GROWING ORGANICS

Supporting & Increasing Organic Production

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

Organic Farm Walk

Dairy & Tillage

on the farm of
Bill George,
Coolanowle Organic Farm,
Arles, Co. Laois

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Introduction

Bill George is farming ***Coolanowle Organic Farm*** in Arles, Co. Laois. This farm began its' conversion to organic farming in 2001 by Bills father in-law Jimmy Mulhall and has full organic status since 2003. Bill is leasing the farm on a long-term lease since 2016. The main enterprise on the farm of 149 ha's is dairying with a mix of tillage crops which are used for growing feed for the dairy herd. 32 ha's of this land is share farmed with a local organic farmer.

The dairy enterprise consists of 150 high EBI cows with 40% calving in the autumn and 60% calving in the spring. Bill uses sexed semen AI to breed replacement heifers for the herd and also uses a Hereford bull along with more beef type AI for the non-replacement animals. These animals are kept on the farm and fed whole milk for 13 weeks and they are then sold to his brother in-law who brings them to slaughter for direct sales at farmers markets and on-line sales.

The milk is supplied to The Village Dairy, Killeshin, Carlow. They are a local processor who are bottling milk for retail and supply Gino's Gelato for Gelato Ice cream. The farm also supplies The Little Milk Company who make a range of organic cheeses.

Farm Details and Land Use

The holding is made up of the grazing platform of 82.75 hectares. Along with 3 out-blocks which are used for tillage, silage and grazing replacements. The grazing platform carries 150 cows & 52 replacements, which gives a stocking rate of 2.2 Lu/ha and a whole farm grass stocking rate of 2.16 Lu/ha excluding the tillage and silage area, so the whole farm stocking rate is 1.45 Lu/ha.

Table 1 – *Planned Land Use Details 2024*

Land Use	Hectares	Use
Pea/Bean	**5.4**	Winter Feed
Spring Wheat	**9.3**	Winter Feed
Grass/white clover/MSS	**98.3**	Dairy Cows & Followers
Red Clover Silage	**31.5**	Winter Feed
Arable Silage	**4.5**	Winter Feed
Total	**149**	

Dairy Enterprise

Table 2 – *Stock Details 2024*

Stock Type	2024
Spring Calvers	100
Autumn Calvers	50
0–1 Yrs Replacements	42
1 - 2 Yrs Replacements	52

Cow Breeds

Cows

- Holstein Friesians
- Jersey X
- Ayrshires

Bull

- Hereford Bull
- AI – Sexed Semen for replacements

Breeding Management

- Use of collars to detect heat, health and fertility issues
- Cows are drafted through parlour for AI in May & June for Spring calvers and Jan & Feb for Autumn calvers
- Scanning is carried out in April & September
- Spring calving starts 10th Feb, Autumn calving – 1st Oct

Bill has built up the EBI Evaluations of the herd over the last 10 years which are now averaging at €223/cow and replacement values at an average of €300 EBI. This has been achieved by ***"selecting bulls that are positive and balanced on all traits such as milk, fertility, health and management"***

Milk Sales

Average milk yields were 5,230 L/cow in 2023, while meal intake was 650kg/cow on average. The milk is primarily sold to The Village Dairy, Carlow where it is processed for retail and some food service customers along with supplying Ginos for organic Gelato Ice cream. Some excess milk may be sold to The Little Milk Company for cheese making.

Grazing Management

Cows are grazed on a rotational basis around the farm using a paddock system. Bill aims to begin grazing from the first week in February until late November. Cows graze pastures of Multi Species herbal ley and white clover ley. Topping is carried out as necessary to improve grassland performance and to control weeds.

Winter Feed Management

Bills winter diet is made up of Red & White Clover silage mixed with barley/pea grains as part of a Total Mixed Ration (TMR) diet. Cows are also fed to yield in the parlour with barley/pea grains. The concentrate feed ration purchased on the farm has decreased by 90% in the last 2 years due to growing more on farm and working with other organic farmers as part of share cropping agreements. The growing of a mixed pea/bean crop in 2024 aims to grow extra protein for the diet and increase milk yields. This is being carried out as part of the Teagasc VALPRO Path project which aims to increase the production of plant proteins.

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.

White Clover on the Farm

All grazing paddocks have white clovers and perennial ryegrasses. There is a continual re-seeding program on the farm that is incorporated with growing of crops for feed.

Red Clover on the Farm

There are over 30 ha's of red clover on the farm and this makes up the bulk of the silage requirements. The red clover is cut 4 times/year and offers

a highly digestible silage with high protein content. The silage is tested every winter to determine the DMD% and protein content and this is then mixed with the barley/pea grains to make up the required diet. The red clover swards demand significant organic nutrients and these are supplied through applications of slurry, fym and organic dairy sludge. The red clover lasts for up to 5 years on this farm.

Herbal/Multi-species Ley

Herbal leys contain a diverse range of grasses, herbs and clovers. Its aim is to produce a well-balanced forage and not just large volumes of grass. Many of the species used are deep rooting and have the ability to unlock nutrients from deeper in the soil profile. The herbal mixture does not demand high fertiliser inputs and is therefore ideally suited to organic farming. These leys provide increased levels of minerals and vitamins to livestock. Also, when herbal leys are grown for around four years, they have the ability to naturally improve soil structure with their deep roots. Bills farm suffers from drought in the summer months and the MSS is playing a very important role in maintaining grass growth in prolonged dry periods. The plan is to sow another 10 ha's of MSS in 2024.

Table 3 – *Multi-species mix 2023 – 14 seed mix*

Multi-species Mix – Needs Derogation Seed Variety Kgs	
Chicory	1.4
Plantain	1.4
Red clover	1.4
White clover	1.4
Ryegrass	3.6
Other herbs & grasses	2.4
Timothy	1
Sainfoin	1.4
	14 kg per acre

Organic Cereal Enterprise

There is a strong demand for organic cereals for feed on this farm. Currently on the farm there are 19.1 hectares of land devoted to cereals and protein crops which are all being used for feed purposes and reducing the need for purchased concentrate rations.

Spring Wheat Details (Share Farm)

Area: 9ha
Variety: Mulika
Sowing Date: 18/3/24
Sowing Rate: 220kg/ha

Arable Silage Details

Area: 4ha
Variety: 70% Organic DUET (Derogation Required)
Sowing Date: Mid-April
Sowing Rate: 125kg/ha

Spring Beans/Pea Trial (VALPRO Path Project)

Area: 4.5ha
Trial Varieties: 1. Carrington & Louhi
2. Eso & Louhi
3. Carrington & Vire
Sowing Rate: 1. 333kg/ha
2. 295 kg/ha
3. 326kg/ha

A feed mill and seed cleaner were purchased in the early of years of converting to organics and they were grant aided. These items of equipment allow Bill to mill all his own feed. A small dryer was also purchased which is invaluable after a wet harvest to aid safe storage of feed.

Organic 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.

Sources of Nutrients Used on the Farm

- Farm-yard manure applied in autumn on grazing, silage ground and ploughed in for crops
- Imported dairy sludge (sourced from Tirlan, Ballyragget) - applied on the grass and silage
- Slurry – applied using trailing shoe throughout the year on silage after each cut and to grazing paddocks where available
- Lime where required

Animal Health on the Farm

Vaccinations are given for rotavirus and leptospirosis as they are confirmed medical issues on the farm. Faecal egg tests are taken to determine the presence of stomach and lung worms and animals are dosed if worm burdens are high. The practice of grazing clean pastures for calves is used on the farm to ensure ingestions of worms are kept to a minimum and this works well.

Mastitis is mainly treated by the use of peppermint creams and homeopathic remedies to reduce swelling. Emphasis is put on hygiene at milking time and maintaining a dry clean straw bed with plenty of lying area/cow. Bill strives to manage mastitis as best he can using natural remedies but when necessary antibiotics will be used with permission and the necessary withdrawal requirements are then followed.

Housing

All animals are housed on straw with slatted feeding areas. Most of the animal housing was purpose built since becoming organic. Bill puts a great value on the use of straw for bedding, ***"keeping animals well bedded and clean prevents sickness and stress in the herd and it also provides me with top quality nutrients for the farm. I don't measure the cost of the straw but rather the value of it to animal comfort and soil health and fertility"***

Financial Performance (2023) (Cent per litre)

Financial Performance (2023) (cents per litre)		
(excl. livestock rearing charge)	**Bill George**	**EPM Ave**
Milk Price	**59.1**	**44.26**
Purchased Concentrate	7.13	7.72
Home-grown Concentrate	2.26	0.01
Purchased Forage	3.77	0.52
Total Supplementary Feed	**13.16**	**8.25**
Fertiliser	0	3.85
Animal Health/Vet	1.21	1.54
Breeding	1.03	1.03
Contractor	1.79	3.42
Seed, Spray, Soil Fertility	0.51	0.53
Animal Bedding	1.52	0.29
Other Variable costs	1.51	2.47
Total Variable Costs	**20.73**	**21.40**

Key Observations on Bills financial performance

Table 1 compares Bill George's financial performance in 2023 with national average figures from the Teagasc National Farm Survey. Bill's milk price for 2023 was 15cpl ahead of the national average figure while his variable costs were very similar to the national average. As illustrated in the table, Bill's feed costs were almost 5cpl higher. This is primarily due to the shared farming arrangement to purchase arable silage along with the cost of growing a percentage of his own home-grown concentrate. However, this increased feed cost is offset by a zero fertiliser cost and a reduced contractor cost. (It should be noted that a large portion of the home-grown concentrate cost and the purchased forage cost would be comprised of contractor costs). Due to the fact that all animals on this farm are housed on straw bedding, straw costs add an extra 1.23cpl above the average farmer. Other variable costs are approximately 1cpl lower on Bill George's farm, mostly due to the absence of milk replacer costs. All calves on this farm are reared on whole milk (as per organic guidelines) and it is estimated that this has reduced Bill's milk sales by the equivalent of 300 litres per cow versus the average farmer.

Supporting the Growth of Irish Organics

Emmet Doyle, Bord Bia Organic Sector Manager

Summary

- Positive developments for the Irish organic sector through increase farmer participation
- Strong consumer purchase intent for Irish organic food and dairy in the domestic market
- Bord Bia's National Organic Consumer Marketing Campaign – 'More-ganic' going live on May 6th

Introduction

The European Green Deal has a target of 25% of total agricultural land across the EU member states to be farmed organically by 2030. In Ireland, the Climate Action Plan 2023 has set a target of 450,000 ha to be farmed organically by 2030 which is the equivalent of 10% of our agricultural land.

The focus in Ireland is to increase the scale and capability of Irish organic production through increasing the participation in the Organic Farming Scheme (Green Deal Action Plan axis 1). While developing and activating a clear marketing proposition for Irish organics to help the consumption and consumer trust of Irish organics in the domestic and export markets (Green Deal Action Plan axis 2).

Organic Sector Growth

Since January 2023, the Organic Farming Scheme (OFS) has seen an additional 3,000 farmers join, bringing the total number of farmers in OFS to just over 5,000. The total agricultural land being farmed in OFS (either fully converted or in conversion) is now at 5% (DAFM). It is forecasted that another 1,000 farmers are set to join when the scheme reopens later in the year.

This growth in organics is not only impressive but actually very important as this will increase the output of Irish organic food, drink and horticulture available, thus helping to deliver the necessity scale to supply key retail and foodservice customer both in the domestic and export markets.

With a focus on organic dairy according to the most recent DAFM/Teagasc figures, there were just over 4,700 dairy cows on just over 75 organic dairy farms in 2022. This represents an increase of 85% relative to 2017. With a further increase predicted to over 5,400 cattle on organic farms in coming years.

100% of Irish organic milk is destined for the domestic market, over 90% of organic cheese/farmhouse cheese is exported with approx. 15-20% of organic added value dairy products exported e.g. yogurts. Key export markets include Germany, France and the UK.

Latest Irish Organic Consumer Research

Bord Bia conducted a six month Irish organic consumer market research project in 2023. The results of this research was very promising for the future growth opportunities for organics in Ireland. Some of the key feedback included:

- 80% of all Irish shoppers buy into the organic food and drink in some format.
- One in two of all shoppers actively go out and seek organic food and drink while shopping.
- One in two of all shoppers buy organic dairy (milk, yogurts and/or cheese) on a weekly basis.
- Over the next 12 months, 95% of all Irish shoppers will look to maintain or increase their level of organic consumption. Of those 45% of all shoppers will look to increase their level of organic purchases.
- The key drivers for shoppers to purchase Irish organic dairy is because its Irish, the taste and its health credentials.

Bord Bia's National Organic Consumer Campaign – 'More-ganic'

In Ireland, to help build the awareness of Irish organics for Irish shoppers, Bord Bia launched its largest ever national organic marketing campaign in November 2023. The 'More-ganic' campaign focus is to demonstre to shoppers how easy it is to include more Irish organic food (veg, dairy, meat etc) into their weekly shop. Furthermore the campaign educated shoppers

about the quality of Irish organic agriculture through a new organic portal on the Bord Bia website. The campaign included radio, billboards, print, digital, social media and organic brand ambassador activities. The campaign was a major success with some of the following key highlights:

- 7.4 million reach
- 1.2 million completed video vies
- 670,000 audio listens
- 84% of shoppers who saw the campaign would pay more for Irish organic food
- 63% of shoppers actively looking for Irish organic food following seeing the campaign
- 4 out of 10 shoppers claimed they bought more Irish organic food following seeing the campaign

The 'More-ganic' will be going live again on 6th May through to the 3rd of June 2024 and will conclude at Bloom where there will be a number of organic activities at the event including an organic corner in the Food village, an organic garden and a number of organic speakers on the stages over the bank holiday weekend.

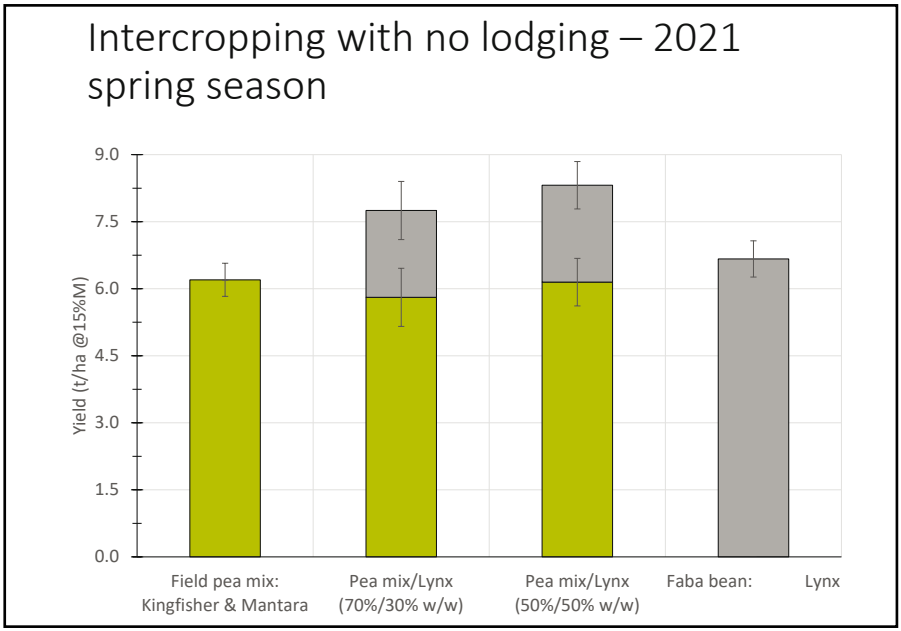
VALPRO Path project

Intercropping field peas with faba beans for decreasing risk and increasing productivity

Based on industry demand, the supply of pea protein is an important ingredient for food industries with increased consumer interest in plant based products.

The highest average yields of field peas in the EU27 for the period of 2011-2022, were reported in Ireland (4.1t/ha), Belgium (3.6t/ha) and Denmark (3.8t/ha). However, the area cultivated was very low in these countries, mainly because peas are prone to lodging under the weather conditions of those countries, potentially leading to a high risk of crop loss at harvest. Teagasc researchers have found that growing peas and beans in combination can reduce that risk and increase yields, while delivering effective break crops in cereal rotations, interrupting the cycle of diseases such as take-all and fixing atmospheric nitrogen (N), reducing N requirements in the following cereal.

Results: 2019-2020 season



In the VALPRO Path project, an EU-funded research project tasked with increasing the added value potential of plant protein crops, we aim to validate the potential of intercropping field peas and faba beans at the farm level, by engaging 5-8 farmers which will grow the sole pea crop and the intercropped mixture in the same field. Furthermore, rolling out the practice at the farm level will help identify barriers to large scale implementation.

Agricultural sustainability support and advisory programme (ASSAP)

Noel Meehan[1] and **Fiona Doolan**[2]

[1] *ASSAP Manager, Teagasc, Deerpark, Ballinasloe, Co. Galway*

[2]*ASSAP Advisor, Teagasc, Friary Rd., Naas, Co Kildare*

Summary

- Ireland has been set a target by the E.U. Water Framework Directive of achieving 'Good Status' for all waters.
- The River Basin Management Plan for Ireland sets out Irelands plan to achieve good status.
- The ASSAP is a free and confidential advisory service and is available to farmers in 190 Priority Areas for Action (PAA's) and is a key part of helping achieve good status
- The Farming for Water EIP provides funding for farmers to implement actions that prevent the loss of nutrients and sediment to waters

Introduction

In Ireland all water policy and management is led by the Water Framework Directive. Under this directive Ireland has been set a target of achieving at least 'good status' for all waters in Ireland. However, despite a lot of good work over the last 20-30 years we are falling short in achieving this target and water quality has declined in recent years.

Ireland's response to challenges around water quality is set out under the national river basin management plan. As part of this plan, 190 priority areas for action (PAA) have been identified across the country where water quality improvements need to be made. The recently launched Farming for Water EIP is available to farmers in PAAs and provides financial support to farmers to put in place specific measures that are beneficial to water quality.

Implementation of the ASSAP

The Local Authority Waters Programme (LAWPRO) have deployed a catchment assessment team of 60 scientists across the country to assess

streams in PAA's in detail and identify the significant pressures impacting water in each PAA. Where an agricultural pressure is identified the farmers in the area will receive the offer of a free farm visit from an advisor under the ASSAP programme.

The ASSAP programme is made up of a group of 46 advisors (20 working under Teagasc jointly funded by DHLGH and DAFM and 26 advisors from the dairy processing co-ops). These advisors are available to provide farmers with a free and confidential advisory service that farmers in a PAA can avail of on a voluntary basis.

The advisors will meet the farmer to assess the farm for any potential issues that are having an effect on the water quality in the local stream. At the end of a visit the advisor and farmer will agree on where the farmer should focus improvements or actions, if any are required, on his farm. The practical advice will be designed to 'break the pathway' and prevent

Figure 1:
Heavy rainfall leads to overland flow of water, Phosphorus and soil particles

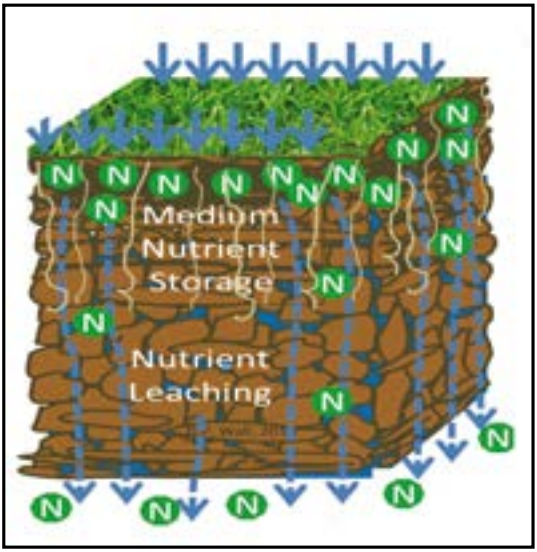


Figure 2:
Nitrogen that is not used up by grass/plant is available to leached to groundwater/streams during heavy rainfall

nutrients and other contaminants from entering water. The measures supported by the EIP will help farmers to put the right measures in the right places on the farm to target the loss of phosphorus, sediment, nitrates and pesticides from farming activities.

Farming For Water EIP

"Farming For Water" is a Water European Innovative Partnership launched in 2024 and which will run until the end of 2027. The project is a collaboration between Teagasc, LAWPRO and DII together with DAFM and DHLGH. A fund of €50 million is available to farmers with the aim of delivering targeted actions to reduce losses of nutrients, sediment and pesticides from agricultural lands. This European Innovation partnership will engage with up to 15,000 farmers across the country where water quality need to be improved. It will assist farmers in implementing voluntary measures on farm, above regulatory requirements and ensure the "right measure is put in the right place".

Conclusion

The ASSAP programme is collaborative and the funding and support received from DAFM, DHLGH and the dairy industry has been critical to allow a new approach to enabling local landowners to engage positively in seeking solutions to local problems with the support of a confidential advisory service. Support from the farming organisations for the programme has been very strong and this is vital in communicating and informing farmers about the ASSAP programme and its key messages.

Ten Things to Know about the Signpost Programme

Siobhán Kavanagh, Teagasc Signpost

1. The Signpost Programme is a partnership of 62 companies and organisations from across the Irish agricultural sector working with farmers to reduce gaseous emissions, improve water quality and enhance biodiversity of food production.
2. The Signpost programme is taking a holistic view to sustainability, encompassing economic, social and environmental sustainability.
3. There are 3 main pillars to the Signpost Programme
    a. The Signpost Demonstration Farm Programme
    b. The Signpost Advisory Programme
    c. The Teagasc Climate Centre research programme
4. The 120 Signpost demonstration farmer are central to the programme and will point the way forward for all farmers. These farms are made up of a number of dairy, beef, sheep and tillage farms as well as organic farms and pig farms, located across the country.
5. The Signpost farmers are the early adopters of the MACC technologies to reduce GHG emissions. These technologies include:
    a. Make better use of nutrients in cattle slurry
    b. Incorporate clover into their grassland swards
    c. Use protected urea as their source of fertiliser nitrogen
    d. Reduce the quantity of fertiliser nitrogen spread
    e. Reduce the finishing age of beef animals
    f. Manage and enhance their hedgerows and other biodiversity features
    g. Breed more efficient animals
    h. On tillage farms using clover crops, straw incorporation
6. Signpost demonstration farmers are also being encouraged to adopt and demonstrate new technologies as they become available including the use of feed additives, slurry additives, tree planting, diversification etc.
7. The story of the Signpost farms will be communicated to the wider farming community through traditional and digital media including

farms walks, articles, videos, podcasts, imagery, videos etc. Farmers will have the opportunity to track the progress of their own local Signpost Farm and hopefully be inspired to make a change to how they farm to reduce gaseous emissions.

8. The Signpost Advisory campaign is the second element of the Signpost programme. To support all farmers:

   a. There are 21 climate advisors dotted across the country. These advisors are working closely with farmers to "know their number and make a plan" to reduce emissions on their farms.
   b. The Signpost Advisory campaign is supported by Teagasc Advisory and Education staff as well as industry and private advisors.
   c. The programme is being delivered via workshops as well as a network of discussion groups, events, one to one consultations as well as media – traditional and digital.
   d. AgNav, the digital sustainability platform, developed by Teagasc, Bord Bia and ICBF, is providing farmers with information on the emissions for their own farm as well as the opportunity to examine the impact of different technologies on their emissions and consequently create a plan.
   e.The education of the next generation of farmers as well as training of all farmers will be a key priority of this programme over the next couple of years

9. The National Agricultural Soil Carbon Observatory research programme, the third pillar of the programme, is deep soil sampling the Signpost farms throughout the programme providing important knowledge on soil carbon sequestration. Flux towers are located on a number of Signpost farms to measure carbon exchange.
10. Biodiversity is an important element of the farm sustainability plans, with key actions being undertaken on each farm outlined in the Plan. A LiDAR survey is being undertaken on each Signpost farm at the start and end of the Programme so that C sequestration in hedgerows can be quantified.

For further information on the Signpost Programme check out www.teagasc.ie/signpost or to sign up for the Signpost Advisory Programme, contact your local Teagasc office to speak to a climate advisor https://www.teagasc.ie/about/farm-advisory/advisory-services

Organic Certification 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 *www.irishorganicasssociation.ie*

Email: info@irishoa.ie

Organic Trust,

Office A1, Town Centre House,

Dublin Rd, Naas, Co. Kildare

www.organictrust.ie

Email: info@organictrust.ie

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Targeted Agricultural Modernisation Scheme

Organic Capital Investment Scheme (OCIS)

A standard rate of aid of 60% on investments up to a ceiling of €90,000 for all organic farmers.

How to Apply and Closing Date:

Online applications only through *www.agfood.ie* facility.

Full details and T&C:

https://www.gov.ie/en/collection/0e509-tams-3/

Queries:

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

Organic Processing Investment Grant Scheme

Grant aid of up to 60% onfacilities for the processing, preparation, grading, packing and storage of organic products with minimum level of investment in excess of €3,000.

More Details:

https://www.gov.ie/en/service/51e8d-organic-processing-investment-grant-scheme/#rate-of-payment

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

Notes

Notes

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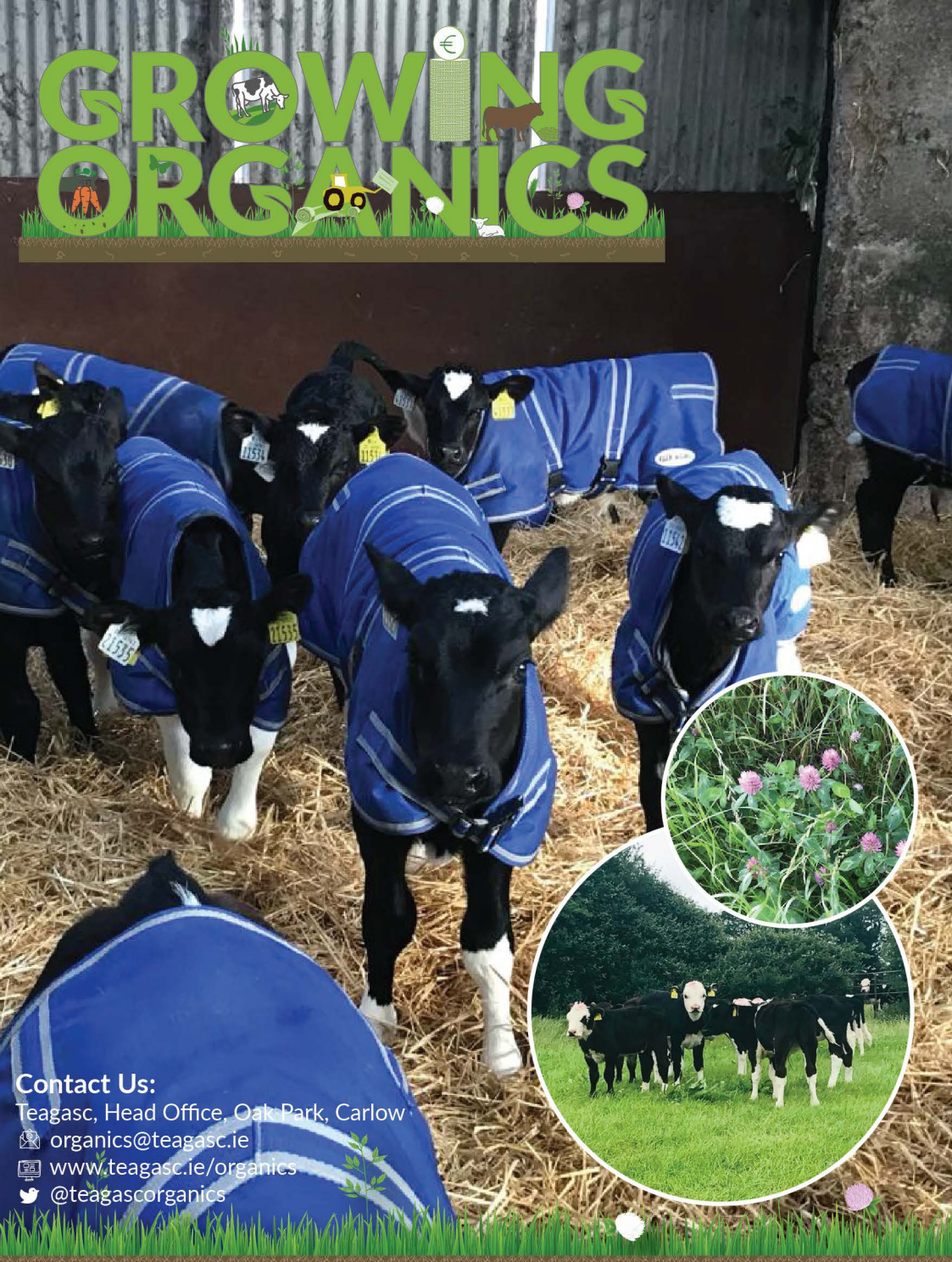

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