



Teagasc Organic Farm Walk
on the farm of
Fergal Byrne
Calverstown Little, Dunlavin,
Co. Kildare

Wednesday 8th June 2022



Introduction

Fergal Byrne farms 58.768Ha (145acres) of utilisable land in Calverstown Little, Dunlavin, Co. Kildare. The farm is a mixed farming enterprise with cattle, lamb, oats, wool and turkeys all sold off the farm organically. For a number of years Fergal had an interest in organic farming. “In 2014 I felt I had to start looking at other options for the farm”. At the time he was renting a lot of land on conacre and growing cereals on it. “Every time I went into the field I was spending money on the likes of fertiliser and sprays”. Fergal also wanted to generate a full-time income from the farm and realised that he was going to have to increase in scale under conventional systems to enable this to happen.

In late 2014 Fergal completed a 25 hour course on Organic farming principles. Having completed the course, Fergal decided that farming organically could offer him the opportunity to earn a full time living from the farm without having to increase in scale. In late 2014 Fergal completed his conversion plan and commenced his organic conversion in early 2105. Fergal really enjoys the variety of jobs on the farm that the mixed organic farming system offers him and also the variety of enterprises protects him somewhat from price fluctuations as his is not too dependent on any one income source.

Fergal is the chairperson of the organics branch of the ICOSA (Irish Cattle and Sheep-farmers Association), is a member of the newly founded National organic strategy forum, is a board member of the Irish Organics Association and is also involved in an EIP project entitled “Protecting Farmland Pollinators”, <https://ec.europa.eu/eip/agriculture/en/find-connect/projects/protecting-farmland-pollinators>

Farm Details and Land Use

The utilisable area on this farm is 58.76Ha, of which 35.49Ha is owned and the remaining 23.27Ha is rented on a conacre basis. There is also a further 5.6Ha of commercial forestry, bringing the total area farmed to 64.36Ha.

Table 1: Land Use Details 2022 (Ha)

Permanent Pasture	33.90
Traditional Hay Meadow	10.38
Red Clover silage (sown 2020)	4.40
Spring Oats	10.07
Forestry	5.60
Total Ha	64.36





Livestock Enterprises

Fergal operates a mixed grazing system of sucklers and sheep. These are primarily kept on the home farm with the outside blocks being used for mostly for hay and silage. The suckler herd has remained relatively static in numbers over the past 10 years, however, prior to converting to organics, Fergal used to sell all calves at weanling stage. Over a period of 3 years, after converting, he increased the stock until he was selling all cattle as finished animals. Fergal has also increased the sheep flock to 235 ewes this year.

Table 2 - Average Livestock Numbers 2021

Animal Type	2021
Suckler Cows	15.7
0 – 1 year olds	13.6
1 – 2 year olds	13.8
+ 2 year olds	2.5
Ewes	180
Rams	6
Total LU	62.54 LUs
Total Ha (UAA)	58.76 Ha
Grassland Ha	48.69 Ha
Whole Farm Stocking Rate	1.06 LU/Ha
Grassland Farm Stocking Rate	1.28 LU/Ha



Red Clover Silage

In early May 2021, Fergal sowed 4.40 Ha with red clover silage and combi-crop. The land was ploughed and tilled with 10ton of composted farmyard manure being spread before ploughing. 50kgs (8 stone) of oat seed were sown along with 40kgs of combi-crop seed. Fergal then broadcast a red clover silage mix that he sourced from Fruithill Farm. The field was then ring rolled before finally receiving a final flat roll. The field received two sprays of compost tea during the growing phase.

2021 Red Clover Silage (4.40 Ha)	
May 2021	FYM
May 2021	Crop sown
June/July 2021	Compost Tea x2
August 2021	90 bales (Wholecrop)
August 2021	FYM & Compost Tea
October 2021	70 bales (Red Clover silage)
October 2021	FYM
Winter 2021	Grazed with sheep
2022 Red Clover Silage (4.40 Ha)	
24 th May 2022	78 bales (Red Clover Silage)
**July 2022	**80 bales (estimate)
**September 2022	**70 bales (estimate)
Winter 2022	Graze by sheep

****Predicted cutting dates and yields**

Figure 3: Red Clover seed mixture used on the farm



93,5 % Organic

Content label for SemoPur 2.3 Clover Mix Perennial				
Batch No.: 9384 544M		Weight in kg: 10		Closing Date: Nov 2021
Species	Variety	% organic	% conventional	weight conventional kg
Red Clover	'Lucrum'	10		0.00
Red Clover	'Titus'	5		0.00
Red Clover	'Nemaro'	10		0.00
Crimson Clover	'Signal'		3	0.30
White Clover	Nemuniai		1.5	0.15
White Clover	'Edith'	5.5		0.00
White Clover	'Klondike'	6		0.00
Alsike Clover	'Dawn'		2	0.20
Meadow Fescue	'SW Minto'	10		
Meadow Fescue	'Pasja'	15		0.00
Timothy	'Kaba'	12		0.00
Per. Ryegrass	'Giant'	5		0.00
Per. Ryegrass	Astonhockey	5		
Per. Ryegrass	Valerio'	5		0.00
Italian Ryegrass	'Hunter'	5		0.00
Total % / kg		93.5	6.5	0.65

Supplied by: Fruit Hill Farm, Bantry, Co. Cork www.fruithillfarm.com

Regulation for Seed Usage

- Organic seed database with details of suppliers and available organic seed www.organicxseeds.com
- Must seek permission to use un-treated non-organic seed from your Organic Certification Body (OCB).
- A derogation must be obtained from the OCB for use of any untreated non-organic seed prior to sowing.
- Conventional treated seed is not permitted to be used.

Beef Enterprise

Fergal keeps approximately 15 suckler cows and rears all the progeny through to fattening at 22 – 27 months. The cows are predominantly Charlaois and a Charlaois bull runs with the cows. The majority if the cows calve in March and April. Cattle receive 3-4kgs of ration for the last 3 weeks before slaughter and that is the only ration they receive in their lifetime. Red clover silage is used to finish cattle over the second winter. All the cattle slaughtered in 2022 were sent to Slaney meats. The majority were sold at a flat price of €5.60/kg. As can be seen from table 3, they were slaughtered at an average of 25 – 26months at an average carcass weight of 286kgs.

Table 4 – Slaughter Performance Report 2022 (Jan – May)

Sex	Number of Animals	Days on Farm	Average Age at Slaughter (months)	Carcass Weight (kg)	Carcass Grading	Factory Price	Price per kg
Steers	11	747	25	286	O+2-	€1,570	€5.49
Heifers	3	774	26	286	O+3=	€1,616	€5.63

Source: icbf



Case Study – Animal 321



Photo taken April 26th 2022 (3 weeks pre-slaughter)

Animal Number 321	Stats
Date of Birth	02/04/2020
200 day weight (20/10/2020)	295kgs
ADG in first 200days	1.23kgs
Slaughter Date	18/05/2022
Days on farm	776
Age in months	25.5
Carcass Weight	299.90
Grade	O+2-
Price/kg	€5.60
Carcass value	€1679.44

Beef financials

In the table below we assume Fergal purchases his own weanlings at 300kgs for €900 and finishes them at 26 months. As Fergal does much of his own machinery work and grows his own straw, the silage costs and straw costs are over-estimated to reflect the situation of a grass only farmer who hires a contractor to complete all silage work.

Weanling to Beef Budget	
Purchase Weight	300kgs
Purchase Price (€/kg)	€3/kg
Purchase Price (€)	€900
Feeding period - First Winter	150 days
-At Grass	215 days
- Second Winter	160 days
Silage Required for 2 winters	12 bales (200kg DM)
Cost/Bale	€15
Variable Costs/Head	
Silage Costs	€180
Meal Costs	€60
Vet costs	€24
Seed	€26
Straw (€15/bale)	€78
Contractor (non-silage)	€26
Total Variable Costs	€394
Total Fixed Costs	€303
Sale Price	€1679
Minus Purchase Price	€900
Minus Total Costs	€697
Net Profit /head	€82
OFS Payment	€131
Total Profit/Head	€213

Sheep Enterprise

Fergal has always kept sheep on the farm and he feels they fit in well with the beef and tillage enterprises. The sheep can also target specific weeds making them an ideal complement to the cattle enterprise but the primary reason for maintaining the sheep enterprise is to provide a more even cashflow over the calendar year.

The current flock consists of 230 ewes including 25 ewe lambs. The ewes are mostly crossbred with a combination of Leicester x Texel x Suffolk being the most common cross with the flock. There are also a number of Cheviot and Kerry hill ewes within the flock.

Texel, Blue Texel, and Hampshire Down rams are currently running with the main flock. Fergal runs 2 Galway rams with the ewe lambs as he feels they very easy lambing and they are also very good for their wool quality for which Fergal has a unique market (covered in a later section).





Flock Management

- Rams are introduced to the flock in early October for breeding.
- Ewes are scanned at approximately 80 days gestation.
- Lambing begins in early March.
- Shearing takes place in June
- Faecal egg counts are carried out on ewes twice annually and lambs, in September and after Christmas. Worm dose only given if egg count is high, and after receiving veterinary approval.
- Vaccinations are given for Clostridial Diseases in accordance with the recommendations
- Lambs receive mineral supplementation of Cobalt and Vitamin 12 and the ewes are supplemented twice with Cobalt before and during mating.

Winter Feed Management

Sheep are typically housed in early January. Fergal keeps a close eye on the ewes for the first 2 weeks after housing and he will put any ewes that aren't thriving back out to grass. This usually results in approximately 20 ewes being put back out to grass and they are usually the Cheviot, Kerry Hill and some older ewes. Fergal believes this is key to him maintaining a very low ewe mortality rate.

Ewes are fed on a mixed diet of hay and red clover/oat silage mix. Fergal will purchase 1ton of organic ration to feed to ewes pre-lambing and this is the total meal purchased for the ewes. They will all receive mineral supplementation during the indoor period via mineral licks. Ewes are let out to grass as they lamb. In spring 2022, they also grazed the red clover silage ground.



Lamb Sales/financials

Lambs are sold from mid- June to March. Lambs typically weigh 20kgs deadweight with an average price of €145 received for lambs in 2021. Fergal has 2 main markets for his lamb, Mulhalls of Coolanowle Organic Meats and ICM (Irish Country Meats) based in Camolin, Co. Wexford. Fergal would rather have a 20kgs lamb and get paid for the full weight rather than have a 23 – 24kgs lamb and not get paid for the last 1- 2kgs.

Fergal's costs for the lamb enterprise work out at €51 per lamb sold. Variable costs of forage (hay & silage), veterinary, and straw costs amount to €8 and fixed costs of machinery running, insurance, professional fees, car, phone, electricity and land lease amount to €43/lamb sold.

When these costs are put against the price received of €145 it makes it one of the more profitable enterprises on Fergal's farm. The short housing period, low input finishing and achieving a premium for his organic lamb are key to the profitability of Fergal's system.

Wool Sales

Fergal Supplies Yarns and Vibes in Cork with organic wool who sell the wool as yarn. The process of taking the organic wool from Fergal's farm to the time it ends up on the shelf of Yarns and Vibes in Cork goes through a number of distinctive steps/processes across the country.

1. The wool is produced on Fergal's farm in Co. Kildare
2. The wool undergoes a gentle and organic wash
3. The is then transported to Chris in Donegal yarns where the wool is firstly put through a blending chamber to "breathe life into the fleece" before being spun into yarn
4. The yarn then makes its way to hand-dyer, Jennifer in Co. Clare who uses natural organic blends to achieve her vibrant colours
5. The final stop for the yarn is on the shelves of Joan's shop in Co. Cork

The full story can be watched on Youtube by searching "Yarn Vibes Organic" or at the following link;
<https://www.youtube.com/watch?v=fHitw2FdmAc>





Organic Cereals

There is a strong demand for organic cereals for both livestock and human consumption. The demand for organic cereals is expected to continue to increase for the foreseeable future.

Currently on the farm, there is 10.07 hectares of land devoted to cereals. This is made up of all spring oats all of which are grown for Flahavans and the organic porridge market.

Figure 5: Spring Oats Details

Spring Oats
Area: 10.07 ha
Variety: Husky
Sowing Date: March 25 th 2022
Sowing Rate: 13 stone per acre

Crop Rotation

Crop rotation is the key to successful organic crop production. The rotation provides the principal mechanism to provide crop nutrients and is a major way to control pests/diseases along with a variety of other benefits.

Fergal's plan will be implementing a rotation of a 2 year fertility-building phase followed with 3 years cereals and then back to red clover/combination-crop.

Table 6: 2022 Cereal Crop Margins
Variable Costs exc. VAT (€/ac)

	*Winter Feed Oats	** Fergal Byrnes Spring Organic Oats
MATERIALS	<u>357</u>	<u>32</u>
Seed	40	32
Fertilisers	241	
Manure		
Sprays	76	
HIRE MACHINERY	<u>179</u>	<u>142</u>
Plough, one pass and rolling	76	76
Spraying	38	
Fertiliser Spreading	13	
Manure Spreading		14
Harvesting	52	52
MISCELLANEOUS	<u>38</u>	<u>16</u>
Interest (6%)	16	3
Transport	22	13
TOTAL VARIABLE COSTS	<u>574</u>	<u>190</u>
Net Price (€/Tonne)	195	387
Straw (€/ac)	101	101



**Table 7: Cereal Crops Gross Margins (€/acre)
(Incl. Straw)**

	*Winter Feed Oats	Fergal Byrnes Organic Spring Oats
Tonnes/acre		
1.0		298
1.5		492
2.0		685
2.6	33	917
3.0	111	1072
3.2	150	
3.6	228	
4.0	306	

***Source Teagasc Crops Costs and Returns 2022**

**** Source Fergal Byrnes own figures**

Expected Yields

The expected yield for the spring oats would be between 1.8 – 2.0 tonnes per acre. In 2021 Fergal’s spring oats yielded 1.92 tonnes per acre.

Compost Tea

Compost teas are liquid versions of the solid compost material. They contain soluble plant nutrients and a complex community of beneficial microorganisms. While there are an infinite number of ways to prepare compost teas, basically all teas begin by mixing compost in water in order to extract plant nutrients and microorganisms. Liquid teas can be applied as soil drenches, foliar sprays or incorporated into irrigation systems. *Source: Rodale Institute*

Having attended a talk by Joel Williams, Fergal was keen to investigate more about the concept of compost teas and he has been experimenting with using various ingredients that he has on his farm and applying the compost tea as a foliar spray application. He admits that he is still learning the process and sometimes it works better than others. Farmyard manures (from cattle, sheep and turkeys), plant materials, clover silage, woodchip and wool are amongst some of the ingredients that Fergal has experimented with in his compost tea.



Turkeys

Fergal rears approximately 250 turkeys every year. The turkeys are reared in the polytunnel (prior to sheep being housed). They are purchased as chicks in late August/early September and sold at Christmas. Fergal sells direct to many customers but also sells a large percentage of them to a retailer who sell s hem at the farmers market in Carrick on Shannon.

The turkeys are fattened on an organic turkey ration and he has experimented with using the sheep's wool as a bedding material. When the turkeys are 5 – 6 weeks of age he introduces the wool and finds it serves two purposes n that it is a bedding material for the turkeys but it also breaks the wool down to allow him compost it, adding to the circular nature of Fergal's farming system.



Soil Nutrients and Manure Management

- Management of organic farms should ensure regular inputs of manures and a level of microbial and earthworm activity sufficient to breakdown organic matter and ensure continuous and efficient nutrient cycling.
- Keeping soils at a pH that facilitates organic matter breakdown and nutrient recycling is essential for successful organic farming.
- Organic manure nutrient content can vary widely depending on the source of nutrients and it is advisable to have the nutrient content of manures checked through laboratory analysis.

Sources of Nutrients used on Farm

- Nitrogen from atmospheric fixation by clover and other legumes
- Farmyard manure from sheep when housed for lambing
- Imported farmyard manure and cattle slurry
- Imported dairy sludge





Animal Welfare in Organic Farming

Livestock Health

- A healthy herd in organic farming is achieved by a combination of good management, sound nutrition and good animal husbandry skills.
- When a farm undergoes conversion to organic status an Animal Health Plan is required to be drawn up by the veterinary practitioner, who specifies the current animal health issues on the farm and how the farmer will tackle these problems into the future, while conforming to the requirements of organic certification standards.
- Detection of problems needs to be early, and timely veterinary advice is invaluable – when an animal is ill the organic farmer reacts in the same manner as their conventional neighbour and veterinary assistance is required immediately.

Conventional Veterinary Treatments Permitted

- Animals for meat consumption: one course antibiotics within 12 months.
- Animals for breeding: two courses antibiotics within 12 months.
- Dairy Mastitis: 2 courses antibiotics within 12 months, otherwise the cow is removed from the milking herd.
- If limits exceeded, organic status is taken away from animal.

Withdrawal Periods for use of Veterinary Products

All withdrawal periods shall be doubled.

Unless the medicinal product used indicates a withdrawal period, the specified withdrawal period shall not be less than:

14 days for eggs

14 days for milk

56 days for meat from poultry and mammals

Organic Animal Housing Standards

- Adjustments to meet organic standards may be necessary – depends on farm situation.
- Housing is not compulsory.
- At least 50% of floor area must be bedded.
- Straw, rushes or untreated wood shavings are acceptable bedding materials and these need not be organic.
- All animal housing is subject to inspection and approval by the Organic Certification Body.
- See Table 8 for organic space requirements.
- Cubicles are permitted if they are of optimum size for the animals on the holding. At least 3m² per individual animal must be allowed for dairy cows.
- Cubicles must be clean and dry and bedded at all times

Table 8 - Minimum Housing Area per head and by weight

Animal	Minimum Indoor Areas (net area available to each animal)	
	Live-weight Minimum (kg)	m ² /head
Calves; Beef	Up to 100kg	1.5
Cattle;	Up to 200kg	2.5
Bull Beef;	Up to 350kg	4.0
	Over 350kg	5.0 with a minimum of 1m ² / 100kg
Dairy Cows		6.0
Breeding Bulls		10m ²
Sheep		1.5m ² per ewe 0.35m ² per lamb



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

Organic Certification

A major factor that distinguishes organic farming from other approaches to sustainable farming is the existence of internationally acknowledged standards and certification procedures. The standards for organic production within the European Union are defined and enshrined in law by Council Regulation EC 834/2007 as amended.

In Ireland the Department of Agriculture, Food and the Marine is the competent authority (i.e. - the Department's Organic Unit is based at Johnstown Castle Estate Wexford) for regulating the organic sector and ensuring that the obligations and requirements of Council Regulation (EC) No. 834/2007 as amended and adhered to.

The Organic Unit of the Department of Agriculture, Food and the Marine have designated Official Certification Bodies whose role is to certify organic producers, farmers and processors through and inspection process of each individual's unit or farm. Further information can be sourced from these organic certification bodies:

Irish Organic Association



- Based in Unit 13 Inish Carraig, Golden Island, Athlone, Co. Westmeath,
- Phone: 090 643 3680
- Email: info@irishoa.ie
- Website: www.irishorganicassociation.ie

Organic Trust



- Based in Unit M4, Naas Town Centre, Dublin Road, Co. Kildare, W91 F7X3.
- Tel: 045 882377
- Email: info@organictrust.ie
- Website: www.organictrust.ie



Targeted Agricultural Modernisation Scheme Organic Capital Investment Scheme (OCIS)

On Farm Scheme

A standard rate of aid of 40% on investments up to a ceiling of €80,000 (i.e. can generate a grant of €32,000 from an investment of €80,000). For qualifying young organic farmers who meet the specific eligibility criteria, the standard rate of aid is 60% on investments up to a ceiling of €80,000.

How to Apply and Closing Date:

Online applications only through www.agfood.ie facility.

Full details and T&C:

<http://www.agriculture.gov.ie/farmingsectors/organicfarming/organicsscheme/organiccapitalinvestmentschemeocis/>

Queries:

DAFM Organic Unit, Johnstown Castle: (053) 91 63400

Organic Processing Scheme

Grant aid of up to 40% on €1.75 million (i.e. can generate a grant of €700,000 for an investment of €1.75 million) in facilities for the processing, preparation, grading, packing and storage of organic products with minimum level of investment in excess of €3,000.

More Details:

<http://www.agriculture.gov.ie/press/pressreleases/2015/august/title,84203,en.html>

Queries:

DAFM Organic Unit, Johnstown Castle: (053) 91 63400

Organic Farming Scheme 2022 PRESENTLY CLOSED

The DAFM Organic Farming scheme opened on February 9th 2022 for new applications and closed on April 22nd 2022.

Payment Rates for Livestock Holdings

Organic Status	Farmed Area of >3Ha up to 70Ha	Farmed Area >70Ha
In conversion	€220/Ha	€60/Ha
Full Organic Status	€170/Ha	€30/Ha

Further Information

<https://www.gov.ie/en/service/d46aec-organic-farming-scheme/>
<https://www.teagasc.ie/rural-economy/organics/>



Organic Farming

Steps to Organic Conversion	
Step 1 - Consider	Step 4 - OFS
<ul style="list-style-type: none"> • Could you farm without chemical fertilisers or pesticides? • Can you modify your animal housing to incorporate a bedded lying area? • Have you a source of farmyard manure/slurry/compost? 	<ul style="list-style-type: none"> • Organic Farming Scheme • Scheme opens regularly • Attractive premiums available • Apply online via Agfood • Consult your farm advisor • Change status of land parcels on BPS
Step 2 - Investigate	Step 5 - Training Course
<ul style="list-style-type: none"> • Talk to existing organic farmers • Consult your farm advisor • Attend farm walks/open days • Familiarise yourself with the organic farming standards 	<ul style="list-style-type: none"> • QQI Principles of Organic Farming • 25 hour course • Blended course - online & farm visit • Register at www.teagasc.ie/rural-economy/organics/training
Step 3 - Choose an OCB	Step 6 - Conversion Period
<ul style="list-style-type: none"> • Choose an Organic Certification Body • Irish Organic Association • Organic Trust • Complete a Conversion Plan • Register as an organic operator 	<ul style="list-style-type: none"> • Normally 2 years – allows time for land to adjust • Must adhere to organic standards • Can sell produce as organic once conversion period completed





Organic Farm Walks 2022

Teagasc, Department of Agriculture, Food & the Marine and organic organisations invite all farmers and members of the public to see organic farming in practice and to meet and speak with the producers and sector's experts.

Wednesday, 1st June | 2pm

John Hurley, Castle Hill House,
Knockalaughta, Ballintubber,
Castlerea, Co Roscommon
Suckler to Weanling, Sheep

Wednesday, 8th June | 2pm

Fergal Byrne, Calverstown
Little, Dunlavin,
Co Kildare
Sheep, Cereals, Beef Finishing

Wednesday, 15th June | 2pm

Donal & Frederique Keane,
Camelton Stud, Summerhill,
Co Meath
Suckler to Beef, Cereals

Wednesday, 22nd June | 2pm

Clive Bright, Ardsallagh,
Ballymote, Co. Sligo
Beef, Direct Selling

Wednesday, 29th June | 2pm

Mark & Grainne Duffy,
Clogher, Ballybay,
Co. Monaghan
Poultry-eggs, Cereals, Beef Finishing

Wednesday, 6th July | 2pm

Gavin Tully, Clonhenritte,
Camolin, Enniscorthy,
Co Wexford
Cereals

Wednesday, 13th July | 2pm

Declan Houlihan, Corrigen Organic
Farm, Rathcabin, Birr,
Co Offaly
Cereals, Poultry-eggs

Tuesday, 19th July | 2pm

Rose O Sullivan & Martin Fox,
Spring Cottage Organic Farm, Parke,
Kinnegad, Co Westmeath
**Fieldscale Vegetables, Protected
Cropping, Cereals, Poultry-eggs,
Direct Selling**

Scan the QR code
to book a ticket!

