



Teagasc Contributions to Organic Research and Innovation



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Foreword

Organic farming in Ireland has entered an important period of development. The substantial growth in participation, supported by national and European policy, creates new opportunities for Irish agriculture. It also increases the need for a strong evidence base to inform farmers, policymakers and the wider sector as organic farming evolves in Ireland

Teagasc plays a key role in contributing to that evidence base through scientific research and translating research findings into practical knowledge and support for farmers, advisors, policymakers and the wider organic sector.

This booklet provides an overview of a growing portfolio of organic research, advisory and knowledge-transfer activities in which Teagasc is involved, co-created with farmers and our research and industry partners. The programme spans the organic farming and food system: from beef and sheep production, grassland and crop management, and technological innovation, through to farm economics and sustainability, farmer decision-making, knowledge exchange, markets, processing and supply-chain development.

A particular strength of the programme is the increasing integration of research, demonstration and knowledge transfer. GROFarmS is the Teagasc flagship DAFM-funded research project combining controlled research trials, whole-farm systems research and analysis of commercial organic farms through the Teagasc National Farm Survey. Within GROFarmS the Teagasc Kildavin Organic Research Farm at Johnstown Castle provides an important platform for connecting experimental research with the development and demonstration of practical organic production systems. This is complemented by the Growing Organics demonstration farm programme funded by DAFM and delivered by Teagasc Organic Specialists and Regional Advisors on commercial farms across Ireland and the DAFM FARM project which examines the capacity for organic feed processing.

Collaboration is central to our approach. EU funded projects such as OH-FINE, ENFASYS and SAFER connect Irish research and farmers with European knowledge and innovation networks, while initiatives including the Organic Tillage and Vegetable (OTV) EIP, DAFM funded OBLIG and Mid-West BioDistrict projects bring together farmers, advisors, researchers with the range of sectoral stakeholders to address practical challenges extending from farm production to organic markets and supply chains. The DAFM funded ENACT policy research study further broadens the evidence base by investigating the implications of alternative pathways for expansion of the sector.

Together, these activities reflect an increasingly whole-system approach to organic farming considering the interactions between biological performance, farm economics, environmental outcomes, farmer behaviour, knowledge and advisory systems, markets and policy. Our ambition is to provide robust scientific evidence, practical knowledge and innovation capacity to support informed decision-making across Ireland's organic farming and food sector.

I would like to acknowledge the farmers, researchers, technicians, advisors, specialists, project partners and stakeholders whose collaboration make this work possible.

Professor Frank O'Mara
Director, Teagasc



GROFarmS: Developing efficient finishing systems for beef production



Funding: Department of Agriculture, Food and the Marine (DAFM) and Teagasc

Partners: David Flynn, David Wall, Rioch Fox, Peter Doyle, Marie McFadden, Mark McGee and Paul Crosson, Teagasc; Alan Kelly, University College Dublin (UCD)

Developing practical and profitable organic beef production systems

Beef cattle production is the dominant enterprise on Irish organic farms. Until recently, however, there has been limited experimental evidence to guide organic beef farmers and those considering conversion on the most efficient and profitable approaches to beef production and finishing.

GROFarmS is addressing this gap through complementary research at Teagasc Grange, County Meath and the Kildavin Organic Research Farm at Teagasc Johnstown Castle, County Wexford. Grange is generating controlled experimental evidence on alternative winter finishing diets, while Kildavin provides a dedicated organic systems research platform in which feeding strategies can be integrated with forage production, grazing management, breed and alternative finishing ages. Teagasc Organic Specialists informed the selection of feeding trials and livestock procurement.

Reducing the cost of indoor finishing – Exploring Winter finishing diets at Teagasc Grange Research

Indoor finishing is one of the most expensive phases of beef production, a challenge amplified in organic systems by the relatively high cost of certified concentrate feeds. The Grange research is examining whether greater use can be made of home-grown feeds (both energy and protein sources) while maintaining animal and financial performance.

Late-maturing suckler steers were offered four contrasting finishing diets over 98 days:

1. Perennial ryegrass silage plus barley-based concentrate 'control diet';
2. Organic grass-red-clover silage plus organic barley-pea grain;
3. Organic grass-red-clover silage only; or
4. Organic barley-pea bi-crop silage



Cows eating red clover silage



Second cut red clover silage

What did the Grange experiment find?

The grass-red-clover silage plus organic concentrate treatment achieved the highest average daily liveweight gain at 1.33 kg/day, compared with 1.09 kg/day for the conventional control, 1.01 kg/day for the bi-crop silage and 0.85 kg/day for grass-red-clover silage alone.

Feed conversion efficiency was also highest for the conventional and grass-red-clover plus organic-concentrate diets, requiring approximately 8.0–8.5 kg DM per kg of liveweight gain, compared with 11.2 and 12.7 kg for grass-red-clover silage alone and bi-crop silage, respectively.

Financial margins were highest for the grass-red-clover silage plus organic concentrate treatment and lowest for the bi-crop treatment, although results were highly sensitive to store cattle purchase price and final beef price. These findings provide an evidence base for developing winter feeding strategies within the Kildavin organic beef system.

Kildavin – from experimental evidence to whole-farm systems research?

The 48-hectare Kildavin Farm is in the process of conversion to organic standards to provide a long-term platform for organic beef systems research and demonstration. It provides an important bridge between controlled experiments and whole farm systems research, allowing feeding strategies to be evaluated alongside grazing management, forage production, breed, animal health and finishing age within an integrated organic system.

In the first production cycle, 82 organically sourced, spring-born suckler-bred weanling steers, comprising early- and late-maturing breed types, entered the system in autumn 2024. During their first winter, cattle were offered either grass-red-clover or multi-species silage without concentrate supplementation, before turn-out to pasture.

Following their second grazing season, cattle followed three contrasting finishing pathways:

- 19 months – finished directly from pasture without concentrate supplementation
- 23 months – finished following a second winter on silage supplemented with organic concentrate or
- 26 months – overwintered on silage with a lower level of concentrate before returning to pasture for part of a third grazing season.

The research thus examines the trade-offs between earlier finishing, winter feed requirements and greater use of grazed forage. Average carcass weights in the first production cycle were 302 kg, 359 kg and 396 kg at 19, 23 and 26 months, respectively.

Subsequent production cycles will build on these findings and evidence from the Grange finishing-diet research, allowing alternative feeding strategies, forage sources and breed types to be evaluated within the developing Kildavin organic beef system.

Developing an organic beef blueprint

The emerging evidence demonstrates that organic beef production cannot simply be viewed as conventional production with inputs removed. Forage production, breed, stocking rate, grazing management, winter feeding, finishing age, concentrate use and marketing interact to determine technical and financial performance.

GROFarmS is progressing from the controlled evaluation of individual components at Grange to their integration within the whole-farm system at Kildavin, with the objective of developing an evidence-based blueprint for efficient and profitable organic beef production and identifying opportunities to maximise the use of home-grown feed while maintaining animal and financial performance.

GROFarmS: Developing efficient finishing systems for organic lamb production



Funding: Department of Agriculture, Food and the Marine (DAFM) and Teagasc

Partners: Philip Creighton and Frank Campion, Teagasc; Tommy Boland, University College Dublin (UCD)

Researchers at Teagasc's Sheep Research Farm at Athenry, County Galway are examining practical finishing systems for both lowland and hill lambs, taking account of animal performance, forage production, environmental performance and economic returns. The feed trials were co-designed by the Teagasc researchers and the Teagasc Organic Specialists, with a focus on relevance for practical farm contexts and feed availability.

Lowland organic lamb production

The lowland research is investigating how legumes and forage crops can be incorporated into diets to provide productive, low-input systems capable of finishing lambs to organic farming requirements.

Two systems are being compared:

- a high-legume pasture system, incorporating white and red clover to provide high-quality grazing and conserved forage
- a high-legume plus forage-crop system, incorporating white and red clover alongside forage crops for post-weaning lamb finishing.

Across the first two years of the project, lambs in the legume-plus-forage-crop system recorded an average post-weaning growth rate of 150 g/day, compared with 138 g/day in the legume system. Average age at slaughter was consequently lower at 228 versus 239 days, while concentrate supplementation was also considerably lower at 1.4 versus 8.5 kg/lamb.

The forage-crop system has also increased overall forage production. Across Years 1 and 2, total dry-matter production averaged approximately 10.0 t DM/ha for the legume-plus-forage-crop system compared with 7.3 t DM/ha for the legume pasture system.

The challenge of finishing organic hill lambs

A second strand of the research is examining indoor finishing options for smaller lighter hill-bred lambs. Organic finishing presents particular challenges because concentrates are expensive and organic standards restrict *ad-libitum* concentrate intake, increasing the importance of producing and conserving high-quality forage.

Initial work compared offering lambs *ad-libitum* access grass silage, red-clover silage or whole-crop silage plus 500g/head/day of organic concentrate supplementation. The first year's study demonstrated the difficulty of finishing comparatively light hill lambs indoors; average daily gain was 119 g/day on grass silage, 95 g/day on red-clover silage and 45 g/day on whole-crop silage. Feed intake, forage quality and starting liveweight emerged as important constraints.

The experiment was refined in year 2; a revised whole-crop treatment was devised to address the deficiencies identified in the review of year 1 treatments. Performance improved on red-clover silage, with lambs gaining 132 g/day, compared with 101 g/day on grass silage and 66 g/day on the revised whole-crop treatment. Half of the lambs offered red-clover silage reached slaughter specification during the feeding period (103 days for grass silage and red clover silage), compared with 36% on grass silage. However, none of the sheep on whole-crop reached slaughter specification within the 82 day feeding period.

Learnings

The research demonstrates that forage-based organic lamb production is possible, but the quality, intake and conservation of forage are critical. For hill lambs in particular, starting live-weight has a major influence on the viability of indoor finishing, while dependence on expensive purchased organic concentrate must be minimised.

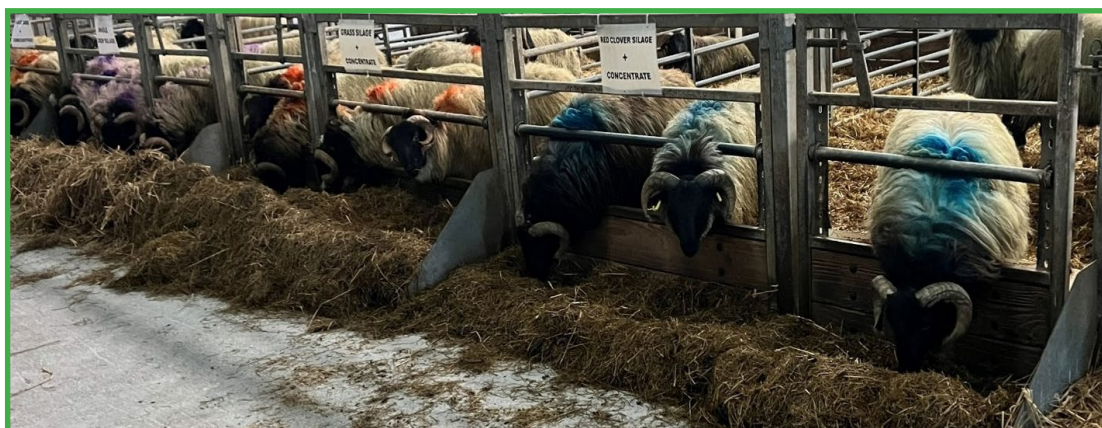
Further work is quantifying actual dry-matter and energy intake and examining the economics of the different systems. The objective is to translate these experiments into practical finishing strategies that organic sheep farmers can apply under Irish conditions.



Organic red clover silage



Hill lambs outdoors



Hill lambs indoors

GROFarmS: Economics, Farm Sustainability and Resilience



Funding: Department of Agriculture, Food and the Marine (DAFM) and Teagasc

Partners: Kevin Kilcline, Mary Ryan and Tara Gilna, Teagasc; Edel Kelly and Brian Leonard, University College Dublin (UCD)

Understanding how commercial organic farms perform

A primary objective of GROFarmS is to complement experimental research with evidence on the sustainability performance of commercial organic farms. Through the Teagasc National Farm Survey (NFS)¹, GROFarmS is developing a comprehensive technical, financial, environmental and socioeconomic evidence base for Irish organic farming.

This is important because the rapid growth in organic farming has not been matched by comparable farm-level evidence on how organic farm businesses are performing and how their performance compares with conventional systems.

Building an organic National Farm Survey sample

The inclusion of a dedicated organic sample within the Teagasc NFS provides a platform for benchmarking organic systems and, as the dataset develops, for examining their economic, environmental and social sustainability.

First results from the 2024 production year highlight important structural and financial differences between organic and conventional farms. Analysis also extends to organic sheep and tillage farms. This summary focuses on the three principal cattle livestock systems: suckler, other beef and dairy.

Table 1: Selected structural and financial performance indicators for organic & conventional cattle farms (2024)

	Organic Suckler	Conv Suckler	Organic Beef Other	Conv Beef Other	Organic Dairy	Conv Dairy
Farm area/(ha)	43	31	53	32	77	70
Stocking rate (LU/ha)	1.15	1.76	1.63	2.04	2.62	3.18
Family Farm Income (€)	19,653	13,442	36,825	17,650	53,964	110,398
Direct costs (€)	11,811	16,475	25,649	24,219	104,067	150,088
Direct payments as % gross output	56%	35%	43%	24%	18%	7%

¹ The Teagasc National Farm Survey collects nationally representative data (by farm system and size) for the Farm Sustainability Data Network of the EU Commission

Across all three cattle systems, organic farms were larger in land area but operated at lower stocking rates. Organic suckler farms recorded lower direct costs and higher average Family Farm Income (FFI) than the conventional comparison group. A similar income difference was evident among other beef farms, although total direct costs were broadly comparable.

The dairy results show a different pattern. While organic dairy farms operated with substantially lower direct costs, their average Family Farm Income was considerably below that of conventional dairy farms. Direct payments also accounted for a greater proportion of gross output across all three organic systems, highlighting the importance of the Organic Farming Scheme and wider CAP supports to the current economic performance of organic farms.

These results are descriptive and represent the first year of the new organic sample. They should therefore not be interpreted as measuring the effect of organic farming itself, as differences in farm size, structure and other characteristics have not yet been fully controlled for. With 2025 production data now available, work is progressing towards more robust comparisons between structurally similar organic and conventional farms. The analysis is also being extended to examine environmental and wider sustainability indicators of organic systems.

What can high-performing organic grassland farms teach us?

Alongside the Teagasc NFS analysis, complementary research is examining how high-performing organic livestock farmers manage productive grassland systems, with a particular focus on translating their experience into practical knowledge to support advisors, organic specialists and the design of effective knowledge-transfer activities.

Eight high-performing organic farms, four dairy and four beef farms, including the Kildavin organic research farm at Johnstown Castle have been purposively selected in consultation with Teagasc organic specialists. These farms provide examples of productive grassland management under organic conditions and an opportunity to examine the production potential achievable within well-managed organic systems.

The research combines:

- Teagasc NFS financial and socioeconomic information
- PastureBase Ireland paddock and grass-growth data
- Semi-structured farmer interviews, and
- Focus-group research.

Rather than simply asking “how much grass can an organic farm grow?”, the study seeks to understand how farmers achieve that performance: their use of clover and legumes, grazing and soil-management strategies, management skills, decision-making processes and accumulated practical experience.

The final output will integrate physical, financial and farmer-experience data into eight detailed case studies, practical key performance indicators and evidence-based advisory messages. A key focus is translating this evidence into practical resources for Organic Specialists and advisors and informing the design of effective knowledge-transfer activities. Ultimately, this will support the wider adoption of evidence-based best practice on organic farms and provide farmers considering conversion with practical evidence and guidance to support the transition as well as conventional farmers seeking to reduce purchased inputs while maintaining grassland productivity.

Together, the NFS and case-study research provide two complementary perspectives: what is happening across the organic farm population, and what can be learnt from resilient, high-performing organic farms demonstrating what can be achieved in practice, including under challenging conditions such as the drought experienced in 2026.

OH-FINE: Organic Farming Innovations Network Europe

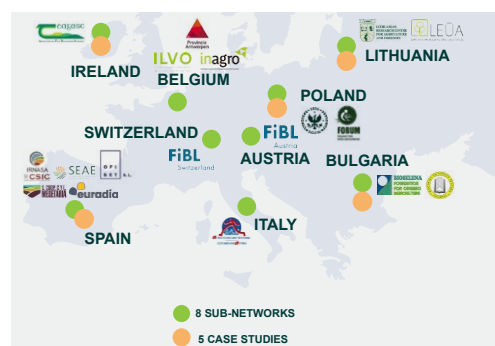


Connecting farmers, knowledge and innovation across European organic farming

Funding: Co-funded by the European Union and the Swiss State Secretariat for Education, Research and Innovation (SERI).

Partners: CSIC - SP, Teagasc - IE, OFISET - SP, WULS, AFOA - PL, FCI, BIOSELENA - BG, LAMMC, LEUA - LT, SEAE, Mesetaria - SP, FiBL - AT/CH, ILVO, INAGRO, HBH - BE, BETA-NIA - SP, CAN - IT, LRvL - CZ

OH-FINE brings together 18 scientific and agricultural organisations to create a pan-European organic farming learning community. It includes established organic farmers, farmers undergoing conversion and farmers considering organic production. Teagasc is one of five Regional Knowledge Hubs (RKH) case-study countries, with more than 100 case-study farms participating across the project.



Starting with farmers' needs

OH-FINE recognises that farmers need access to trusted people, practical demonstrations, locally relevant solutions and continuing support as their businesses evolve. The experiences of 20 Irish case-study farms contribute to research examining knowledge needs, the functioning of the Agricultural Knowledge and Innovation System (AKIS) and factors that help or hinder farmers in accessing and applying knowledge. This evidence is then used to help shape the project's knowledge exchange activities rather than assuming that information developed by researchers will automatically translate into practice. Teagasc also leads research on the impact of knowledge interventions and engagement with the organic AKIS; this means OH-FINE is not only asking what information farmers need, but also whether the ways in which that information is provided actually helps farmers to make and sustain changes.

Learning across Europe

Cross-visits are a central element of OH-FINE. Farmers, advisers and researchers visit organic farms and research facilities in participating countries, providing opportunities to compare farming systems, discuss practical problems directly with other farmers and bring potentially useful innovations home. These activities form part of a broader programme incorporating workshops, training, field demonstrations, advisory support and networking.

OH-FINE collaborations in Ireland

OH-FINE actively collaborates with Irish organic initiatives such as the organic flagship project GROFarmS, OTV EIP, Growing Organics Demonstration Farm programme, EU ENFASYS.

Co-designing solutions on farms

OH-FINE is conducting practical field trials co-designed by farmers, advisors and researchers. Irish crop trials are being undertaken in collaboration with the Organic Tillage and Vegetables (OTV) European Innovation Partnership (EIP), illustrating an emphasis on connecting existing initiatives rather than duplicating research.

The current OH-FINE/OTV trials examine:

- pea-bean intercropping, examining seed-rate ratios and their effects on yield, protein content, standability and weed competition
- low-disturbance establishment of multi-species swards
- organic maize, examining seed depth, weeding timing and machinery approaches.



Co-created Organic Field Trials



Legume Intercrop Ratios
(Pea-Bean)
Apr 2026



Low-Disturbance Establishment
of Multi-Species Swards
May 2026



Organic Forage Maize
Agronomy
May 2026



Details of Trials in Event Booklet



From knowledge to action

OH-FINE is also developing an Organic Farming Learning Community, supported by the regional knowledge hubs and a European online platform. The platform brings together videos, technical information, factsheets and decision-support resources, while face-to-face activities retain the farmer-to-farmer and adviser-to-farmer interaction that is critical for practice change.

For general information on organics in each of the five OH-FINE Regional Knowledge Hubs, please search the OH-FINE Organic Compass available at www.organicfarmingcompass.eu



Organic Tillage & Vegetables



Better weeding through integrated weed management

Funding: Department of Agriculture, Food and the Marine (DAFM), the European Union and the European Innovation Partnership for Agriculture (EIP-AGRI)

Partners: Teagasc, Host Farmers, Department of Agriculture, Food and the Marine (DAFM)

Weed control remains one of the main challenges in organic tillage and vegetable production. Successful mechanical weed control depends on good crop establishment, the growth stage of the crop and weeds, soil and weather conditions, machine setup and, critically, carrying out the operation at the right time. New mechanical, precision and autonomous technologies offer growers more options, but many require significant investment and may only be needed for relatively short periods during the growing season.

Organic Tillage and Vegetables (OTV-IWM) is a farmer-led European Innovation Partnership (EIP) evaluating non-chemical weed control technologies on organic farms. Participating farmers are working with Teagasc and machinery and technology providers to assess how these systems perform and how specialist machinery can be shared between farms.



*Mechanical weeding (Pre Emergence)
with the LEMKEN Thulit on a
participating farm*

From field performance to machinery-sharing model

Machinery sharing is being assessed alongside machine performance. The project is examining how specialist equipment can be scheduled and moved between farms within often narrow crop, weed and weather windows, as well as the implications of work rate, transport, labour, ownership and contractor options. This will inform the development of a machinery-sharing model based on the experience of the participating farms.



FarmDroid autonomous seeding and weeding system



Earth Rover CLAWS laser weeding technology

Project Outcomes

The project will pinpoint where each weed control technology performs well, where it falls short, and the conditions that shape its effectiveness. It will give growers clear, practical information on the performance, limitations and costs of the systems tested, while also showing how shared access to specialist machinery could operate under Irish farming situations. The results will provide a solid foundation for decisions on weed management, machinery investment and farmer collaboration across both organic and non organic farms.

OTV is also collaborating with the EU OH-FINE project on a series of field trials and management approaches.

Find out more about the project on www.organictv.ie



FARM: Feasibility Assessment of an Irish oRganic feed-Milling sector

Funding: Department of Agriculture, Food and the Marine (DAFM) (Policy & Strategic Studies Research Call)

Partners: Teagasc and University College Cork

The expansion of organic livestock production creates a related need for reliable and competitively priced organic feed. At the same time, expansion of organic tillage depends on having viable markets for organically produced cereals and protein crops (e.g. pea barley). FARM addresses both aspects of this challenge by examining whether greater domestic organic feed-milling capacity could strengthen Ireland's organic livestock and tillage sectors.

The project combines farm-level, supply-chain and policy analysis to:

- assess the current and potential production and sustainability of Irish organic feed crops
- examine technical/economic feasibility of post-farm-gate organic feed-processing options
- evaluate economic/environmental/social sustainability of developing a domestic organic milling sector
- identify policy options capable of supporting additional milling capacity.

Linking organic tillage and livestock production

Organic milling is more than a processing question. It links two parts of the organic sector that need to develop together. For livestock farmers, limited milling capacity can mean restricted availability and high prices for certified organic concentrate feed. For organic tillage farmers, insufficient domestic processing can limit markets for cereals and protein crops.

FARM therefore examines the complete chain from farm-level feed-crop production through processing to livestock demand.

The research combines farm-level modelling with industry and stakeholder information. Stakeholder interviews have been conducted to identify practical barriers to investment and development of the sector, while alternative processing and policy scenarios have been assessed in terms of economic, social and environmental performance. The resulting evidence will help policymakers and industry evaluate whether, where and under what would conditions additional organic feed-processing capacity be viable.

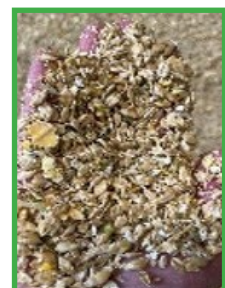
FARM also complements other Teagasc organic research. GROFarmS is examining how home-grown feeds can reduce dependence on purchased concentrate at farm level, while ENACT addresses the wider structural question of the impact of producing that feed.



Harvesting pea barley



Processing with crimping machine



Crimped pea barley

Growing Organics Demonstration Farm Programme



Funding: Department of Agriculture, Food and the Marine (DAFM)

Partners: Teagasc and the Department of Agriculture, Food and the Marine (DAFM)

Growing Organics is a five-year programme focused on supporting and increasing organic production in Ireland. The initiative, led by Teagasc and supported by the Department of Agriculture, Food and the Marine (DAFM), promotes the adoption of best practice at farm level in order to improve the long-term viability, profitability and sustainability of the Irish organic sector.

A key feature of the programme is the establishment of organic demonstration farms throughout the country. These farms have been selected across a range of enterprises, including beef, dairy, sheep, horticulture and tillage systems, to showcase successful organic farming methods in practice. The demonstration farms are used to monitor financial and environmental indicators, helping to provide reliable data on the performance of organic systems in Ireland. Farmers involved in the programme work closely with Teagasc Organic Specialists and Regional Organic Advisors, ensuring that best practice guidelines are implemented effectively on farms.

The information gathered from these farms is shared with farmers, advisors, researchers and policymakers. This helps improve understanding of organic farming methods and supports evidence-based decision-making within the sector. The programme focuses on several areas including grassland management, livestock nutrition, animal health and welfare, crop management, financial planning, and environmental sustainability. By concentrating on these areas, the programme aims to improve farm efficiency while also reducing environmental impacts and enhancing biodiversity.

An important element of the Growing Organics programme is the organisation of regional farm walks and demonstration events. These events are held on participating farms across the country, encouraging knowledge transfer and discussion between experienced organic farmers and those considering conversion to organic farming. The walks are supported by sectoral stakeholders, where Teagasc organic Specialists and Advisors, DAFM representatives, Organic Certification Bodies and the host farmers are available to answer questions and provide guidance. Overall, the Growing Organics programme plays an important role in developing and supporting the organic farming sector in Ireland.

By providing knowledge transfer from experts and on opportunity for peer learning and discussion, the programme builds farmer confidence to consider conversion or improve efficiency, helping organic farming become more efficient, sustainable, economically competitive and climate resilient.



OBLIG: Organic Beef & Lamb Innovation Group



Funding: Department of Agriculture, Food and the Marine (DAFM)

Partners: ifac, Teagasc, National Organic Training - SkillNet, Leitrim Organic Farmers

Despite strong growth in organic farming, farmers, finishers, processors and retailers often remain disconnected. This means that organically raised produce is sometimes sold as conventional, resulting in loss of value to the organic value chain..

OBLIG brings these stakeholders together to improve coordination, reduce that leakage and support sustainable growth through farmer networks, training and collaboration — helping producers access premium organic markets and earn competitive prices for their produce.

Ireland hugely increased its number of organic farmers in recent years. The priority now is ensuring that as much of this produce as possible reaches the organic food chain — enabling farmers to secure competitive prices and build thriving family farm businesses for generations to come. By assessing supply chain gaps and promoting innovation, OBLIG aims to create a more efficient, resilient and profitable organic beef and lamb sector.

Project Objectives:

1. Improve supply chain coordination

Create a well-integrated supply chain by addressing fragmentation and enhancing communication among key stakeholders, including marts.

2. Reduce leakage

Develop solutions to target 100% of output from participating farmers remains within the organic supply chain.

3. Enhance producer collaboration and support

Build collaboration capacity and knowledge among producers to strengthen their capabilities and provide a social outlet, thereby reducing isolation.

4. Address distribution challenges

Identify and solve key logistical bottlenecks hindering organic lamb and beef from reaching markets efficiently.

5. Strengthen market linkages

Develop robust connections between producers, marts, processors, retailers and food service operators.



Mid-West Bio District

Laying the foundations to strengthen organic food systems

Mid-West
Bio District

Funding: Department of Agriculture, Food and the Marine (DAFM) (Short Supply Chains Call)

Partners: West Limerick Resources (LEADER), The Urban Co-op, Teagasc, local Universities and Masterchefs, alongside organic farmers and growers across the region

The Mid-West Bio District is an 18 month place-based initiative focused on developing a stronger regional organic food and farming system across the Mid-West of Ireland. The project aims to connect organic farmers, growers, communities, consumers, institutions and other food-sector organisations, creating stronger links between production, supply, markets and demand.

The Bio District approach recognises that developing organic agriculture requires more than just supporting individual farms. By working at a regional level, the project seeks to: strengthen cooperation between producers and other parts of the food chain, improve access to information and markets and increase awareness of locally produced organic food. The initiative also provides an opportunity to explore public procurement of organic food for settings such as schools, hospitals and other institutions, helping to create more reliable markets for organic producers.



The initiative focuses on building relationships within the organic sector and developing the infrastructure required to support the regional food system. A key objective is to develop shorter and more resilient food supply chains, allowing locally produced organic food to reach consumers more efficiently while retaining greater value within the region. The Bio District can also support farmers through improved access to advice (with the support of Teagasc), funding, markets, processing opportunities and knowledge exchange.

By connecting these elements, the project aims to create a more coordinated and sustainable organic food system in the Mid-West.



ENACT: Evaluating National And EU Comprehensive Targets in Organics

Funding: Department of Agriculture, Food and the Marine (DAFM) (Policy & Strategic Studies Research Call)

Partners: Teagasc and University College Cork

Beyond the target: what does expanding organic farming mean for Irish agriculture?

Ireland has experienced a rapid expansion in organic farming, supported by the Organic Farming Scheme and wider national and European policy. However, setting a target for the area farmed organically is only the first step. Policymakers also need to understand what achieving different levels of organic adoption could mean for agricultural production, farm incomes, environmental sustainability, land use and the wider agricultural sector.

ENACT is a DAFM Policy and Strategic Studies project designed to address this evidence gap. The project (commencing in December 2026) uses the developing organic sample within the Teagasc National Farm Survey (NFS)¹, existing sustainability indicators, economic modelling and stakeholder expertise to assess alternative trajectories for expansion of organic farming in Ireland.

Rather than considering organic targets only in terms of hectares converted, ENACT takes a whole-system perspective. It will examine how different levels and patterns of organic expansion could affect: agricultural production, farm income and economic sustainability, environmental performance, social sustainability, the distribution of organic farming across enterprises and regions and the policy supports required to achieve different trajectories.

From individual farms to national policy

The NFS organic sample provides evidence on how commercial organic farms operate. ENACT builds on this farm-level evidence by modelling the scaling of different patterns of adoption across Irish agriculture. Alternative scenarios will allow policymakers to explore the consequences of different organic farming trajectories before those changes occur. Stakeholder and expert knowledge will complement quantitative analysis where reliable national datasets are not available.

The project therefore provides an important connection between farm-level research and national policy, while also complementing the wider Teagasc organic research programme: GROFarmS provides technical and economic evidence on existing organic farms, FARM examines an important supply-chain constraint around organic feed, and ENACT asks the broader strategic question: **What happens to Irish agriculture if organic farming continues to expand and what combination of production, market and policy conditions is required to make that expansion sustainable?**

The resulting scenarios will provide an applied policy assessment of the economic, environmental and social implications of alternative pathways for development of Ireland's organic sector.

¹ The Teagasc National Farm Survey (NFS) collects nationally representative farm data (by farm size and farm system) for submission to the European Commission Farm Sustainability Data Network.

SAFER: Strengthening Agricultural landscape multiFunctionality through expansion of agroecological farming in EuRope

Funding: Co-funded by the European Union, the EU Agroecology Partnership Call and the Department of Agriculture, Food and the Marine (DAFM)

Partners: INRAE - FR, University of Verona - IT, University College Dublin - IE, Brandenburg Uni of Technology - DE, HUN-REN Centre for Ecological Research, University of Bergen - NY, ISOE - DE, University of Padova - IT, Teagasc - IE, Zalf - DE, Lund Uni - SW

SAFER is a European Agroecology Partnership project investigating how agroecological practices can be expanded while balancing agricultural production, farmer livelihoods, biodiversity and wider societal benefits.

A central principle of SAFER is that there is no single agroecological practice suitable for every farming system or region. Solutions therefore need to be adapted to local environmental and socioeconomic conditions and developed with farmers and other stakeholders rather than transferred as universal prescriptions. SAFER brings together six European Living Labs in which researchers and stakeholders co-design locally relevant agroecological practices and assess their consequences at field, farm and landscape scales.



The Irish Living Lab

The Irish team, involving University College Dublin and Teagasc, is studying tillage landscapes in the Kildare region. The research examines how different levels of agroecological implementation influence biodiversity, ecosystem services, agricultural production and farm performance.

A particular focus is on whether reduced cultivation and other agroecological practices can enhance biodiversity and ecosystem services that support agricultural production. Ecological measurements include:

- soil health, including earthworm abundance and water infiltration
- natural pest control, including spiders and ground beetles and
- pollinator diversity and abundance.

Sampling across landscapes with different levels of agroecological implementation allows the research team to move beyond individual fields and investigate what happens as agroecological practices become more widely adopted.



Source: Sylvie Richart Cervera

Connecting environmental and economic performance

A distinctive feature of SAFER is the integration of ecological, economic and social analysis to understand the implications of agroecological transition for both the environment and farm viability. As part of the Irish research, organic and conventional tillage farms will be studied alongside each other to examine the implications of different levels of agroecological management (including standard and reduced cultivation approaches) on environmental and economic performance. Where possible, side-by-side fields or neighbouring farms will allow differences to be examined under broadly comparable local conditions.

The organic component will be developed in collaboration with the Organic Tillage & Vegetables EIP, drawing on existing organic farms and field-scale initiatives to strengthen the practical relevance of the research. Combining ecological measurements with farm-level economic data allows SAFER to examine the costs, benefits and trade-offs associated with different levels of agroecological transition. This study will be complemented with farmer experiences, attitudes, barriers to implementation and the practical factors influencing the adoption of agroecological practices. Together, this research will help answer a central question for SAFER: can practices that enhance biodiversity and ecosystem services also maintain productive and economically viable farming systems?

The inclusion of organic systems provides an important additional perspective, allowing the project to examine what can be learnt from farms that have already made a more extensive transition towards agroecological production and how environmental and economic performance compares with conventional systems at different levels of agroecological implementation.

ENFASYS: ENcouraging FArmers towards sustainable farming SYstemS



Funding: Co-funded by the European Union and the Swiss State Secretariat for Education, Research and Innovation (SERI).

Partners: ILVO – BE, Humboldt Uni – DE, Uni of Bologna – IT, CIHEAM Montpellier – FR, Teagasc – IE

ENFASYS (2022-2026) examines how policy interventions and business strategies can support the transition towards more sustainable farming systems.

Which farmers are open to organics? What might help them make the transition?

Rather than viewing farmers' decisions in isolation, ENFASYS examined the wider food system and the behavioural and structural 'lock-ins' that can prevent change. The project screened 160 interventions and undertook detailed case studies to identify potential levers for transition towards Sustainable Farming Systems.

FIND OUT

Case Studies

ENFASYS has set up and investigated 10 participatory processes across Europe to understand food system dynamics and decision-making, uncovering key lock-ins and potential levers to move towards Sustainable Farming Systems.

FIND OUT MORE



The Irish ENFASYS case study focused on the organic dairy sector, using a Theory of Change approach to identify key barriers and potential interventions. Economic returns, processing infrastructure and supply-chain efficiency were identified as key leverage points

ENFASYS & GROFarmS Collaboration

In Ireland, ENFASYS and GROFarmS collaborated to investigate a particularly important question:

What are the farm, farmer, economic and environmental characteristics that distinguish farmers who would consider converting to organic farming from those who would not?

A supplementary questionnaire was incorporated into the 2024 Teagasc National Farm Survey¹, gathering responses from approximately 700 farmers. The survey was informed by the Self-regulated Stage Model of Behavioural Change (Bamberg, 2013)² and examined farmers' stage of organic adoption alongside farm characteristics, attitudes, perceived barriers and preferences for behavioural interventions.

Analysis focused on 623 farmers who had not yet progressed to active conversion. Of these, 98 farmers indicated that they would consider joining the Organic Farming Scheme but were unsure what was involved.

Initial analysis suggests that openness to conversion is associated with a combination of farm structure, farmer attitudes and perceived feasibility. Cattle-finishing and sheep farmers were more likely than dairy farmers to be open to organic conversion. Farmers who felt that organic farming was personally the right thing to do and who believed they had sufficient time, labour and financial resources were also more likely to consider conversion.

Among potential interventions, farmers more open to conversion placed greater value on:

- increased Organic Farming Scheme payments
- greater milling capacity and improved availability of competitively priced organic concentrate feed and
- improved access to local markets for organic produce

The results underline an important message for organic policy and advisory services: conversion is not driven by one factor. Financial incentives matter, but farmers' perceptions of risk, practical feasibility, markets and their own ability to operate an organic system also influence whether they move from awareness to action.

This research is helping to identify where policy and knowledge-transfer interventions can be targeted most effectively to farmers who may be open to conversion.

Visit the ENFASYS website for more information on www.enfasysproject.eu

¹ The Teagasc National Farm Survey (NFS) collects nationally representative farm data (by farm size and farm system) for submission to the European Commission Farm Sustainability Data Network

² Bamberg, S. 2013. Changing environmentally harmful behaviors: A stage model of self-regulated behavioral change. *Journal of Environmental Psychology*, 34, 151-159. <https://doi.org/10.1016/j.jenvp.2013.01.002>



Notes

This image shows a full page of a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook or legal stationery. There are no margins, text, or other markings present.



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