T5.2 Case study report (Code IE1B)

Maximising Organic Production Systems (MOPS)

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Acronyms & Abbreviations

CSO	Central Statistics Office
DAFM	Department of Agriculture, Food and the Marine
EC	European Union
EIP-AFRI	EU European Innovation Partnerships in Agriculture
IOA	Irish Organic Association
MOPS	Maximising Organic Production System
OCBs	Organic Certification Bodies
OFS	Organic Farming Scheme
RDP	Rural Development Programme
UAA	Utilisable Agricultural Area
WP	Work Package

Introduction and Regional Context

This case study revolves around issues of succession within organic farming in Ireland. Although it includes a diversity of organic farmers there is a strong focus on organic farmers engaged in the Maximising Organic Production System (MOPS) Project. Situated within an Irish context, the case study crosses a number of NUTS 3 Regions, part east, west and south of Ireland. It engages organic farmers across a number of Irish counties, namely, Kilkenny, Cork, Galway, Laois, Wicklow, Kildare and Wexford. This case study involves small-scale growers, differing in size from one to three hundred hectares involved in organic farming for different lengths of time, some new and some long-established organic growers. The project focuses on improving productivity and sustainability on farms, while bringing small-scale producers together to better meet market demand that is often met through imported produce. The case study examines how issues of farm succession are dealt with via organic farm enterprises, particular via farms engaged in the MOPS Project funded through the EU European Innovation Partnerships in Agriculture (EIP-AGRI) fund.

Practice Context: Organic Farming

Organic farming has experienced considerable growth in recent years throughout Europe (Väre et al., 2021). An EU Commission report suggested that the area under organic production increased by approximately 500,000 hectares annually over a ten year span, which represents a coverage of 11.1 million hectares of European Utilisable Agricultural Area (UAA) (EC, 2014). A more recent Eurostat report showed the total area under organic farming in the EU continues to increase, and in 2019 covered almost 13.8 million hectares of agricultural land (Eurostat, 2019). While the organic sector in Ireland is a small component of the Agri-food sector, its development is important in terms of responding to current marketplace demands and meeting increasing broader societal expectations. Recent consumer research from Ireland for example illustrates that there is a rising preference for organic food over conventional food in the Irish market, largely attributed to the growing health consciousness of modern society (DAFM, 2019a). This mirrors a growing consumer trend right across Europe, highlighting the opportunities for increased production of organic food products. Indeed proponents of organic farming point to the economic, social and environmental benefits of organic systems (Väre et al., 2021).

The competent authority for the organic sector in Ireland is the Organic Unit of the Department of Agriculture Food and the Marine (DAFM). This unit appoints and regulates a number of Organic Certification Bodies (OCBs) who are responsible for upholding the Organic standards as defined by the EU. Established in 1982, the Irish Organic Association (IOA) is the largest and longest running OCB tasked with inspecting and certifying organic producers in Ireland. Other approved OCBs are: Organic Trust; Global Trust Certificate Ltd. (aquaculture only); BDA Certification - Organic and Demeter and the Painswick Inn Project (DAFM, 2019b).

The area of land under organic production has expanded significantly in Ireland over the past few years, largely due to a suite of measures put in place under the Rural Development Programme (RDP) 2014-2020. These support the organic sector, providing €56 million for the Organic Farming Scheme (OFS), while providing area-based payments to registered organic farmers, and the €8 million Organic Capital Investment Scheme, providing grant aid

of up to 60% for qualified young organic farmers for investment in structures and equipment. Today, approximately 72,000 hectares (ha) of Irish farmland is certified as organic, an increase of nearly 50% on the position at the start of the Rural Development Programme in 2014 (DAFM, 2019a). Furthermore, a recent a by the Central Statistics Office (CSO) reveals that the area of agricultural land farmed organically in Ireland increased by 257% between 1997 and 2018 (CSO, 2020). As a result of such expansion, Bord Bia, the Irish Food Board, reports that the organic retail market in Ireland is now worth €162 million, with a further €44 million generated by direct sales (DAFM, 2019a).

However, despite this growth in the Irish organic sector, land used for organic farming in Ireland still only accounted for 1.4% of total utilizable agricultural area (UAA) in 2018, the third lowest percentage among EU Member States (ibid). In response to the European Union's Farm to Fork strategy calling for 25% of total EU farmland to be used for organic farming by 2030, Ireland's new national climate and air roadmap for the agriculture sector, entitled Ag Climatise, sets out an ambitious target of increasing the current area under organic production to 350,000ha by 2030 to address Ireland's organic shortfall (DAFM, 2020a).

Organic Production Supply Deficits and Opportunities

While the area under organic production has increased in Ireland in recent times, production patterns however, are not fully aligned with market opportunities. The majority of the 1,700 organic farmers in Ireland are livestock producers despite the fact that organic horticulture, tillage and dairy have been identified by Bord Bia, Irish Food Board, as having the greatest growth potential in the domestic market (DAFM, 2019a). Organic horticulture production in particular falls significantly short of what is required, with almost 70% of organic fruit and vegetables imported annually to meet current market demand. There is also a deficit in supply of organic cereals and proteins in the Irish market; further limiting the Irish organic sectors potential to take advantage of the growth opportunities that currently exist. The development of organic production in Ireland in line with market requirements and consumer demand is thus imperative moving forward to ensure long-term sustainable growth of the Irish organic food sector.

MOPS Project Rationale

The organic horticulture sector in Ireland is identified as one of the organic categories with the greatest growth potential, with sales of organic fruit and vegetables already making up 34% of the Irish organic market. This is mirrored in retail data from other countries, as horticulture is one of the strongest performing categories in global organic food sales (Westbrook, 2020). However, as the Irish organic horticulture sector is small, some 70% of organic fruit and vegetables sold in Ireland is currently imported to meet consumer demand (DAFM, 2019a). While it is accepted that on-going importation of some horticulture products is necessary given the range of varieties on offer, and the unpredictability of Ireland's climate, Irish farmers are individually limited by a lack of capacity to meet consistent demand for organic horticultural products due to their small-scale, family-run farm operations. Farm viability is further compromised as farmers are inclined to produce the same crop, harvested at a similar time, causing unwanted surplus and wastage, which undermines economic performance on each farm.

Origin of the MOPS Practice

The MOPs project started initially when an agronomy group came together to seek advice from a well know agronomist specialising in organic farming in Ireland. This preliminary collaborative process raised many questions from the group including, how they could work in partnership to improve their economic sustainability and in-turn how they could enhance their lifestyle and work-life balance. A key aspect of their initial affiliation, according to one interviewee, revolved around fulfilling the "*needs for the market demand and at the same time give them a living"*, but also, "*in creating an organic farm system that they could "pass onto their families"* (IE1B/Int. 1). In putting these initial aspirations and ideals in place, a group of organic farmers, the Irish Organic Association (IOA), researchers and agronomists have come together as a collaborative unit to initiate and form the Maximising Organic Production Systems (MOPS) Operational Group. The group initiated this Operational Group, which in turn responded to a call from the Department of Agricultural Food and Marine (DAFM) for EIP-AGRI funding. Successful in their bid to establish one of Ireland's first EIP-AGRI Operational groups in 2018, the MOPS group obtained €597,416 in funding from the DAFM to run a three-year project. The initial setting up of the group involved the creation of a legal company limited by guarantee. From the outset, all interviewees were confident that the establishment of MOPS was a group project, with one interviewee suggesting, "*It's a very unified group - very easy to get on with"* (IE1B/Int.4), while another suggested, "*Everything is very much a group decision. I mean nothing really is decided without the group's approval"* (IE1B/ Int.3).

The diversity of the group was commended from the outset of the project, with one interviewee stating, "*Within the MOPS group the diversity of people is unbelievable between range of produce and scale of produces and they're nearly coming from the four provinces of Ireland like"* (IE1B/Int.10).

MOPS Project Overview

The MOPS project aims to optimize organic horticultural production in Ireland and improve continuity of short supply chains for the national market through the creation of a collaborative cropping system that corresponds to growing retailer demands, in addition to making farms more sustainable through reducing dependency on nutrient imports. A key determinant of the project lies in exploring and moving to more profitable crops, rather than having an oversupply in volume resulting in wastage, which in turn has considerable financial implications for many farmers. To achieve this and increase profits, the project, aims to deliver a tailor made cropping system that is flexible to market demands.

One farmer outlined this when he suggested, "*One of the aims of MOPS has been really just to go through the figures better and actually see what you're doing that is not so profitable and what's more profitable. Because sometimes it's quite difficult when you're actually busy with it to actually differentiate which crop is really making the money and which is not you know. Like I mean just because you're selling something doesn't mean it's making money*". (IE1B/ Int. 4).

To increase profits through the project, market demand are considered at scale with some of the MOPS group concentrating on local, smaller markets while others concentrate on larger markets. This includes one interviewee, who stated, "*MOPS is a brilliant idea but it gives insight into… Like I'd be considered a commercial grower of the MOPS group and then there's other really good independent growers that do a lot of box schemes. They're touching, they're flirting with the supermarket*s" (IE1B/ Int.19). Although the project is focused on increasing profits though short supply chains and enhancing training, many interviewees were quick to point out the additional value of the project.

"More importantly actually than profitability that they actually have a demand for those crops but also that it suits what they have on their farm, it suits their skillset, it suits their employment and what staff they have, their machinery and all the various other things that impacts on the capacity of that farm" (IE1B/Int.1).

Another partner stated, "*I suppose the good thing about MOPS as much as anything else is that we have constant advice and we have also the kind of teamwork. I won't say its teamwork in that we're all exactly on the same hymn sheet but you know the way*" (IE1B/Int.4).

Motivations and Targets

To achieve the main goals of the MOPS project, it is pursuing the following objectives using the economies of scale from the collaborative production of 11 certified organic horticulture farms around Ireland, of varying sizes and cropping capacity, producing as if they were a single farming enterprise:

(i) Design, develop and implement a series of organic cropping systems for each farm based on its characteristics to provide better continuity of supply;

(ii) Improve structure and efficiencies of short supply chains;

(iii) Improve farm viability by reducing surplus production;

(iv) Determine appropriate cropping systems suitable for each farm based on its characteristics;

(v) Provide a platform for the farmers to formalize inter-trade and supply amongst the group;

(vi) Advise on green cover crop practices to improve sustainable practices and reduce reliance on imported nutrients;

(vii) Establish current and future retail market demands and requirements for organic horticulture;

(viii) Build capacity, via the group to produce a training video to disseminate to the wider community.

In achieving the project aims and objectives, the MOPS group worked with suitably qualified people over the three-year span of the project. The success of this additional support and help was noted by many interviewees, with one suggesting, "*The MOPS project and advisors have been really good for sort of evaluating which crops work best for us and which don't*" (IE1B/Int.9), while another suggested, "*Well the very first simplest thing is because we've had to submit records religiously, records of you know what we sow, when we sow it, how long it took us to sow it, when we harvested it, how long it took us to harvest, how much we made from it, how much is left, how much was spoiled you know all these details. Initially it was a nightmare for us because it's just all this work like capturing everything. But with time we realised it actually was really helping us. We were a bit less stressed. You know you could actually check. You know you could go back a few months. You could see exactly what day was what. Rather than holding everything in your head which I think is what my boss was*

doing. And he was quite good at it but you know it's hard. He carries everything and the rest of us didn't know the details". (IE1B/Int.9). One respondent felt that the project brought about a huge change in attitude, when he suggested that, "*No it wasn't really upskilling so much as just changing our attitude really to what's important actually this is important*". (IE1B/Int.9).

Actors Involved in MOPS and Organic Farming

The 11 organic farms participating in the MOPS project are owner operated with a number also involved in land leasing arrangements. Collectively they supply a range of markets including; direct sales (online and farmers markets), wholesale markets, speciality shops, restaurants, private procurement outlets, and supermarket/retail multiples. While all farms produce a year-round supply of crops, they also import organic produce to supplement what is grown on farm (Westbrook, 2020). All farmers involved in the MOPS project are certified organic farmers, with many engaged in multifunctional farming, including training organic growers via an apprenticeship programme. Within the broader context of the interviewees, all are full-time organic farmers, but key stakeholders were also interviewed, namely organic advisory and speciality personnel.

Style of Farming and Activities Promoted

All farmers engaged in the case study were dedicated organic farmers, although some farmers have a variety of initiatives on farm. A number of farmers were engaged in a variety of enterprises, with one farmer, who was organically farming for nearly seventeen years, stating, "*We have different enterprises - so we were a mixed farm always a mixed farm so we had tillage and livestock and sheep. We're a little bit more intensive now in one area. We've started concentrated in dairying but we also do beef and we do lamb as well. We have another business that complements the farm and it's an organic meat business*" (IE1B/Int. 17). Another mixed farmer stated, "*I have a suckler herd and then I have a tillage sector to it. So yeah it's a good mix. We grow porridge oats and we bring porridge to the market. So we've Ireland's only certified organic Glutton free oat mill on this island*" (IE1B/Int.11). Some farmers converted the farm to organics once they had inherited the land, with one interviewee stating, "*As far as the farming is concerned yeah I started farming in 96 and I stuck with it. My parents were conventional. They were not organic at that stage*". (IE1B/Int.18). In general, most of the farms were converted to organics over the last 5 to 20 years, mainly once farmers either leased or inherited land.

Prior to their engagement in the MOPS project, most of the organic farmers were growing in excess of thirty crops, which one interviewee felt, "*Was interesting and challenging and one could say spreading the risk, or others could argue that's not a very viable option, because its depending on your market but it's very difficult to sell small quantities*" (IE1B/ Int.1). A key aspect of the MOPS project therefore was to explore the cropping system of each farmer, identifying what was most profitable due to an obvious demand, but also that it suited the farmer and his or her skillset. Additional activities promoted by the project revolved around short supply chains, which in turn promoted a variety of activities, including, training, skills enhancement and networking. Involvement in the project did not change the style of farming the project participants were engaged in, however it did allow farmers to explore more efficient methods of organic farming and it encouraged them to connect more readily with other farmers to enhance their current practices. One farmer in particular felt that, "*MOPS has done huge work for the horticulture sector in Ireland you know the organic*

horticulture sector just in joining the dots you know and making sure this farmer is growing that and this farmer needs it or this market needs it here. You know it makes it worthwhile. There is nothing more disheartening in doing something and wasting a crop or not being able to sell it all. You know its very disheartening to do that as a farmer I think"(IE1B/ Int.8).

Innovation

The on-site research and innovative ideas produced by the farming community often goes undetected and disregarded. Kummer et al., (2017) suggest that innovations produced by organic farmers can be unwisely ignored, despite their significance, which often results in strategic changes on farm. Innovative approaches and transferability of ideas and innovations appear central to the ethos of the farmers engaged in the MOPS project, but also organic farming in general. Innovations within this case study however are not always purely scientific, with surprising results showing the importance of social innovation. "*I suppose the innovation doesn't all have to be highly scientific stuff. I'd say the innovation wasn't what we expected. The innovation has actually come about by just having good record keeping and maybe considering using a database or kind of a gatekeeper is actually quite complicated for a lot of the group, but you know to use some sort of system in order to keep track of things*" (IE1B/Int.1). Other social innovations were also alluded to by respondents with one individual suggesting, "*Like you've had to go on an EIP to get this through your head you know. But they're looking at it and saying of course like this is what we'd be using. Even down to something basic. And it is basic. Its things like WhatsApp. But actually having a WhatsApp group that is telling you that I have X amount of parsnips or whatever available and so trying to reduce your waste. The innovation is more in the approach than it is in an actual piece of technology*" (IE1B/ Int.1). From a slightly more technical perspective innovative thinking in and around climate and weather was also an interesting aspect, with one respondent suggesting, "*The climate side has been one that they kind of laughed at in the beginning and didn't think it was that important. And nobody laughs at it anymore because now they're realising well actually you know that actually understanding what Met Eireann tells you is completely different to what's genuinely happening on your individual farm. So to have a few monitors around your farm, to*

understand about the frost, to understand relative humidity". (IE1B/ Int.1). Enhancing farm viability was also a key aspect of organic innovative thinking, with one farmer outlining his innovative efforts to increase his income, "*I launched a veg box scheme in 2019. Literally just one night decided to set up an Instagram page, a Facebook page with a logo on it and just put it out there. And I would say within a week we were booked solid*" (IE1B/Int.14). Another farmer had similar innovative ideas to enhance the viability of his farm through organic vegetable growing, "*It means everything in the packaging houses are all packed on tablets, touch screens and there's no paper anymore. All the paper has been eliminated - everything is automated from the order to the payments to the packing to the delivery. It's all on apps and that was a big project for us you know but it meant like thousands and thousands of print-outs and double checking just disappeared literally overnight*" (IE1B/ Int.6). Many if not all interviewees spoke of the innovative ideas that they operationalised, particularly those engaged in the MOPS project, but also organic farmers outside of MOPS were keenly aware of the need for innovation, creating high standard organic produce and in turn local supply chains for product distribution. Ideas and innovations, either social, technological or product innovation were all initiated to enhance the viability of the farm or to increase the work-life balance of the family farm. The issue of innovation was also raised by members of the Focus Group carried out as part of this case study. Members suggested that innovation embedded in organic farming can be the key aspect which will entice younger farmer to engaged in farming, "*It's about this innovativeness of organic farmers and even the collective innovation and the different synergies and how that you know can it play a role in enticing the younger farmer. Maybe the innovative practices in organics, can entice younger farmers into farming but of course obviously into organic farming*". (Focus Group Member).

Environmental Issues

Environmental issues, concerns and practices are at the heart of organic farming with all interviewees alluding to protection of the environment as a key focus of their individual enterprises. There is broad consensus amongst interview participants that their motivation to farm organically goes beyond purely economic reasoning. Instead, organic farming is deeply rooted in a commitment to society and responsibility to the environment, confirming

previous research (Läpple and VanRensburg, 2011; Moser and Barrett 2006, Mzoughi, 2011; Läpple, 2012). Interview respondents placed a particularly strong emphasis on the value of their organic farming system co-existing alongside the natural habitats of flora and fauna on their land. Indeed, organic agriculture is widely reported to be beneficial to biodiversity protection and enhancement, particularly farmland wildlife (Hole et al., 2005).

"*We wanted to regenerate the land and make it better so we've put in hedge rows, we've put in the mushrooms, we encourage diversity of the flora and fauna in the area… like constantly for almost all of the year you will hear birds and bees and other insects almost constantly. There's kestrels. There's owls. There's swallows all year. We get robins here in the winter. So the bird population here has grown and we would see more of each type most years*" (IE1B/Int. 2).

"*I put a huge value on the input that nature can have on my farm and on my production and on the overall balance of the farm… the way I manage the hedging is that I allow them to grow and allow them to express their own sort of being as it were and they grow. I haven't cut hedges here for maybe eight or ten years. And you see then you have a huge place for the wildlife the biodiversity to live and it allows the hedge to flower or the fruit and there's more food for the birds and its somewhere for mammals to live and for all these things. And these are all positives to the farm like*" (IE1B/Int. 5).

Interview participants were also highly critical of synthetically compounded products like fertilisers; pesticides; herbicides; fungicides; insecticides, livestock feed additives and genetically modified organisms (GMO's). Instead, they manage their land in an ethical and environmentally friendly manner by nourishing their soil for example through the use of natural inputs, and employing crop rotations.

"*My big thing is know your soil organic matter… that's a big difference. It's essential… if you build that that holds the nutrients. It will hold the moisture. It will hold and the health of the soil and then that helps the production you know. But knowing your soil is so important*" (IE1B/Int. 3).

"*The environment is a massive part of it… it's nice that we're contributing to a rich biodiversity. So we do that in lots of ways you know through the green manure that we plant when we're not using certain parts of the farm. You know that really encourages fantastic creatures… just yeah sort of minimal impact you know really respecting the soil and you*

know the rich diversity of life that was actually in the soil never mind above the soil. Kind of working with nature rather than against it is key" (IE1B/Int. 9).

"*You know your soil is a living breathing organism. You just have to feed it and feed it correctly*" (IE1B/Int. 19).

Such sentiments are in line with the governing European Council Regulation (EC) No. 834/2007 definition of organic production: 'an overall system of farm management and food production that combines best environmental practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards and a production method in line with the preference of certain consumers for products produced using natural substances and processes'. Indeed, a recent Strategy for the Development of the Organic Sector for the period 2019 to 2025, published by the Department of Agriculture, Food and the Marine, also acknowledges the due consideration given by organic food production to climate change mitigation and biodiversity protection (DAFMa, 2019).

Putting environmental action into practice was evident in the practice of many organic farmers engaged in the MOPS case study, but also via those engaged in broader organic farming.

"*I mean the first thing we did was put an acre and a half and we planted 3000 trees and every year we try to plant 3, 4 or 500. This year we'll be planting 1300 trees on the border. So we're always planting trees. Every year we're planting trees*" (IE1B/Int. 6), while another farmer engaged in MOPS stated, "*We've put in hedge rows. We plant wild flower strips. We have bees on our farm. Part of the organic rotation obviously is to use green manure so you sow green manures, which allows the soil to replenish and to develop better soil structure. These are things you have to do to be organically certified but we'd be doing them anyway*". (IE1B/Int.7).

This strong connection and respect for the environment also arose during the Focus Group, where one individual stated, "*As organic farmers we are subversive because we are kicking the traces. We're saying no we're not happy. You know we want to eat food that is natural, that's produced in harmony with nature that respects nature, that respects the environment and so on. We're not compartmentalizing it and saying here's something that's a good idea because there's lots of money to be made out of it*". (Focus Group Member).

In all, the MOPS case study, and organic farmers in general, appear centrally focused on environmental issues, including concerns of climate change and climate action. All farmers engaged in the study iterate their commitment to environmental protection of the land, their animals and biodiversity, with one farmer, stating, "*Organic farming gives you a lot of the climate change things, it gives you the animal welfare side of things, it gives you the food coming out of it. So it hits so much of the other targets that are there*" (IE1B/Int. 16).

Environmental awareness amongst the organic farmers engaged in this research aligns with the work of Läpple (2013), who compared attitudes and characteristics of organic, former organic and conventional farmer in Ireland and found a much higher awareness and commitment to the environmental protection of the land than conventional farmers. This commitment to the environment amongst organic farmers with young families, as was the case in this study, can have lasting effects on both the environment, but also the children on the farm. Issa and Hamm (2017) suggest that within a 'socio-psychological context, intentions towards specific behaviours are considered good predictors of the actual performing of these behaviours' (p. 2024). In turn, drawing on the Theory of Planned Behaviour (TPB), which deals with behaviour prediction, but also examines the relationship between what people believe, their attitudes and in turn their behaviours, it is possible to draw some broad conclusions around the longer-term engagement of younger farmers in the field of organic farming. The MOPS farmers and other organic farmers highlighted the engagement of children and young people on the farm and in environmental issues, with one farmer suggesting, "*Trevor was involved with farming for nature so he was in the last six competitors, so there would have been videos done and I actually got the video sent to me from a young neighbour who is seventeen. He's doing a fifth year agricultural project and I told him about the farming for nature thing and so he's talking about that in his class with his classmates*" (IE1B/Int. 12), while another farmer stated, "*I think with organic farming you have your fingers in a couple of different enterprises really you know. So that sort of intrigues people. I mean I know with my own daughters you know they love the crops. They love the animals and gardening and all that kind of stuff and they can see even if you do it on a small scale you get results. Even if it's just growing a couple of rows of potatoes you know you could produce your own food and I mean the younger generation they're the ones that are really great I think you know*" (IE1B/Int. 18). This youthful passion for the environment and

connection to the land, because of family life on an organic farm can be examined using the TPB. Strong connections to the environment, through organic family farming can potentially lay the groundwork for farm families to consider the issue of succession, and in turn for intergenerational farm transfer to occur. One individual within the case study Focus Group outlined how this occurred in her case.

"*I'm, I suppose not a good example of succession because we wouldn't be typical I guess just on gender. I'm probably the third female farming here in a line so that's probably unusual. Also we converted to organic thirty years ago so it's not like I made the decision myself and I suppose the things that I would value would be very much in line with what my parents with regard to biodiversity and extensive farming. So we wouldn't be I guess a typical situation. We've never farmed intensively or my parents never farmed intensively so I didn't have to make that change myself*". (Focus Group Member).

This response reflects the work of Fielding et al. (2008) who suggest that the influence of past behaviours of those engaged in agriculture may be enough to maintain involvement into the future. Although Läpple and Kelley (2013) highlight economic and social constrains as well as technical barriers for farmers considering organics, however, such barriers may already be overcome for young farmers already engaged in organics via the family farm.

Networking and Intergenerational Dynamics

The MOPS project is one of the first EIP-AGRI organic projects in Ireland consisting of eleven farmers engaged in creating a short supply chain for their produce. Organic farmers interviewed as part of this study place great value on the collaborative model of the MOPS project, in that it provides them with an ideal forum to engage with each other on an on-going basis.

"*I suppose the good thing about MOPS as much as anything else is that we have constant advice and we have also the kind of teamwork. I won't say its teamwork in that we're all exactly on the same hymn sheet but you know the way… You've somebody to consult and talk to about things you know*". (IE1B/Int. 4).

"*A WhatsApp group came out of it and then there'd be meetings… you would just pick up tips and run things by people and you'd help others as well like no we did that variety and these are the issues we had with that and you know they don't grow well in this kind of soil. You know it's just so nice you don't have to invent the wheel. Like there's this wealth of knowledge and expertise and you can all help each other*". (IE1B/Int. 9).

The intergenerational knowledge transfer and exchange facilitated by the MOPS Project also appears to be a real strength of this particular EIP-AGRI Operational Group. Interview respondents report that the strong cohort of well-established older farmers participating in the project hold an invaluable store of tacit and lay knowledge developed over years of regularized interaction and experience working in the organic sector, that the younger generation have not yet accumulated. As such 'soil-specific' human capital is not easily transferable, communicated or learnable (Laband and Lentz, 1983), interview participants highlight that the MOPS Project provides an arena in which the enthusiasm and ambition of the younger farmer can be nurtured and enhanced under the continued guidance and advice of the senior generation.

"*The MOPS project facilitates a level of communication with new entrants in a very practical and worthwhile way I think*" (IE1B/Int. 6).

"*There's a generation of them there all in their sixties… years and years of experience… It's vital you know that transfer of knowledge… I've said it at multiple meetings… The knowledge,*

the boots on the ground of going out to a field and looking at a crop and saying that's what's wrong with this crop... I will say my expertise would be in carrots because I've grown up with them. I've seen every single different breed and disease and condition. And I could walk out into a field and I could say that's what's wrong with those or X Y and Z just through years of experience. I couldn't do the same for broccoli or cauliflower. Now I'm learning" (IE1B/Int. 19).

The networking opportunities made possible within the MOPS Project is important as farmers interviewed as part of this study are of the opinion that conventional extension services are not tailored to the needs and requirements of organic production, confirming previous research (Rigby, et al., 2001; Läpple, 2012). Padel (2001) also argue that 'farmers prefer information sources that specifically address the issues from an 'organic' perspective ... to well-established sources that are typical for the agricultural industry in general' (p.52).

"*I think well I think horticulture is completely neglected from Irish agriculture. Its not even considered*" (IE1B/Int. 21).

"*Going forward with more people going into organic there needs to be more resources put into advising the existing organic farmers*" (IE1B/Int. 22).

Creating a short supply chain via the MOPS project, in addition to other project objects resulted in regular networking within the group.

"*I'd be with a few good networks now at the moment and then through the local enterprise as well we're on a few export programmes and we have a Laois producers group on the go as well. So yeah we'd have a good bit of networking going on*" (IE1B/Int. 11).

"*Oh yeah, well like I say a massive amount of positivity and support. It would enliven you, encourage you and you feel energised after talking to these people*" (IE1B/Int. 12).

"*Maybe because I suppose it's a smaller sector and people are relying on each other more. Maybe it's like if you're from a small family and a big family you know you rely on each other more from a small family than a big family. That's how I would compare it to. I presume it does happen at a conventional but I would see it more like I've worked in the sector for over thirteen years now but I would find it very obvious definitely*". (Focus Group Member).

"*Well I think a good example is the work that's being done by NOTS the National Organic Training Skillnet because a lot of the courses that are being run had an awful lot of the farmers engaging in that are non-organic. So we're coming up against people all the time*

who are not necessarily involved in the organic family if you want to put it like that. I also think the certification bodies play a role in that too because as they start to inform people out there through webinars and so on about what organic farming can do that helps to sort of get the message out there too. So there are different ways there I think that we're all networking". (Focus Group Member).

Networking through MOPS or via organic farmers in general appears strong and plays a key role in knowledge transfer as well as raising issues such as succession and intergenerational farm transfer. Building social networks, according to Herman et al. (2018) is critical and allows organic farmers to become part of a defined group with a clear identification. The MOPS EIP-AGRI project has provided participating farmers with this much needed identification with a defined group, thereby enhancing their networking and longer-term resilience.

Policies and Institutional Supports

The Department of Agricultural, Food and the Marine funded the MOPS EIP-AGRI project, providing an excellent opportunity for organic farming to highlight its potential at both a national and EU platform. Funding and the success of the MOPS project was commended by many interviewees, however interviewees were quick to point out that policy and attitudes towards organic farming in general was still largely lacking. Many felt that policy and funding is directed towards larger farms, with smaller farmers or horticulturist forgotten.

"*Maybe there needs to be kind of a separate policy for smaller kind of scales or you know even getting people back into working using*". (IE1B/Int.14).

"*I suppose the other thing in relation to MOPS is the smaller horticulture people just don't come in for any funding because unfortunately our system is designed for bigger farmers and a lot of them wouldn't even claim single farm payment or anything because you know you have to have a hector or two and a half acres which some of them wouldn't even have. And the payment for that amount to do the work to pay someone to do the forms and do all that is just not viable. So we've always argued that some of the schemes should be frontloaded more to help small horticultural people*". (IE1B/Int.16).

"*There's not a full policy acceptance of it here in Ireland. You know I think if policy changes then attitudes start to change as well you know. I suppose now we have much more acceptance of environmental practices in farming. So again we have a change in the thinking and acceptance of organics. So I suppose as well as an acceptance via academia acceptances via policy change things and change attitudes too*". (Focus Group Member).

Issues around education via 3rd level institutional training and in turn knowledge transfer via advisory services was also highlighted as below average.

"*There's not much official bodies dealing with organic farming. You know all the effort is put into conventional farming, which I suppose well it's the vast majority of farming*"(IE1B/Int.17).

"*There's only two advisors in Teagasc in horticulture in Ireland you know in pure vegetable production. So it's the weakest sector. But it would be ahead of like… Like there's 400 million*

or 420 sold in horticultural plants, mushrooms, potatoes and veg in Ireland. Its bigger than the sheep sector" (IE1B/Int.3).

"*Organics is not strong. We're weak in our colleges and we're weak in our third levels. There's no degree course. It's weak so they're not being exposed to it in the academic or in the education. The only place they may get exposed is when they go out working on farms but we're well behind academically and education research you know*" (IE1B/Int. 3).

Succession: Intergenerational Farm Transfer

One key aspect of this case study was an exploration of intergenerational farm transfer. In light of issues related to a lack of farm succession in conventional farming, an examination of the MOPS project and Irish organic farming in general provides an opportunity to investigate aspects of organic farming, which may lend to enhanced succession practices. Conway et al., (2019) suggests that the farming community increasingly consists of a farm population with a high age profile. They also highlight that this 'greying' of the farming workforce necessitates an infusion of new, or at the very least fresh, 'blood' into farming by means of efficient and effective intergenerational farm transfer in order ensure the production efficiency and economic growth of the Irish Agri-food industry as well as the sustainability of rural society more broadly (ibid). The younger generation are perceived to be eager to embrace smart agriculture, alternative farming practices such as organic agriculture and science-based research to help guarantee a more sustainable, profitable and productive future for farming (Lobley et al. 2009; CEJA and DeLaval, 2017; Ferreira et al. 2020). On the other hand, older farmers are reported to be less competitive in the current marketplace because they are slower to adopt new practices and innovative agricultural technologies (Ingram and Kirwan, 2011; Conway et al., 2020).

Analysis of empirical data from this study reveals that intergenerational succession, and eventual inheritance of the family farm, is the main route of entry into organic farming in Ireland.

"*I basically went into full-time farming working with my father. And I would have worked alongside him for a number of years and then when I was in my mid-twenties I started renting land from my father at first"* (IE1B/Int. 5).

"*Well I grew up on a farm, so I've been on the farm all my life and interested in the farm all my life. I've never actually done anything else... I went from school on to the farm. My grandfather was a farmer so it's in the family and it would have been I suppose just the only thing I really wanted to do. I suppose getting into the farming then I was kind of happy just working on the farm. I was working for my dad and he passed away in 2003 so I took over the farm then and I started farming it*" (IE1B/Int. 12).

"*My father and mother they were elderly… and going to give up farming so I just started farming four acres of organic veg here. And then after the first year he just made about three quarters of the farm over to me and a quarter to my other brother. So that's kind of where it all started from*" (IE1B/Int.20).

The reasons for this steadfast adherence to traditional patterns of intergenerational family farm transfer is twofold. Firstly, it is clear that interview participants adhere to a deeply ingrained 'rural ideology' that prioritizes the process of handing over the farm within the family, confirming previous research (Conway et al., 2019). Secondly, interview respondents report that there are extraordinary socio-economic barriers and challenges for young people aspiring to embark on a career in organic farming from a non-agricultural background, particularly around gaining access to land, but also. This is largely due to the fact that that entry to farming is predominately by inheritance or purchasing highly inflated farmland, resulting in the level of land transfer by sale being minimal, with less than 1% of the total land area in Ireland being sold on the open market annually (DAFM, 2020b; Conway et al., 2020). Furthermore, the predominant system of land rental is short-term and frequently through informal arrangements which provides little security for those looking to establish or expand their farms (Geoghegan et al., 2015).

"*Land is really costly. And it would be lovely if there was just a bit more flexibility around that*" (IE1B/Int. 9).

"The only way you can look at organic farming or farming in general is first of all you nearly have to inherit ground.. its nearly kind of a prerequisite" (IE1B/Int. 19).

"*Well one of the farms in particular one of the larger farms is all leased land. They don't actually own any land at all. They only lease land of other organic farmers. So the land that they have themselves would be a couple of acres and they'd be leasing in probably about 60 acres elsewhere so that's quite a lot. The smallest farm there is one hector and provides a very good living actually for the two women that own it, a small farm that was given to them by their fathers so that was inherited so to speak*" (IE1B/Int. 1).

"*Most of the farms have inherited land but a lot of them will also be leasing it. I'd say about, I'm just trying to think. Out of eleven five of them would be also leasing land as well*". (IE1B/Int. 1).

Given the importance of land mobility (i.e. transfer of land from one farmer to another, or from one generation to the next) in achieving generational renewal in agriculture, and the extent to which low levels of mobility can hinder structural development and growth within the farming sector, increasing access to land for young farmers and new entrants across EU Member States is thus one of the European Commission's key priorities in the upcoming Common Agricultural Policy (CAP) reform (Zagata et al., 2017; Dwyer et al., 2019).

Empirical findings from this research are in contrast to those by Lobley et al. (2005; 2009) comparing the socio-economic impact of organic and non-organic farmers in the England, who discovered that a significant proportion have entered the organic farming sector as an entirely new 'career' and are more likely to come from an urban background, suggestive of a new agricultural paradigm. The positive 'new blood' effect of entrants to organic farming from outside the agricultural sector is widely recognised. Such entrants are reported to be the more entrepreneurial, business orientated and proficient in setting up new market opportunities (Sutherland et al., 2015).

Prevalence of Previous Employment and Experience Outside of Agriculture

Whilst the majority of organic farmers interviewed as part of this study entered the sector through traditional patterns of farm succession and inheritance, it is important to highlight that a large proportion of them travelled extensively and/or worked in different sectors of the economy outside of agriculture, prior to returning to their family farm to embark on a career in organic farming. Interview participants highlight that the 'professional detour' (Errington, 2002) they embarked in outside of farming, in areas such as pharmaceutical, construction and hospitality, had provided them with the ambition, vision and courage to look beyond the conventional farming practices traditionally carried out on their family farm, and convert to an organic farming system in order to ensure the long-term sustainability and viability of their family farm.

"*I got a degree in applied chemistry in Galway. Then went to do a PHD in Cambridge in the U.K and then went into the pharmaceutical and the biotech industry in England for eleven years. So you know I'd be very aware of chemistry, chemicals, biochemistry, the background*

to you know how chemicals work in the environment and potential pitfalls of using them etc" (IE1B/Int.6).

"*I worked around the world. I worked in Germany. I worked in Spain. I worked in Australia… So that's what I was at before I came home and took over the farm… So, I had seen an awful lot of diversity in farming around the world and little small farmers up on hilltops in India and in Nepal and how they were making a living off a very small part of the land. So that put me on a journey towards organic when I seen how they were viable*" (IE1B/Int.11).

"*I did four years in the bank after Edinburgh and then there was more and more helping needed at home so I needed to kind of be at home more so I looked at retaining. Went up to Donegal and did a FAS course up there for a year and a half in stone masonry. And at least then I had a trade that I could be self-employed with and kind of fit it in around the farm… all these things are important rather than just having a very small realm of experience doing what your father did kind of thing*" (IE1B/Int.13).

"I did social science in Dublin and I lived there for a number of years and worked in that area… I worked in that kind of industry in rehabilitation and all that kind of stuff. And then I decided to move back home and took on part of the family farm and I started basically to grow organic vegetables" (IE1B/Int.21).

These findings confirm previous research indicating that many new entrants to agriculture incline to organic farming, as it is perceived to be a more a more sustainable production system (Rigby et al., 2001; Padel, 2001; Lobley et al., 2009; Mayen et al., 2010; Sutherland et al. 2015). These findings also reflect research by Rigby et al. (2001) who highlight that organic farmers are, on average, later entrants to agriculture. Zagata et al. (2017) add that new entrants to agriculture, whatever age are they, are potential innovators, hence the value of an infusion of 'new blood' into organic farming, regardless of whether they are from a farming or non-farming background.

Organic Farm Sustainability and Viability

Overcoming structural and institutional deterrents obstructing land mobility in agriculture is a pressing matter in contemporary Europe, due to the fact that two thirds of the 10.5 million family farms in the EU are less than 5ha (Eurostat, 2018). As land is the core asset for productive agriculture, securing long-term access to additional land is thus reported to be imperative for those wishing to assemble a farm holding of an efficient size that will increase their productivity and profitability, be they the sons and daughters of farming families or young people from a non-agricultural background (Van der Ploeg et al., 2015; Conway et al., 2020). Zagata et al. (2017) warn however that the limited supply of land available for purchase or secure rental experienced throughout the EU is having a detrimental effect on the economic viability of Europe's small and medium sized farms who do not have substantial financial resources behind them to obtain additional land to develop a sustainable farming enterprise.

Organic farmers interviewed as part of this research, however, report that their previous experience working beyond the agricultural realm has equipped them with a necessary skillset and experience to manage and operate a profitable organic farming enterprise, regardless of the size and scale of their farm holding. Previous research comparing the economic viability of conventional and organic farms in Denmark from 2012 to 2014, Pedersen and Hauge (2016) found that 'the profit of conventional farms has decreased, while organic farmers' earnings have increased' (p.4). Hence, there is great reason to believe that young farmers will have a brighter future within organic farming than conventional (ibid). Small-scale organic farmers interviewed as part of this research have overcome challenges faced by their conventional counterparts around access to land, as well as difficulties in accumulating sufficient capital to compete in scale-driven markets, by becoming involved in niche market farming operations, and identifying novel routes to their consumer base, such as in the form of delivery box schemes, farm shops, farmers markets and on-farm processing facilities, in order to establish a commercially viable farm.

"*We don't have loads of acres and we don't have access to cheap labour. So my feeling was that we needed to do something a little bit different and a little bit more high value at the*

end and something niche and I suppose that's where I got the interest in organic farming". (IE1B/Int. 5).

Farmers' markets in particular have previously been reported to be an effective channel for selling organic produce/products as the customer base tends to be supportive of the organic ethos (Bord Bia, 2007). Compared to specialised conventional operations, many of the organic farmers interviewed as part of this study were also found to grow a diverse range of vegetables/crops to mitigate the risk of their farm's being exposed to external forces such as challenging and unpredictable weather conditions or in the face of market changes. Furthermore, interview participants highlight that Ireland's green image in the international marketplace provides them with an ideal platform to grow their organic enterprises. Taken together, such activities have made a substantial contribution to the farm income of interview participants.

The most compelling picture to emerge from this study for the future of organic farming in Ireland is therefore one of opportunity. Not only for the development trajectory of existing organic producers, but also in attracting new entrants to the sector to help ensure that it meets the ambitious and challenging growth projections for the industry set out in the European Union's Farm to Fork strategy.

Social Aspects Inhibiting Organic Farming

Another interesting finding to emerge from the analysis of empirical data is related to the social drivers influencing conversion to organic farming. A number of interview participants reported that their conventional farming peers not only perceived organic farming methods and practices as unnecessary and aversive, but also incompatible with what is needed to earn the social status and recognition as a 'good farmer' within the farming community. The perception that the merits of organic farming do not conform to conventional agricultural criteria within the farming community is highlighted by:

"*I mean there was a stage where you didn't really tell people you were an organic farmer. They kind of gave you a second look as if what's wrong with you*" (IE1B/Int. 18).

"*When I started people kind of laughed at organic farming*" (IE1B/Int. 10).

"*Some farmers think the idea of organics is retiring and stopping farming and quitting and just letting it go…. I've had many's a farmer say to me when I went organic oh your ground will get poor*" (IE1B/Int. 7).

"*They thought he was stone wall mad. How are you going to grow grass, how are you going to, you know you'll lose the whole lot like*" (IE1B/Int. 8).

As the 'audience' (or significant others) for farmers is widely reported to be neighbouring farmers (Conway et al., 2016), such ambivalence towards organic farming is a major concern as it has the potential to become part of the next generation of the farming community's indoctrination, thus averting them from converting to an organic system of farming in some cases. Previous research on farmers' resistance against, and rejection of, Agri-Environmental Scheme (AES) involvement in the United Kingdom (Burton et al., 2008) revealed that the lack of possibilities within Agri-Environmental work to display skills and performance as a 'good farmer'. This is in comparison to conventional farming, where 'tidy and efficient' farming practices (such as evenly coloured fields and straight furrow lines) generate esteem and respect within the farming community, has seen a lack of support for such schemes (ibid). In response to such negativity, organic farmers interviewed as part of this research however appear to be keen to highlight their methods of organic farming to exemplify the merits of this alternative system of farming, not only to conventional farmers, but also to the members of public more generally.

Furthermore, whilst not clearly evident in this particular piece of research, it is worth noting that older farmers are widely reported to be more 'conservative than younger farmers are and therefore more resistant to organic farming practices' (Fertô and Forgács, p.57). Such hesitancies amongst the senior generation of the farming community to embrace change is also a concern as successors have previously been reported to be socialised into the values, norms and behaviours of the existing family farm business, and as such may be unwilling to go against their elders upon taking over managerial control of the farm, and instead carry on with existing farm practices (Dumas et al., 1995; Sutherland et al, 2012; Conway et al., 2017). Such intergenerational differences of opinion towards organic farming are brought to in the quote below:

"*I remember I did a conversion plan for a farmer in Galway there about ten years ago. And the guy who invited me out he was taking the farm or he was inheriting from his dad. And I*

arrived into the yard and the dad started to walk up behind his son who invited me out. And the son said to me my dad is coming, you are a REPS (Agri-environmental scheme) advisor, you're not an organic advisor. You are not an organic advisor" (IE1B/Int.22).

Gender Issues in Organic Farming

With regard to gender equality in organic agriculture, whilst Padel (2001) and Läpple (2012) previously reported that there is a greater share of women farmers in the organic sector, findings from this study identified the contrary. Analysis of empirical data however uncovers the crucial role women play in the successful management and operation of a labour-intensive organic farming enterprise. They appear to be the 'invisible' or 'silent' partners in the family farm business, however, possibly due to the deeply ingrained patriarchal nature of farming reported internationally (Brandth, 2002; Price and Evans, 2006; Price and Conn, 2012).

"*My wife actually has an Instagram and a Facebook page for the farm here so we put up pictures of the stuff we're doing and diversity on the farm*" (IE1B/Int. 12).

"*My wife manages Human Resources and I manage the production. She manages the people*" (IE1B/Int. 3).

"*At the beginning yeah there was myself and Jenny and my father and we were growing, packing, delivering, answering the phone*" (IE1B/Int. 6).

"*I see an awful lot more women now coming into farming and I think it's a great thing to see. You know the women can do it. Why can't they do it you know. Its been always a male dominated occupation and there's women can do it. My grandmother as most women like her in her era looked after the farm and the kids. She milked the cows like while my grandad went contracting and earning money off farm you know. She managed. So women are well able to do it, probably more able than a lot of men*" (IE1B/Int. 8).

Furthermore, in line with previous research by Price (2010) and Price and Conn (2012), the gender relations of the family farming ideology amongst interview participants still appear to be stubbornly persistent in their adherence to patriarchal inheritance practices and a longing to 'keep the name on the land'.

"*For me it was a bit easier. I was the only boy. I have five sisters. So, it was probably a little bit easier than if there had have been five boys and one girl*" (IE1B/Int. 11).

Price and Evans (2006) argue however, that such patriarchal inheritance is not only dependent upon the existence of sons, but also 'women's willingness for their son's and brothers to inherit what is largely, in fact, wealth to which they are legally entitled' (p.291).

A number of interview respondents highlighted however that their daughters were becoming actively involved in their family's organic farming enterprise, signifying that there is likely to be an increased number of younger, highly educated women involved in various types of direct sales initiatives and other innovative initiatives linked to organic farming in the future.

"*My eldest girl she studied marketing in DCU so she's just graduated there last year so she does all that side. And then my next girl she does all the social media. Aoife is the social media guru so she looks after all the social media for us*" (IE1B/Int. 11).

"*I mean I know with my own daughters you know they love the crops. They love the animals and gardening and all that kind of stuff. And they can see even if you do it on a small scale you get results. Even if its just growing a couple of rows of potatoes you know you could produce your own food. And I mean the younger generation they're the ones that are really great I think you know*" (IE1B/Int. 18).

Rural Regeneration

Findings from this study indicate that organic farmers are embedded in their local community, confirming previous research (Lobley et al., 2009). Organic farmers facilitate rural generation in their area by not only creating local employment through their on-farm processing enterprises for example, but also by forming lasting relationship with local consumers by communicating the way in which they produce food in an ethical and environmentally friendly manner through their organic farming methods. Interview participants also identify the value of their role in developing closer connections with the local economy, while maintaining a sustainable agricultural production.

"*We have different things going on here throughout the year. We've different walks with friends and family and the community at different times of the year (now it hadn't happened last year) and big summer barbecues. For the last ten years, we've done a kind of pig on a spit summer barbecue. We raised a bit of money for charity… in the next probably five years it should have more of an impact on the community because we'd hope to open it up more in terms of walks and through the forest and kind of probably tap into a bit of eco-tourism or Agri-tourism and that kind of experiences that people maybe are looking for*" (IE1B/Int. 13).

"*All my neighbours even and people in the area yeah they would know what I'm doing now you know. Yeah people are interested in it and becoming more aware of it. I suppose I'm a beekeeper as well so I sell honey in my local town you know in about four or five of the shops… So yeah that makes them more aware no doubt about it and they're always intrigued with organic farms. You know they like the idea*" (IE1B/Int. 18).

"*We've done some educational stuff with the schools and stuff like that and linked in with people... from time to time*" (IE1B/Int. 21).

"*Well I think if you're looking at the overall context of regeneration you look at organic horticulture and you look at smaller scale farms which are having a huge impact on the local rural area in terms of employment. Like there would be a couple of people in the MOPS farms who were you know farming on 38 hectors and they're employing 20/30 people. So in terms of that context of regeneration certainly organic farming is very viable*". (Focus Group Member).

Conclusion

This report sought to outline the MOPS EIP-AGRI case study as well as examine the broader practice of organic farming within an Irish context. The case study paid particular attention to issues of succession within an organic farming context, seeking good practice examples of intergenerational farm transfer. The MOPS Operational Group is a three-year project aiming to create a supply chain amongst eleven organically certified farmers, to allow greater access to a demand-driven market. The case study report was developed following a series of twenty-two individual in-depth interviews with MOPS personnel, additional organic Irish farmers, policy makers, organic advisors and members of the Department of Agriculture, Food and Marine, in additional to a ten person focus group and a ten person feedback session. The findings from the case study process was the identified of interesting aspects of the project which directly or indirectly enhance patterns of succession.

Aspects of the MOPS project include, enhanced farm viability, a strong environmental ethos, high aptitude for innovative practices, strong patterns of community awareness, high levels of networking and connectedness, a strong aptitude to embrace challenging farm practices and gender diversity. A combination of all of these issues were prevalent within the MOPS case study, issues which Lobley et al., (2009), DeLaval (2017) and Ferreira et al. (2020) suggest are what young farmers are seeking, namely, smart agriculture, via science-based research an opportunity to guarantee a sustainable and profitable family farm into the future. The following quote in many respects sums up what one Focus Group member felt about the role organic farming can play in promoting farm succession:

"*When they convert over to organics that's often a lot of the reason why they do it is because they're challenged. And they'll say this. That every day I'm sitting on the tractor and I'm challenged to think about what I'm doing on the farm organically and they actually really enjoy that challenge. And some farmers will say to us like when you're sitting around with a group of conventional farmers it was all heads down looking at their feet because you know there was no excitement, there was no challenge and education. So for some farmers that come in that's what they really like. They like to learn and push themselves and to learn more about the soil and learn about all of that. And we're certainly finding that there's a group of*

farmers who are new into organics but have extensive experience farming conventionally and they're really excited by the prospect of farming organically". (Focus Group Member).

The above key points of the case study were reiterated during the Feedback Workshop, with individuals from the MOPS project reiterating the importance of farm viability within the context of succession issues. Various members of the Feedback Workshop spoke of the extensive funds currently used by young farmers to engage in dairy farming, perceiving it to be financially viable, yet if they were more aware of the financial returns of organic farming they may consider this an option instead. Others felt that an acceptance of organic farming was still questionable; therefore, a strong marketing campaign was needed to convince young farmers of the potential of organic farming for farm viability and sustainability.

Other policy and research personnel present at the Feedback Workshop were also both supportive and complementary of the case study findings, feeling they are in line with current issues within the organics industry. The continuation of the MOPS EIP-AGRI Operational Group was raised at the feedback session, particularly as the project ends in December 2021. Although the funding will cease for this project, members of the group were hopeful that an additional fund would be sought to maintain the chain supply created by the group. Additionally, one attendee at the feedback session, suggested case study members could avail of the NOTS (National Organic Training Skillnet) support system to ensure the current MOPS Operational Group remain in contact. In all, however all members of the feedback session were complementary of the MOPS project feeling it was a positive case study to present as part of Work Package 5, within the RURALIZATION project.

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Appendix 1. The list of interviews

Code.	ENTERPRISE	MOPS	Pseudonym
IE1B/Int.1	MOPS Project Manager	MOPS	Anne
IE1B/Int.2	Manna Vegetables & retail	Organic Farmer	Tara
IE1B/Int.3	Beechlawn Organic Farm Vegetables (MOPS)	MOPS	James
IE1B/Int.4	Vegetables (MOPS)	MOPS	Scott
IE1B/Int.5	Sprout Farm (Vegetables) (MOPS), cereals & beef	MOPS	Andy
IE1B/Int.6	Green Earth Organics Vegetables (MOPS)	MOPS	David
IE1B/Int.7	Cereals & beef	Organic Farmer	Paul
IE1B/Int.8	Cereals & beef	Organic Farmer	Daniel
IE1B/Int.9	Moyleabbey Organic Farm, Horticulture (MOPS)	MOPS	Mary
IE1B/Int.10	Kilbrack Farm, Horticulture (MOPS)	MOPS	Tom
IE1B/Int.11	Merry Mill, Cereals, on farm processing & retail	Organic Farmer	Jim
IE1B/Int.12	Cereals & sheep	Organic Farmer	Kevin
IE1B/Int.13	Cattle & forestry	Organic Farmer	Niall
IE1B/Int.14	Horticulture	Organic Farmer	Pippa
IE1B/Int.15	Cereals only	Organic Farmer	Donal
IE1B/Int.16	Beef & cereals	Organic Farmer	Fiona
IE1B/Int.17	Coolanowle Organic Farm, Dairy, Beef, Poultry, Direct Selling	Organic Farmer	Leo
IE1B/Int.18	Cereals, beef, bees, forestry	Organic Farmer	Paul
IE1B/Int.19	Leo Dunne - Horticulture MOPS	MOPS	Ben
IE1B/Int.20	Vegetables (MOPS)	MOPS	Pat
IE1B/Int.21	Riversfield Farm - Horticulture MOPS	MOPS	Jack
IE1B/Int.22	Teagasc	Stakeholder	Aaron

Table 3: Interviews