent / Farming Examiner (weekly publications)
- Food & Drink Exports – Bord Bia (<https://www.bordbia.ie/globalassets/bordbia2020/industry/insights/new-publications/performance-and-prospects-2019-2020.pdf>)
- Market prices – Bord Bia (<https://www.bordbia.ie/farmers-growers/prices-markets/cattle-trade-prices/>)
- Annual Agri Financial performance across all sectors - Teagasc National Farm Survey (Link to recent Teagasc 20210 Outlook webinar [here](#); report – [here](#))
- Agri price trends, structure, area planted – Central Statistics Office (<https://www.cso.ie/en/statistics/agriculture/>)
- CSO PXStat (lots of archive agri data for trend analysis) – See <https://data.cso.ie/> (Agriculture 1st option on left hand side)

Appendix: Section of Farm Direct Payments received by Irish farmers

Basic Farm Payment



- Replaced the Single Farm Payment
- Area based payment for active farmers
- Progressive convergence in payment toward a national average entitlement value (€272 / ha) payment. (Farmers with above average entitlement values will see a gradual decline in payment received; farmers with below average entitlement values will see a gradual increase in payment received)
- Typically paid in two instalments (50% Oct; 50% Dec)

Greening Payment

- All farmers eligible for payment under Basic Payment Scheme are subject to Greening, and most automatically qualify for payment
- Seeks to promote crop diversification & biodiversity
- Payment equivalent to c.30% of total payment under Basic Payment Scheme
- Typically paid in two instalments (50% Oct; 50% Dec)

Green
Low-carbon
Agri-environment
Scheme

GLAS (Replaced REPS / AEOS)

- Agri environmental scheme focused on water quality; species & habitats; climate change
- Max payment €5k /annum over five year contract [+ €2k (GLAS +)]
- **GLAS+** additional payment for farmers making exceptional environmental commitment
- Payments made October (75%) & December (25%)

Area of Natural Constraint (formerly Disadvantaged Area Payment)

- Area based payment for farming in a “Disadvantaged Area”
- Over 100,000 farmers qualify for payments
- Max payment :
 - €2,468 for Less Severely Handicapped Lowland [€82.27/ha to a maximum of 30ha]
 - €2,880 for More Severely Handicapped Lowland [€95.99/ha to a maximum of 30ha]
 - €3,400 for Mountain Type Grazing [€109.71 for first 10 ha; €95.99/ha on remaining hectares up to maximum of 34ha]
- 100% payment made end September



Beef Genomics Scheme



- Voluntary scheme offering 6 year payment for suckler beef farmers
- Scheme seeks to lower GHG emissions by improving the genetic merits of the national beef herd.
- Payments received in Dec - the amount influenced by the number of suckler cows calved and the eligible forage land declared

Knowledge Information Schemes

- Includes Dairy / Beef / Sheep Technology Adaptation Programmes
- Seeks to promote the transfer and exchange of information and best practice across a range of areas, utilising Discussion Groups
- Annual grant of €750 received by eligible participants in December



Burren Scheme:

- Part of €70m Targeted Agri-Environment Scheme to 2020
- Scheme seeks to support locally-led agri-environment programmes
- Estimated 5,000 farmers could benefit
- Payment paid February of year following contract



Forestry:

- €483m forestry program 2014-2020
- Capital grants & premium for afforestation
 - Aim: increase land available for planting (aim 18% under forest, currently 11%)
- Premium rates vary by plantation size & type
 - Same premium rate paid to farmers / non-farmers (change vs. older programme)