

Teagasc Organic Dairy Farm Walk on the farm of Sean Condon, Fanningstown, Crecora, Co. Limerick Wednesday 5th June 2019



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



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Introduction

Welcome to today's farm walk on the farm of Sean Condon, Fanningstown, Crecora, Co. Limerick.

Sean Condon started his organic conversion process in July 2005 and has been producing full symbol organic milk since July 2007. Around the same time that he started his conversion period, he also switched to Once-A-Day milking (OAD).

When farming conventionally, the herd was Spring calving and during the conversion period (2 years duration) this was changed to autumn calving so as to adjust to the organic processor market demand at the time for Winter milk.

In 2012, Sean changed back to a Spring calving system. This was mainly due to the premium market price he was able to achieve through the Little Milk Company for organic Spring milk and the expensive price of concentrate feed required for the Winter Milk system.

Presently, Sean supplies milk to the Little Milk Company and he has recently embarked upon selling some raw milk directly to shops and markets through the Natural Milk Company. and through his own label, Temple Roe Farm.

Since his conversion to organic farming, Sean has evolved his enterprise from a relatively high input Winter milk system used to capitalise on the price premium available over the Winter months to a low input Spring calving system while still commanding a market price premium for his milk.



This is a system which works for Sean and proves beneficial from both a work life balance perspective and in terms of profitability per litre of milk.

The main features of the system include:

- A low cost system (little or no expensive concentrate feed and OAD milking).
- particular attention to high levels of cow welfare and animal health
- high EBI breeding index and;
- a price premium achieved for his milk.

Farm Details and Land Use

Table 1 - Land Farmed 2019

Land Status	Area (forage)
Owned	40ha (100 acres)
Leased	19ha (47 acres)
Total	59 ha (146 acres)



	Area
Permanent Pastures/Grass Clover Pastures	58ha (143.5 acres)
Herbal Ley (new re-seed)	1 ha (2.5 acres)
Total	59ha (146 acres)

Note: Milking platform = **36ha** (**89 acres**).

The Dairy Herd

The dairy herd is made up of Friesian, Jersey and Norwegian Red crosses. An AI Aberdeen Angus (AA) Bull is used. The average herd EBI is \in 130 vs the national average of \in 106.

Present stock number	2019
Milking cows	65
0 - 1 year old	0
1 - 2 year olds	4
>2 year olds	5 (1 AA bull + 5 cows)

• Average stocking rate: 2018 - 1.3 L.U. ha

• <u>Replacements:</u> No replacements are being kept for this particular year 2019. Earlier in 2019, all calves were sold to another organic farmer for beef rearing.



Milk Production Details 2018 Table 3–Milk Production Summary 2018

Spring Calving				
No. of cows	60			
Milk produced in year	139,863 litres incl. organic processor: :105,363 litres; raw milk direct sales: 25,500 litres; other organic farmer rearing calves: 14,000 litres			
Milk yield per cow/year	2,331 litres/cow/yr. OAD (sig. drought effect reduced yield 2018)			
Average Butterfat	4.55%			
Average Protein Source www.icbf.com	3.67%			

Source <u>www.icbf.com</u>

• <u>Concentrate feed:</u> No concentrate are fed to cows except for the late Winter period to late calving cows so as to maintain milk supply for direct milk sales. Total concentrates feed amounts to 6 tonnes/year. Concentrate feed is sourced from the U.K. at a price of €600/tonne.

Table 4 - Sean Condon's Average Milk Price 2018 Price 2018

Average milk price 63.2 cents/litre

Including 42 c/litre (Processor and milk to organic beef calf rearer)

€1.80/litre (The Natural Milk Company and Temple Roe Farm)

Dairy Calving Statistics

 Table 5 - HerdPlus – Sean Condon's Dairy Calving Statistic.

 Source; www.icbf.com

	1/07/17-30/6/18	National Average
Spring 6 week calving rate (%)	64	64
Calves per cow per year	0.97	0.9
Cows not calved in period (%)	3%	8%
Current replacement rate (%)	21%	21%
% of heifers calved @ 22-26 months of age	85%	70%

Once-A-Day milking (OAD)

Why Once -A-Day milking?:

- Shortage of skilled labour.
- Facilitates expansion (2nd milking unit).
- Better lifestyle.
- Labour saving in 1st 4-6 weeks of calving season.
- Higher milk price higher fat and protein.
- Lower costs of milk production.
- Can be as profitable as twice a day milking.

Challenges:

- Control of Somatic Cell Count (SCC).
- Lower Milk Solid (MS) yield (20% reduction for full lactation)
- 1st lactation animals (keep minimum).
- Better grazing management required.
- Focused breeding programme.

Cow benefits of Once-A-Day milking

- Less walking (especially long distances).
- Higher body condition.
- Improved animal health and fertility.

OAD Discussion Group

- 36 members.
- Pioneering OAD in Ireland.
- Herd size: 50 250 cows.

Grazing and Silage Managment

Grazing Platform

- The farm has a grazing platform of 36ha.
- Cows are generally grazed outdoors as they calve from the 1st week in March,
- The first round of grazing finished by the <u>late April.</u>
- Paddock size 1 ha to 1.5ha.
- <u>Rotation length (general)</u>
 - Early March to late April 50-60 days.
 - Early May to end July 30 days.
 - Early August to end November 50-60 days.

Growing Forage on an Organic Dairy Farm

- The aim is to maximise the amount of quality grassclover swards fed and to minimise the amount of expensive concentrates purchased.
- Although no re-seeding has been carried out in recent years since the move to a lower input system, Sean has re-seeded 75% of the farm over the last 10 years with both white and red clover swards which add free Nitrogen to the system.
- When previously producing Winter milk, he also grew Winter forage crops (rape/turnip/kale mix) for out-wintering yearling heifers.
- Arable silage has also been grown (Oat and pea mix) to produce extra silage on the farm. This has been undersown at re-seeding time with new perennial ryegrass white clover swards.

• In April 2019, 1 ha of a new herbal ley - legume mix was sown for the purposes of grazing.



Sean sows clover in his swards to increase the quality and quantity of forage grown.

Silage production

- Silage is cut from 14ha each year plus from any from grazing paddocks which get too strong and are left out of the grazing rotation.
- Silage is normally cut in early June and early July (GLAS Trad Hay Meadow area) on the 14ha and yields in the region of 7 bales and 8-9 bales/acre on the main silage area and the GLAS (Tradional Hay Meadow) area respectively.

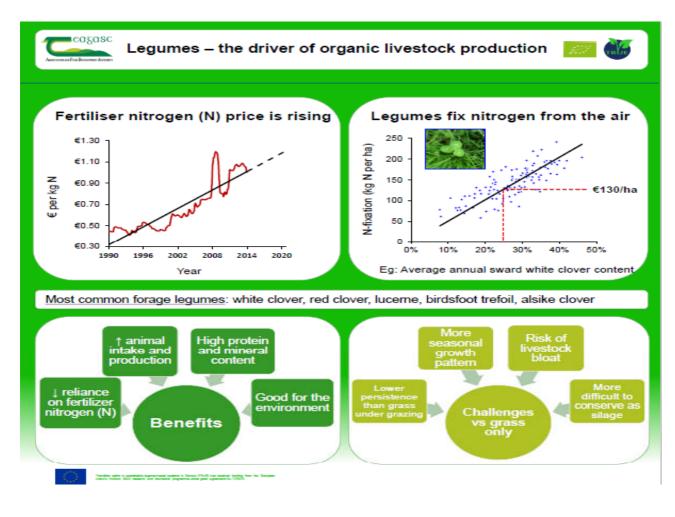
The Value of Legumes on Organic Farms

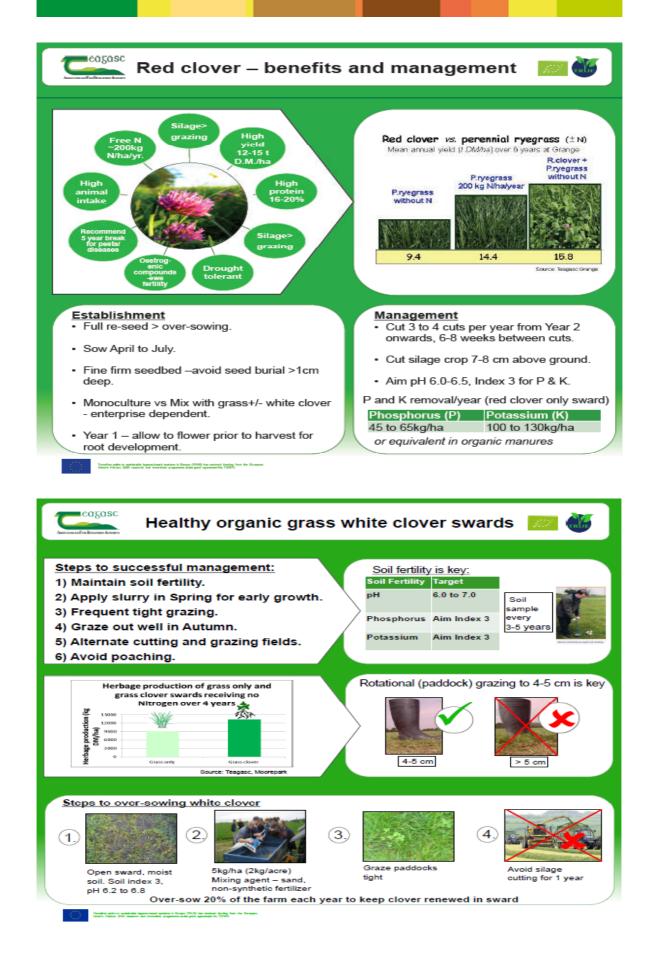


TRansition paths to sUstainable legume-based systems in Europe

Transition paths to sustainable legume-based systems in Europe (TRUE) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 727973. For more information, go to: <u>https://www.true-project.eu/</u>

Grass leys containing forage legumes (eg. white, red clover and) are a vital component of productive organic grassland farms.





All species mixtures: Grass-Clover-Herbal Leys

A grass-clover-herbal ley contains a diverse range of grasses, herbs and clovers. The mixes were pioneered by farmer Frank Newman Turner in the early 20th century who believed in "health from the soil up" and described the mixes as a "fertiliser merchant, food manufacturer and vet all in one". It produces well balanced forage and not just large volumes of grass. Many of the species used are deep rooting and have the ability to unlock resources from deeper in the soil profile. Also, once well established, herbal have the ability to naturally improve soil structure with their deep roots.

All Species Mixtures			
Advantages	Challenges		
Deep rooting to unlock nutrients	Persistency		
Does not require high fertiliser inputs and thus suited to organic production	Getting the balance right		
Increased minerals and vitamins			
Improve soil structure after 3- 4 years			



Table 6 – 2019 Grass-Clover-Herbal Ley Mix sown on 1ha.

Grass or Clover or Herb/Other Variety			
PRG*: Rosetta - int.diploid	2.5 kg		
PRG*: Dunluce - int.tetraploid	2.5 kg		
Timothy	2.0 kg		
Cocksfoot	1.0 kg		
White Clover	1.5 kg		
Red Clover	1.0 kg		
Sanfoin	0.75 kg		
Chicory	0.75 kg		
Plantain	0.75 kg		
Yarrow	0.25 kg		
1.D.	121 .		
1 Bag = 13kg			
Sowing rate: 32kg/ha (13kg/acre)			

*PRG = perennial ryegrass



Typical established grass-clover herbal ley on an organic farm.



New grass-clover herbal ley on Sean's fram 3-4 weeks after sowing, Photo taken 28th May 2019

Re-seeding cultivation method:

Sowing completed on May 12th 2019.

- Disc harrow x2
- Power harrow x1
- One-pass-power harrow/spread seed x1
- Ring roller

Note: soil tests determined that soil fertility was adequate for reseeding so therefore no FYM or slurry was spread prior to cultivation.

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 <u>www.organicxseeds.com</u>
- Conventional treated seed is not permitted to be used.

Soil Nutrients and Manure Management

- The aim of organic farming is to maintain soil fertility levels by efficient recycling of farmyard manure, slurry and or compost that is normally generated on the farm.
- 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 the Farm

• Aim Index 2 on this fram due to rel. low stocking rate.



• Slurry from the over wintering of animals.

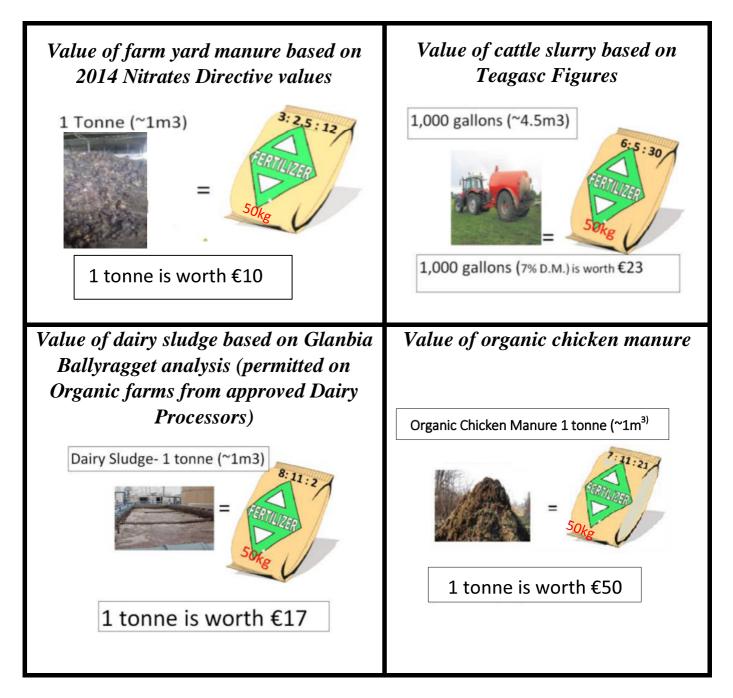
animals.

- Slurry is mainly spread on a rotational basis to the grazing ground as early as possible in the year, before or shortly after the first rotation in early March.
- All the FYM is spread on the silage ground.
- Sean buys in approx. 250-300 bales round bales of straw per year at a cost of approx. €20 per bale to satisfy organic bedding requirements. This FYM is an important source of nutrients on the farm, especially Potassium. (K).

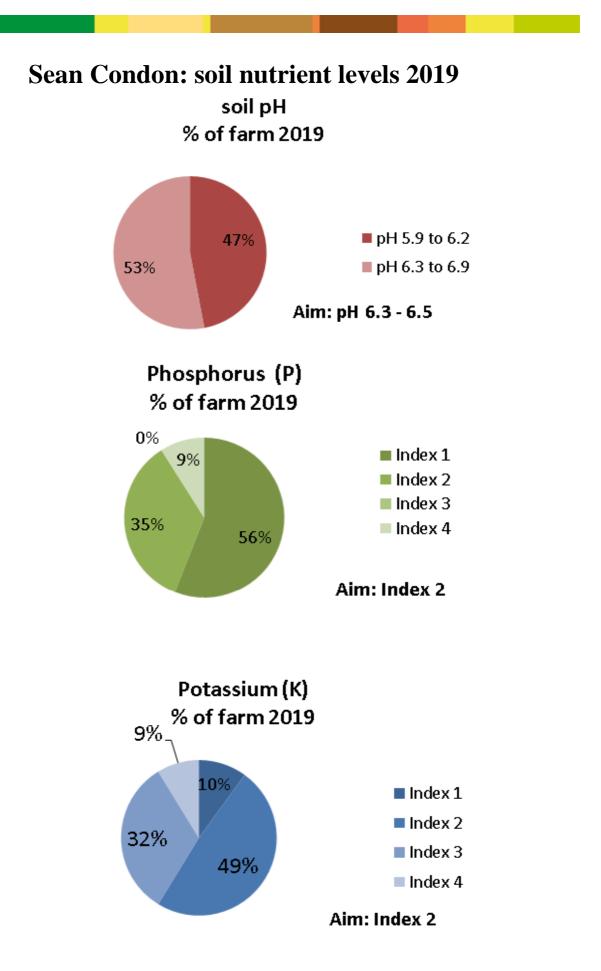
Sources of Organic Manures that are permitted to be imported onto Organic Farms

- Imported farmyard manure or slurry must come from stock that have been outside during the year, not from intensive pig and poultry units where animals are inside all the time or from zero grazing farming systems. Farmyard manure must be composted for at least 3 months before it can be land spread.
- Dairy processing sludge is available from some dairy processors who have sludge registered with an Organic Certification Body.
- Free-range and organic poultry manure can alos be imported. It must be spread according to strict DAFM regulations.

Available Nutrient Content & Guide Value (€) of Organic Manures (source Teagasc)



• Note: The nutrient content of these manures is highly variable and it is advised to get a test done to determine the exact nutrient content of source material.



Observations and options to increase soil fertility on this farm

- <u>Soil pH</u> is at a generally staisfactrory level. Apply 100 tonnes to fields with <pH 6.3 over the next 4 years
- <u>Phosphorus</u>: Over half of the farm is Index 1 (ie. a positive growth response is very likely by the addition of phosphorus). Apply dairy processing sludge and or ground rock phosphate to Index 1 fields.
- <u>Potassium</u>: Majority of farm is Index 2 to 4 (adequate to good soil fertility). Maintain exisiting management of applying farmyard manure (FYM) and slurry to all fields especially focusing on Index 1 fields.
- Where Indices are very low (Index 1) the focus will be primarily on silage fields where potential nutrient off-takes are higher vs grazing fields.



Farmyard manure is a good source of Nitrogen (N), phosphorus (P) and especially Potassium (K) on orgaic farms.

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: 1 course antibiotics within 12 months.
- Animals for breeding: 2 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

- Min 7 days adhered to if no period specified.
- Under 18 days triple the withdrawal time.
- Between 18-28 days adhere to a 56 day withdrawal period.
- 29+ days twice the withdrawal time.

• If treated with organophosphates, lose organic status permanently.

Mutilations

Prior approval is required from your Certification Body before any mutilations are undertaken.

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 7 below for space requirements.

	Minimum Indoor Areas (net area available to each animal)		
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	
	Up to 500kg	5.0	
Suckler Cows		6.0	

Table 7: Minimum Housing Area per head and by weight

Dairy Cows	Up to 600kg Over 600kg	6.0 min. 1m ² /100kg
Breeding Bulls		$10m^2$
Sheep		$1.5m^2$ per ewe $0.35m^2$ per lamb



The loose house/slatted shed on Sean's fram has capacity for 73 cows under the organic regulation ($6m^2$ required per cow).

Farm Profitability

The Teagasc E-Profit Monitor tool allows farmers to assess the financial performance of their farm whilst comparing their performance with targets on other farms. The figures in the table below show the financial performance of the dairy herd on a cents per litre basis vs targets and the national average. When comparing organic dairy farms to conventional systems, profit per cow and per litre is often much higher on organic farms, but on a per ha basis, is average or lower.

Comment on Epm:

The profitability of this farm compares very favourably to conventional on a return per litre basis. Stocking rate is relatively average for an organic dairy herd but much lower than average vs conventional. Scheme payments (including the Organic Scheme Payment which Sean receives) are not included in the calculations.

The farm is a relatively low input OAD enerprise with the output per cow lower than average in 2018 cow due to the Summer drought. The relatively high premium price for milk and this is the main reason behind the relatively high profitability per litre of milk achieved.

Cago	ISC Year 2018 D	airy Short Report	December 2018	
Profit Monitor	Farmer Sean Condon	Advisor	Eoin Horgan	
Production Ty	pe 2. Creamery Calving start after Jan	30 YOURS	TARGET	EPM average 2018
FARM				2010
Dairy Cows		60		137
Stocking Rate (LU/ha)	1.23		101
Litres Milk Prod	luced / Cow	2,331		6200
Litres Sold / Co	w	2,331		5732
Co-Op Price (c/	(Litre)	63.20		
GROSS OUT	IPUT	c / Litre	c / Litre	
Milk Sales		63.20	34.52	36.44
Plus	Cow & Calf Sales & Calf Transfers	5.31	7.80	
Minus	Cow & Repl. Purchases & Repl. Tran	sfers 9.29	5.50	
+/-	Inventory	3.50	0.00	
Gross Output		62.72	36.82	36.85
VARIABLE		c / Litre	c / Litre	
	Feed	7.06	6.50	7.18
	Fertiliser	0.00	2.40	2.47
	Veterinary	0.62	1.00	1.09
	Al / Breeding	0.74	0.70	0.54
	Contractor	4.90	1.50	1.91
	Other Variable Costs	6.55	1.60	1.88
	Total Variable Costs	19.87	13.70	15.07
Gross Margin		42.84	23.12	21.78
FIXED COST				
		c / Litre 0.66	c / Litre 1.30	1.34
	Machinery Car / ESB / Phone	4.72	1.30	1.21
	Depreciation	3.08	1.60	1.94
	Other Fixed Costs	6.23	1.60	1.93
		0.23	1.00	21.49
Common Cos	st	34.54	19.35	15.36
Common Pro	fit	28.18	17.47	

Note: Cost of 2 years straw is included in 1 year analysis - see Other variable costs ($\sim \notin 5,000$ annual straw cost x 2 = $\sim \notin 10,000$).

Future Goals

- Continue OAD system.
- 2019- Aim for ~25-30% (50-60,000 litres/year) of all milk sales to be sold direct to the consumer through The Natural Milk Company and Temple Roe Farm.
- Change calving pattern to calve down a small portion (~10 cows) of cows in the Autumn time as to maintain milk supply of organic raw milk during the Winter months.

The Little Milk Company



The Little Milk Company was established in March 2008. It acts as the product development and marketing body for 10 organic milk producers located throughout Munster and Leinster Collectively, there is a milk pool of over 3 million litres.

Since 2011, the co-operative have been making cheeses, all of which are handmade and hand-turned using traditional cheese making techniques.

The Little Milk Company now has multi-award winning cheeses and continues to establish markets at home and abroad. At present the cheeses can be found at a range of outlets in Ireland and abroad. For more info: <u>www.thelittlemilkcompany.ie</u>

Raw Milk

Since 2015, the Governamnt has been regulating the sale of raw milk in Ireland. Industry guidleines have now been established since 2018.

Information and further details:

Raw Milk Ireland: <u>www.rawmilkireland.com</u> DAFM Guidleines on Raw Milk production and sale: <u>www.agriculture.gov.ie/foodsafetyconsumerissues/foodsafetyco</u> <u>ntrolsonmilk/</u>



Sean presently supplies approx. 1,000 litres of raw milk per week through the Natural Milk Company and the Temple Roe Farm label. He aims to supply 25-30,000 litres in 2019.



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

Organic Certification in Ireland

A major factor that distinguishes organic frming 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:

IOA (Irish Organic Association) 13 Inish Carraig, Golden Island, Athlone. Tel: (090) 64 33680 <u>www.irishorganicasssociation.ie</u>

Organic Trust 2 Vernon Avenue, Clontarf, Dublin 3. Tel: (01) 853 0271 <u>www.organictrust.ie</u>

Global Trust Certificate Ltd.

3rd floor, Block 3, Quayside Business Park, Mill Street, Dundalk, Co Louth.

Tel: (042) 93 20912 <u>www.GTcert.com</u>

BDA Certification- (Demeter)

Painswick Inn Project, Gloucester, Gloucestershire, GLS 1QG, United Kingdom.

Tel: (0044) 145 376 6296 www.biodynamic.org.uk



An Roinn Talmhaíochta, Bia agus Mara Department of Agriculture, Food and the Marine Targeted Agricultural Modernisation Scheme Organic Capital Investment Scheme (OCIS)

A standard rate of aid of

40% on investments up to a ceiling of \in 80,000 (i.e. can generate a grant of \in 32,000 from an investment of \in 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 \in 80,000.

How to Apply and Closing Date:

Online applications only through <u>www.agfood.ie</u> facility.

Full details and T&C:

http://www.agriculture.gov.ie/farmingsectors/organicfarming/organicsschem e/organiccapitalinvestmentschemeocis/

Queries:

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

Organic Processing Scheme

Grant aid of up to 40% on $\notin 1.25$ million (i.e. can generate a grant of $\notin 500,000$ for an investment of $\notin 1.25$ million) in facilities for the processing, preparation, grading, packing and storage of organic products with minimum level of investment in excess of $\notin 3,000$.

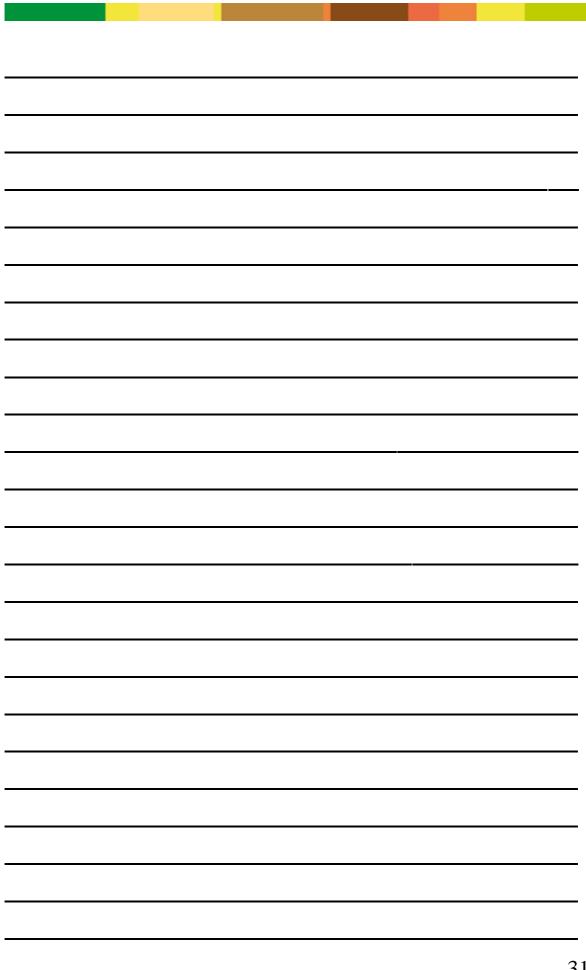
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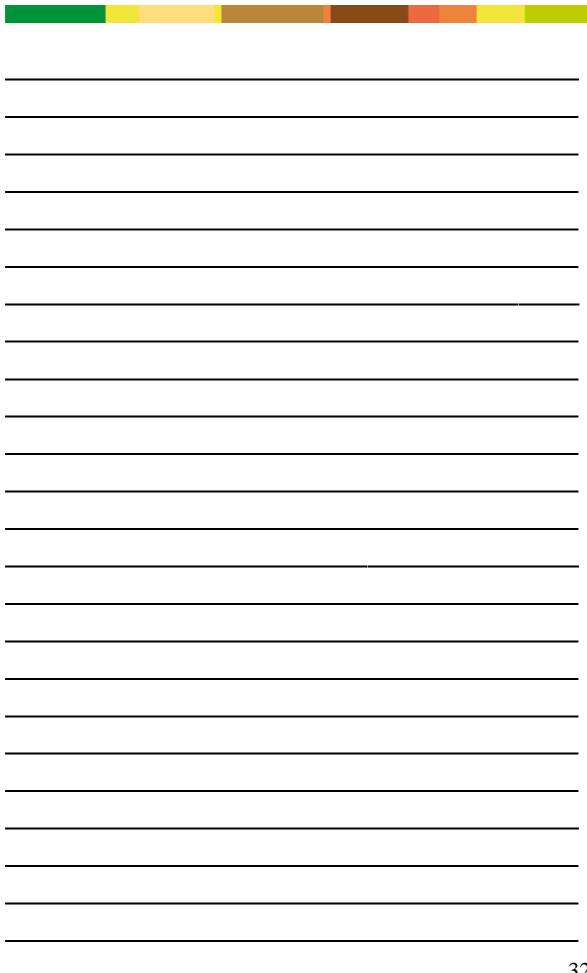
https://www.agriculture.gov.ie/farmingsectors/organicfarming/organicssche me/schemeofgrantaidforthedevelopmentoftheorganicprocessingindustryofffarm/

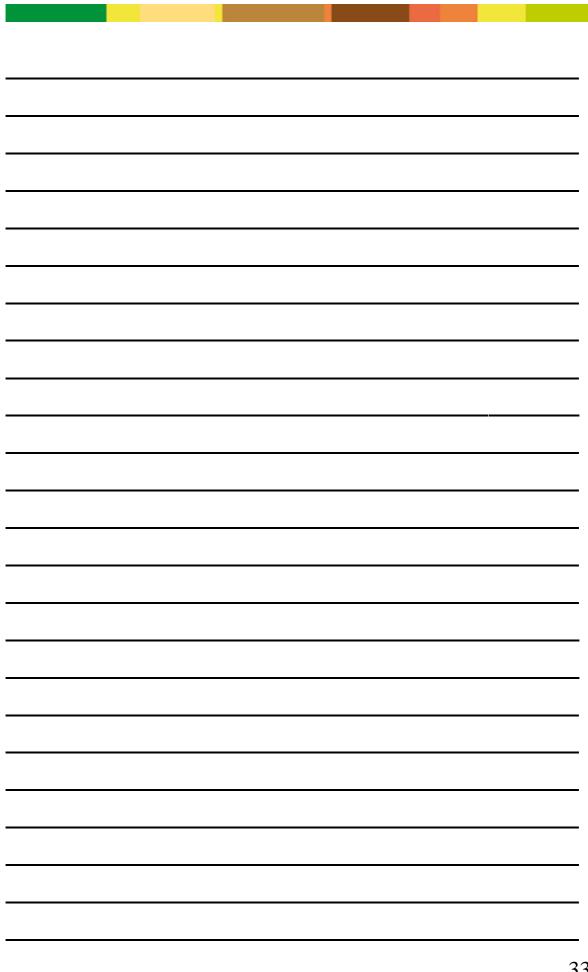
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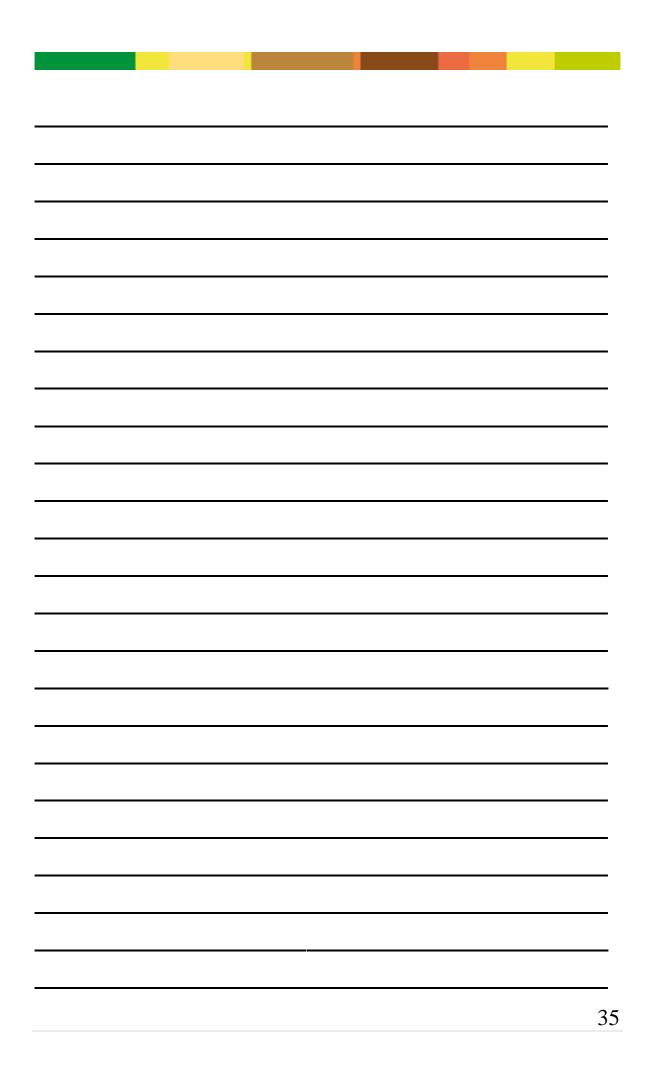
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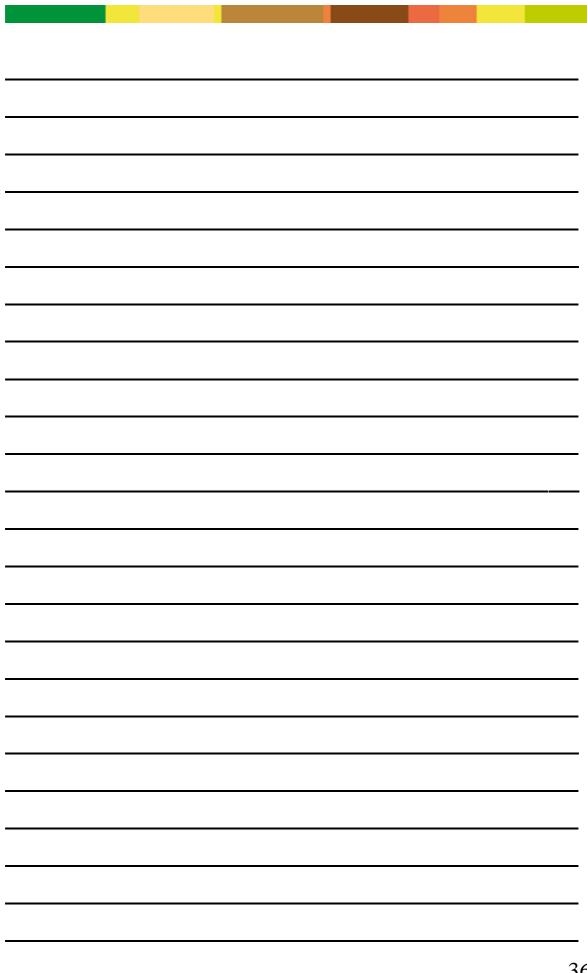


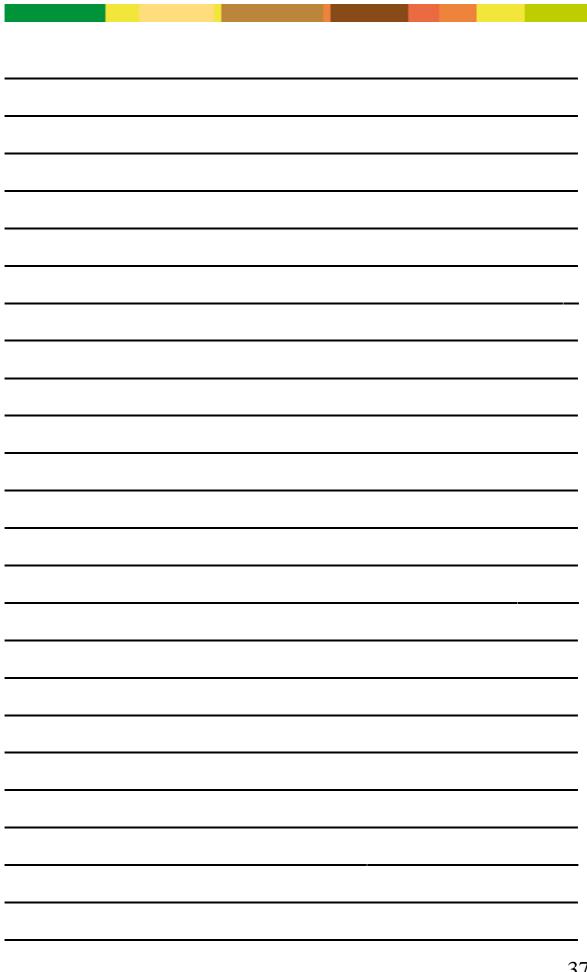




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Organic Farm Walks 2019

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.

Wed, 16th January | 12pm Timothy O'Donoghue, Farranacliffe, Tipperary Suckler to Weanling

Wed, 20th February | 12pm Peter & Jenny Young, Castlefarm, Sean Condon, Fanningstown, Narraghmore, Athy, Co. Kildare Crecora, Co. Limerick Dairy

Wed, 17th April | 12pm Donal Keane, Camelton Stud, Summerhill, Co. Meath Suckler to Beef, Cereals

Wed, 24th April | 12pm Stuart & Jean Kingston, Upper Forrest Farm, Farnanes, Co. Cork Carbury, Co. Kildare Beef Finishing, Cereals

Wed, 8th May | 12pm Ross & Amy Jackson, Woodview House, Lacka, Carrig, Birr, Co. Offaly Cereals, Sheep, Beef Finishing

Wed, 22nd May | 2pm Andrew & Leonie Workman, Dunany Flour Organic, Togher, Drogheda, Co. Louth Cereals, Milling Flour

Wed, 29th May | 2pm

Tom & Gemma Dunne, Seefeld, Ballinaslee, Durrow, Co. Laois Cereals, Beef Finishing

Wed, 5th June | 2pm Dairy

Wed, 12th June | 2pm Jason Stanley, Castlefleming, Errill, Co. Laois Sheep, Cereals

Wed, 19th June | 2pm Nurney Farm Organics, Fieldscale Veg, Protected Crops, Poultry eggs, Direct Selling

Wed, 26th June | 2pm White Oaks Acorn Project, Leanamore Rd, Derryvane, Muff, Co. Donegal Fieldscale Veg, Protected Crops, Direct Selling

Wed, 3rd July | 2pm Paul Kelly, Castledargan, Ballygawley, Co. Sligo Suckler to Weanling & Store

For more information please visit www.teagasc.ie/organics