



Teagasc Organic Farm Walk
on the farm of
Donal & Frederique Keane,
Camelton Stud, Summerhill,
Co Meath
Wednesday 15th June 2022





Introduction and Welcome

Welcome to the farm of Donal and Frederique Keane who along with their daughters Pauline and Marie and son John farm in Camelton Stud.

There has always been cattle and tillage enterprises on the farm. In 2010 having sat down at the end of the year and taking a look at the overall costs of their farming systems compared to the returns, the Keane's started looking to see was there any other options for them going forward.

On meeting a local organic farmer, who gave him an overview of the organic farming system, Donal began looking at organic farming as an option and saw it as an opportunity to improve the overall financial position of the farm. The Keanes also recognised the environmental benefits of organic farming.

After careful consideration and having completed the Teagasc FETAC Organic Farming course and visiting other organic farms, the farm entered organic conversion in 2011 with full organic status for the land and produce being achieved in 2013.

On the farm today is a cereal enterprise of winter wheat and spring oats, a suckler to beef enterprise.

Farm Details and Land Use

The holding is made up of one block of land all of which is owned. The total area of the farm is 58 hectares.

Table 1 – Land Use 2022

Land Use	Area (ha)
Winter Oats	25
Spring Oats	3
Winter Wheat	14
Grass	12
Christmas Trees	2
Dwelling & Farmyard	2
Total	58ha



Winter Oats on the farm



Organic Cereal Enterprise

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

Since converting to an organic system, the area devoted to cereals has increased. Currently on the farm, there is 42 hectares of land devoted to cereals. Three different crops have been sown which are, winter wheat and winter oats with a small area in spring oats.

The oats are grown for the organic porridge market and the winter wheat is grown for the organic livestock feed market.

Cereal Crop Details 2022

Table 2 – Oat crop varieties and seeding rates sown

Crop	Winter Oats	Winter Oats	Spring Oats
Variety	Isabel	Husky	Husky
Area	16.2	8.5	3
Sowing Date	24/10/21	26/10/21	27/03/22
Sowing Rate kg/ha	200	200	200

Table 3: 2021 Cereal Crop Margins
Variable Costs exc. VAT (€/ac)

	*Conventional Winter Oats	**Keane's Organic Winter Oats
MATERIALS	<u>218</u>	<u>99</u>
Seed	35	36
Fertilisers	110	
Manure		63
Sprays	73	
HIRE MACHINERY	<u>174</u>	<u>171</u>
Plough, one pass and rolling	75	75
Spraying	38	
Fertiliser Spreading	13	
Manure Spreading		49
Harvesting	47	47
MISCELLANEOUS	<u>31</u>	<u>47</u>
Interest (6%)	9	9
Transport (€6/Tonne)	22	38
TOTAL VARIABLE COSTS	<u>423</u>	<u>317</u>
Break-even yield (grain only)	2.8	0.8
Net Price (€/Tonne)	150	401
Straw (€/ac)	100	100

*Source Teagasc Crops and Costs Returns 2021

** Source Keane's own costs

In 2021, the base price for the oats was €380/tonne. The crop yielded 2.2tonnes/ac and with bonuses, the price achieved was €401/tonne.



Table 4 – Wheat Crop Details

Winter Wheat
Area: 8ha
Variety: Costello
Sowing Date: 23 rd October 2021
Sowing Rate: 220kg per hectare

The cost of growing winter wheat is similar to the cost of growing the winter oats. The yield is expected to be 2.25 tonnes/ac

Crop Rotation

Crop rotation is a planned sequence of different crop types. It is a key component of organic crop production. The role of rotations is to

- Replenish soil Nitrogen
- Manage weed, pest and disease levels
- Maintain soil organic matter and structure

There are no blueprints for rotations, as circumstances are different on every farm

With cereals being grown on the farm, this has led Donal on to planning and implementing a cropping rotation on the farm. The plan going forward is to introduce more mixed crops (including legumes, peas and beans together with wheat or barley). Where spring crops are planned, they will be preceded by forage crops or cover crops.



Organic Regulation for Seed Usage

- 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.
- Organic seed database with details of suppliers and available organic seed www.organicxseeds.com
- Conventional treated seed is not permitted to be used.

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
- Farmyard manure and slurry from cattle when housed for winter
- Imported farmyard manure
- Imported organic hen litter

Where and when are nutrients spread

Cereal Area

After harvesting, the straw is chopped in and the land is grubbed in order to incorporate the straw into the soil. The farmyard manure is then applied at a rate of 5-7 tonne per acre. It is then ploughed in ahead of sowing.

Grassland Area

In early March, cattle slurry is applied by trail and shoe. A maximum of 1,000 gallons per acre is applied. In the autumn approximately 5 tonne per acre of farm yard manure is applied. Where necessary lime is landspread in order to balance soil Ph.



Composting

It involves mixing and aerating organic materials to produce a stable product, which has a great value as a soil conditioner. It is encouraged because

- It has improved handling qualities and reduces the mass of manure
- Nutrients are in a more stable forms and thus reduces nutrient losses
- Weed seeds, pests and diseases are killed by high temperatures
- It helps improve soil structure

On the Farm

The farmyard manure is stored in a clamp. It is turned 4 to 5 times over a period of four months.



Farmyard manure on the farm



Livestock Enterprise

Table 5 - Average Livestock Numbers 2021

Animal Type	2021 Average Numbers
Sucklers	17
0-6 months	8
6 – 12 months	8
1 – 2 Year Olds	19
2+ Year	11

Initially the livestock system on the farm is a suckler to beef system, with a number of weanlings also being purchased from other organic dry stock producers. All animals were sold directly to an organic processor.

The suckler herd on the farm is made up of predominantly Aberdeen Angus. In previous years these were crossed with an Aberdeen Angus bull. However last year the suckler herd were crossed with Wagyu producing their first calves this spring. Going forward the plan is to finish these and sell off the farm. The plan also is to source organic breeding heifers off farm.



Suckler Cow Performance

Table 6: HerdPlus – Beef Calving Statistics (01/07/20 - 30/06/21)

	Keane Farm	National Average
Calving Interval (days)	384	396
Mortality- Dead at Birth (%)	0%	1.01%
Mortality – Dead at 28 days (%)	0%	2.36%
Calves per Cow per Year	0.89	0.86
Spring 6 week Calving Rate %	100%	54%

Source: www.icbf.com

Weanling Performance 2021

The farm is participating in the DAFM, Beef Environmental Efficiency Programme Sucklers (BEEP-S) Scheme. One of the actions of the scheme is weighing of weanlings.

The weanlings were weighed in October 2021 recording weights from 230kg to 340kg and average daily gains (adg) ranging from 0.92kg to 1.36kg.



Hens

The most recent diversification on the farm is the introduction of a flock of 400 laying hens. This gives the Keane's as Donal says 'a connection with customers'. They market their eggs directly through;

- Shops locally in Summerhill and Trim
- Shops in Dublin
- Vending machine locally in Summerhill

Grassland Management


Clover drives organic farming, by fixing nitrogen from the atmosphere and is a key way for an organic farmer to get nitrogen into the soil. There are two main types of clover; white clover and red clover.

The Keane's aim to maximise the amount of quality grass-clover swards fed to minimise the amount of cereals fed. To help this, all grass mixtures used at re-seeding include either white clover or red clovers.

Red Clover on the Farm

Donal has been using red-clover grass sward to produce silage as part of the forage requirement whilst improving the protein content and overall feeding value of the winter forage for the animals.

Presently there is no red clover-grass silage ley in production. The plan is to sow a red clover grass silage ley this year. This will



produce a 3-4 cut system with cutting starting in late April/early May and a cut taken every 6-8 weeks.

Grazing Management

The cattle are grazed in one group on a rotational basis around the farm. Fields are divided into 3-4 acre paddocks. Cattle are housed for the winter around the 1st of December. Cattle are back out grazing from mid-March according to when cows calve.



Suckler herd on farm



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 with 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.

Livestock Health on the Farm

According to Donal, the switch to organics has not lead to any adverse effects with regard to herd health.

Animals are vaccinated for blackleg.

Faecal analyses are taken to assess the level and identify the type of internal parasites if present. If faecal test results show that animals need to be treated, an appropriate and permitted product is administered and extended longer withdrawal period is observed.

Conventional Veterinary Treatments Permitted

- Animals for meat consumption: one course of antibiotics within 12 months.
- Animals for breeding: two courses antibiotics within 12 months.
- Dairy Mastitis: two 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



Suckler cow and calf

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 Figure 1 for organic space requirements.

Figure 1: Indoor area (net area available to animals)

Minimum Indoor Areas (net area available to each animal)	
Animal	Live-weight Minimum (kg) m²/head
Bovine animals	Up to 100kg 1.5
	Up to 200kg 2.5
	Up to 350kg 4.0
	Over 350kg 5.0 with a minimum of 1m² / 100kg
Dairy cows	6.0
Bulls for breeding	10m ²
Sheep	1.5m ² per ewe 0.35m ² per lamb



Cattle Shed on the farm

Calculating the stock carrying capacity of your shed

Conversion of animal housing to become compliant with the organic standards can be one of the major tasks drystock farmers have to undertake. To calculate the stock carrying capacity of your shed, you will need three figures;

1. The total indoor area of the shed
2. The lying area in the shed
3. The area required for each animal to be housed

Profitable Organic Production

Organic farming systems are no different to any other farm enterprises. In order for any farm enterprise to be profitable, the returns from the enterprise must be greater than the costs of production.

A number of key components that lead to profitable organic production are included below in Figure 2.

Figure 2: – Components of Profitable Organic Production



Keys to Financial Performance

- Donal aims to have a low cost system, for example no concentrate feed purchased for animals; this is provided from grain grown on the farm.
- Achieve a premium price for all that is produced on the farm.
- The Keane's do their own topping, mowing and harvesting of the cereal crops.
- Good use of DAFM grant and scheme support over the years.

Future Plans

The Keane's plans are to

- Rebuild the suckler herd to 30 suckler cows
- Finish all progeny off farm
- Sow more forage crops for outdoor winter feeding
- Grow mixed cereal crops including combicrop
- To take every opportunity to learn how to build and maintain soil health.



Oats on the farm



Heritage Wheat Trial 2020

In 2020, Keane's farm was one of three organic farms used to conduct field trials on heritage wheat varieties. The research was carried out by the Irish Organic Association to explore the potential of heritage wheat as a crop for cultivation by organic farmers. Field trials were located in Monaghan, Meath and Carlow.

The trial was a replicated randomised block design, each plot was 1.2 m x 20 m long = 24 m², with nine treatment plots per block, with the spacing between each plot being 0.6m. There were three replicate blocks per trial site. The total trial site on each farm was 1,329m². Seven heritage cultivars were used in the field trails with one modern cultivar used as a control. The heritage varieties were originally sourced from seed banks in Denmark and Sweden. A trial plot seeder and harvester were used for the trials.

Results from the field study showed no significant yield difference between the modern and heritage cultivars. Yields were low, but in line with other research on heritage cultivars in other countries. All the cultivars in the study achieved high protein levels which were above requirements for organic milling wheat. The crop architecture of these heritage cultivars can offer some advantages in organic farming systems especially in weed suppression.

While recognising the limitations of a one-year field study, albeit conducted on three organic farms, the results show that there is potential to cultivate heritage wheat in Ireland. It also offers the opportunity for more diverse cropping rotations in organic arable production. Heritage cultivars are a niche crop, and more



research is required to fully explore their capacity and adaptability to agricultural, environmental and market variabilities.



Drone image of Trial Plots on the Keane's Farm



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Department of Agriculture,
Food and the Marine

Organic Certification in Ireland

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



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Targeted Agricultural Modernisation Scheme Organic Capital Investment Scheme (OCIS)

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:

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: organic@agriculture.gov.ie

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: organic@agriculture.gov.ie



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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

- 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?

Step 4 - OFS

- Organic Farming Scheme
- Scheme opens regularly
- Attractive premiums available
- Apply online via [Agfood](https://www.agfood.gov.ie/)
- Consult your farm advisor
- Change status of land parcels on BPS

Step 2 - Investigate

- Talk to existing organic farmers
- Consult your farm advisor
- Attend farm walks/open days
- Familiarise yourself with the organic farming standards

Step 5 – Training Course

- 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

- Choose an Organic Certification Body
- Irish Organic Association
- Organic Trust
- Complete a Conversion Plan
- Register as an organic operator

Step 6 – Conversion Period

- Normally 2 years – allows time for land to adjust
- Must adhere to organic standards
- Can sell produce as organic once conversion period completed







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Department of Agriculture,
Food and the Marine



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,
Carnelton 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, Corrigean 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!

