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Regenerative Agriculture. An innovative approach towards mitigation of climate change through multi-tier learning

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Slovenian Association for Conservation Agriculture (Slovenia)

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REGINA National Report PR1 Results

SECAD Partnership CLG, Ireland

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Location: Midleton, County Cork, Ireland.

Updated: 18/04/2023

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Chapter 1. Overview of Regenerative Agriculture uptake and prospects in Ireland

1.1 Agriculture in Ireland

The majority of farms in Ireland are managed through a Family Farm structure. Of the 137,500 farms in Ireland in 2016, 137,100 (99.7%) were classified as family farms (CSO, 2016). Due to a high sense of attachment to their land, farmers generally stay and work on the farm for as long as they can. Therefore on average, farm managers are generally above 50 years of age, 88% of which are male. Only 5% of Farm Holders are aged under 35 in Ireland. A recent Census revealed that one in five farms are less than 10 hectares in size. Approximately 65% of the land in Ireland is agricultural land (CSO, 2016), the majority of which is Grassland.

Ireland's Agriculture and Food Development Authority named *'Teagasc'* (the Irish word for 'Instruction') conducts a National Farm Survey every year, as part of the EU Farm Accountancy Data Network, which collects key data from Irish Farms. In Ireland, the 5 main farming systems in Ireland are as follows: Cattle (Rearing & Other), Dairy, Sheep, Tillage, and Mixed Livestock. Farms in Ireland are generally struggling financially, with Dairy Farmers making the most of the farming sector income. The following figures describe the economic stability, or lack thereof, of Irish farms on average:

- 31% of Irish farms are economically 'sustainable', with farm income, or additional off-farm income, providing the farm family a stable amount of income.

- 42% of Irish farms are deemed 'viable', meaning the income generated is enough to cover family labour and provide a 5% return on non-land assets.
- Worryingly, 27% of Irish farms are 'vulnerable', meaning their farm is not viable and neither farmer nor spouse has an off-farm job.

Given the farm income vulnerability of many farms, 56% of Irish farmer households have off-farm employment. Employment in agriculture (% of total employment) (modelled ILO estimate) in Ireland was reported at 4.5% in 2020. The financial vulnerability of farms in Ireland may be affecting their ability to engage in more sustainable and emissions mitigation practices. Approximately 7.1% of total employment in Ireland consists of the agri-food sector, consisting of agriculture, forestry and fishing-based activities. In 2021, agriculture contributed around 0.99 percent to the GDP of Ireland. Agriculture is said to be Ireland's *"most important indigenous sector",* with the sector being heavily reliant on Foreign Direct Investment (Cullinan, 2022). Indeed, 10% of Ireland's merchandise exports are within the agri-food sector.

1.2 Overview of regenerative agriculture and other alternative farming methods uptake

Organic farming is perhaps the most well-known form of alternative farming within the Irish agricultural sector. The Irish Organic Farmers' and Growers' Association (IOFGA) was established in 1981 by 6 growers (Organic-europe, 2011), and is still in operation today, renamed the "Irish Organic Association - IOA". The IOA are a vital farmer-led organisation that certifies organic food and products throughout Ireland and the UK under EC Regulations, ensuring that food produced organically gets accredited with the IOA organic symbol. While being the most popular alternative farming method in Ireland, Organic Farms (both registered and in conversion) represent only 1.3% of all farm holdings in Ireland (CSO, 2021). Incentives for organic farmers in 2023 under the All Organic Farming Scheme new EU CAP will see new

organic farmers getting €300 per hectare of land, up to 70 hectares, along with an annual payment for €2000 in the first year and €1400 per year thereafter, according to the All Organic Farming Scheme.

In recent years, the term **'Regenerative Agriculture'** has been gaining awareness amongst the farming population in Ireland, particularly amongst Organic farmers and farmers interested in alternative farming methods. Conventional farmers who are looking to a simpler, more sustainable way of farming, are beginning to see Regenerative Farming as an option. Unlike Organics, those farmers who have begun employing regenerative agriculture techniques have done so under no economic motivation, due to the lack of incentives or recognition from the Department of Agriculture or the EU. In saying this, there are a number of environmentally-focused policies at Irish and EU level that align with regenerative practices, such as the new ACRES scheme, whereby farmers may be financially rewarded for reducing chemical fertilisers, planting more trees, and planting cover crops. With Organics as a prime example, it is difficult for governments to govern alternative farming methods such as regenerative agriculture. Indeed, many sources say that organic farming policies are too strict and are 'backwards', or counterintuitive, in some ways. Organic farming policies may be seen as restrictive. This is why regenerative agriculture is so unique; the majority of farmers who employ RA practices do so from their own free will and have complete control over the practices they employ. Often, the RA practises that a farmer may employ is completely contextual to their own land. Thus, making this farming method difficult to define, let alone put rules to.

In Ireland, there is a national training body called the "National Organics Training Skillnet", funded by the department of agriculture, to give a variety of courses, resources, and advice for organic farmers. The National Organic Training Skillnet (NOTS) is a *"not-for-profit network that offer high-quality, low-cost training for the expanding organic sector throughout the Republic of Ireland."*

- They host a number of trainings, information events, farm walks and local meetings across Ireland.
- They target all farmers, growers, processors, food businesses and consultants.

In recent years, NOTS have become increasingly interested in alternative farming methods outside of Organics, with regenerative agriculture being of key interest. The NOTS organisation hosts annual regenerative agriculture and soil-health seminars for farmers to attend, often with them receiving some form of accreditation at the end of the course. NOTS have welcomed a number of World-renowned regenerative agriculture influencers from across the world; such as Gabe Brown and Richard Perkins, As well as this, NOTS host an annual 'Biofarm' conference, with the theme this year being overrun by Regenerative Agriculture. There appears to be huge interest in this area, and growing demands for informational and interactive RA courses.

As discovered in the case studies, RA appears to be taken on by self-driven, passionate farmers. The mantra of 'do-it-yourself', trial and error, and learning from other farmers who are testing out RA is strong. Farmers appear to be keen to learn from one another, and thus, the Irish Farmer-led Regenerative Agriculture group called "BASE" was formed. This is a group of farmers who meet to talk about regenerative agriculture. BASE has formed a community for farmers to share their RA practices, give feedback to one another and encourage each other.

Therefore, RA is very much farmer-led in Ireland, with a notable inclusion of the national organic training centre, which is promising. Regarding policy, perhaps it is not a bad thing that RA is not yet enacted into policy due to potential restrictions or standardisations that may occur.

Some Irish charities have engaged with the prospects of Regenerative Agriculture; such as IWT, the "Irish Wildlife Trust", who hosted a regenerative agriculture event in 2019, however they haven't seemed to have held a similar event since this time, but they remain advocates in the area.

Farming for Nature is a not-for-profit organisation that promotes innovative and sustainable farmers. Each year, they elect new 'Farming for Nature' Ambassadors, sharing blogs, photos, videos and podcasts of the farmers' efforts. Funded by the Department of Agriculture and the National Parks and Wildlife Service, Farming For Nature aims to combat the negative press that many farmers receive in the media surrounding climate change and environmental destruction, with 'good news stories' of farmers doing their part for nature. They aim to encourage farmers *"to feel that they are part of the solution, not just the problem"* for environmental issues. Indeed, the stories shared by Farming for Nature of farmers across Ireland are inspiring and hopeful. They moderate an online forum for farmers to "ask questions and share information", supporting farmers who "wish to include nature more in their farming practices".

It is also important to mention the private sector's involved in regenerative agriculture. There appears to be a great deal of greenwashing and misuse of the work of regenerative agriculture, as multinational companies based in Ireland such as Guiness and Danone seem to be using it as marketing buzzwords, rather than taking much meaningful action on the matter. That being said, a greater awareness of the term RA is prevalent, but it is concerning that the term may be abused or misused, such as how 'organic' was misused before regulations around the use of the word came in.

There seems to be a number of online Irish Regenerative Agriculture groups across widely used social media platforms such as Facebook, twitter and whatsapp. In these online communities, stakeholders well beyond the farmer engage in conversations around RA and

share news with one another. There appears to be a strong emphasis on self-learning and peer-to-peer learning when it comes to RA, which is a positive for RA measure uptake. Irish farmers have also been sharing visual evidence of their regenerative agriculture (or more usually called in Ireland as; Regenerative Farming), on online video platforms such as youtube (Example 1, example 2, example3).

1.3 Interviews with stakeholders: public authorities, farmers' associations, agronomists

The following organisations have taken part in a Stakeholder Interview:

1. Teagasc: State-run agricultural advisory body
    a. Teagasc is the Irish state agency providing research, advisory and education in agriculture, horticulture, food and rural development in Ireland.
2. Bord Bia: Food Safety Authority
    a. "Bord Bia is an Irish state agency with the aim of promoting sales of Irish food and horticulture both in Ireland and abroad. Bord Bia works for small producers by promoting and certifying farmers' markets, and for bigger producers by offering a great range of international marketing services."
3. Charity: Farming for Nature
    a. Farming for Nature seeks to acknowledge and support farmers who farm, or wish to farm, in a way that will improve the natural values of the countryside. They share 'good news stories' on farmers who are doing good things for the environment, and have yearly 'Farming for nature' awards. https://www.farmingfornature.ie/about/
4. Researchers/ Journalists: Irish Farmers Journal.
    a. Prominent Irish Farming Newspaper, Publishes Weekly on all aspects of farming news. Over 379k readers.
    b. Two separate Journalists knowledgeable in RA were interviewed.

Stakeholder Interview Synopsis:

- Respondents are positive about Regenerative Agriculture and think it can be applied to Ireland.
- All respondents recognised the 'Contextual' aspect of Regenerative Agriculture.
- Discussion around the difficulty of defining what RA is in an Irish Context.
- Need for Global Standards/ Laws around RA for countries to follow.
- Definition and Indicators for RA need to be established
- Some respondents think that RA elements will be (and are currently being) funded individually by the government, rather than a 'Regenerative Agriculture' as a whole. Allowing all farmers to take part, rather than being a niche such as Organic.
- Limited resources for RA in Ireland.
- RA and its benefits are not clearly explained.
- Great interest in providing RA training from respondents.
- National laws on RA should follow international / EU standards.
- Some farmers take advantage of the RA term, they say they are RA when they aren't.
- Some respondents believe the baseline for RA should be organic, others think all farmers should be able to engage in RA.
- Lack of investment into organics in Ireland, but this is beginning to change.
- Social/Cultural aspects may affect RA take-up, i.e. "what will the neighbours think?".
- Importance of engaging with Schools and Education for RA.
- RA is not a 'one-size-fits-all' approach
- Agriculture is a naturally adaptable and changeable industry; farmers will adapt to the new environmental ways of farming.
- The journalists say sometimes their articles on RA are sometimes scrutinised before publishing

- Some organisations may be 'Gatekeeping' RA training, very expensive for farmers to take part (i.e. Savoury Institute for example)
- RA should be a grassroots approach and inform policy
- RA- farmers moving back to a more natural state
- Climate change and Biodiversity are becoming weekly news topics for the farming journalists
- RA needs experts to advise the government.
- Risk of RA creating a polarising influence - not helpful when trying to engage farmers in environmental systems.
- Soil management is a big topic in Irish agriculture at the moment.
- Need to be wary around importing systems from other climates without evaluating it for a local context.
- Lack of information about best RA practises for ireland
- Farmers in Ireland have already begun to adapt some RA principles unknowingly.
- Financial incentives should only be directed to components of RA that are proven to work in the situations in which they are being deployed, which to some extent is already happening in Ireland (I.e. cover crops, multispecies swords, direct tilling, etc.).

Books/Literature of Interest

- **Books recommended:**
  - Liquid carbon pathways by christine jones: Pollinator EIP project participant
  - Jeff lyingfield-- teaming with microbes, teaming with fungi, teaming with nutrients
  - James Rebanks - books
  - Rachel Carson - Silent Spring

1.4 Conclusions regarding the RA uptake and prospects

The future is bright for regenerative farming in Ireland and it appears to be a movement that many farmers are identifying with; as it expands beyond the environmental sustainability dimension, and into the social. Farmers are very much the leaders in their RA journeys, and it appears to be an empowering process for many. RA must be adapted for local situations and thus government schemes and payments must be localised and adaptable for the varying climates and environments.

Chapter 2. The farmers' online survey

2.1 Introduction

- **Number of Respondents:** 72 Responses
- **Duration of Survey**: End of August – End of September 2022
- **Considerations:** Respondents are predominantly from the South of Ireland.

2.2 Report of results.

PART 0: GENERAL INFORMATION

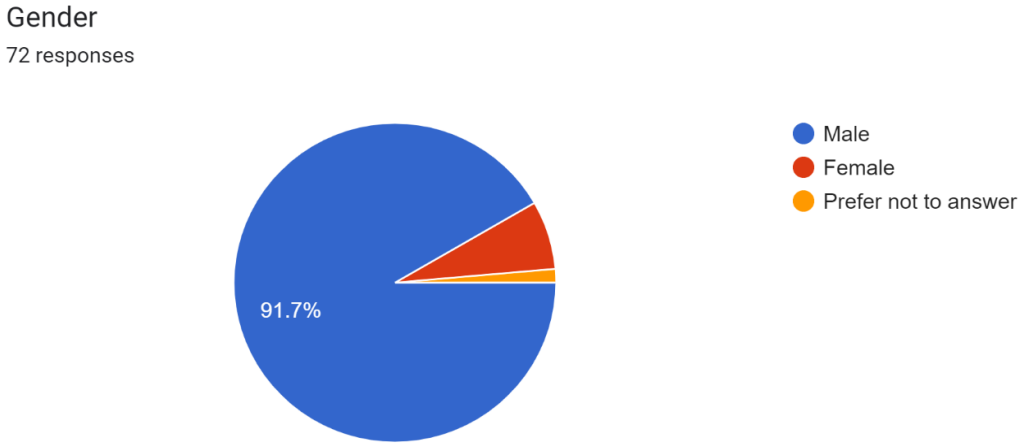
1. Gender:

- Response Rate: 72/72

- Answers: 66 Male (91.7%),

5 Female (6.9%),

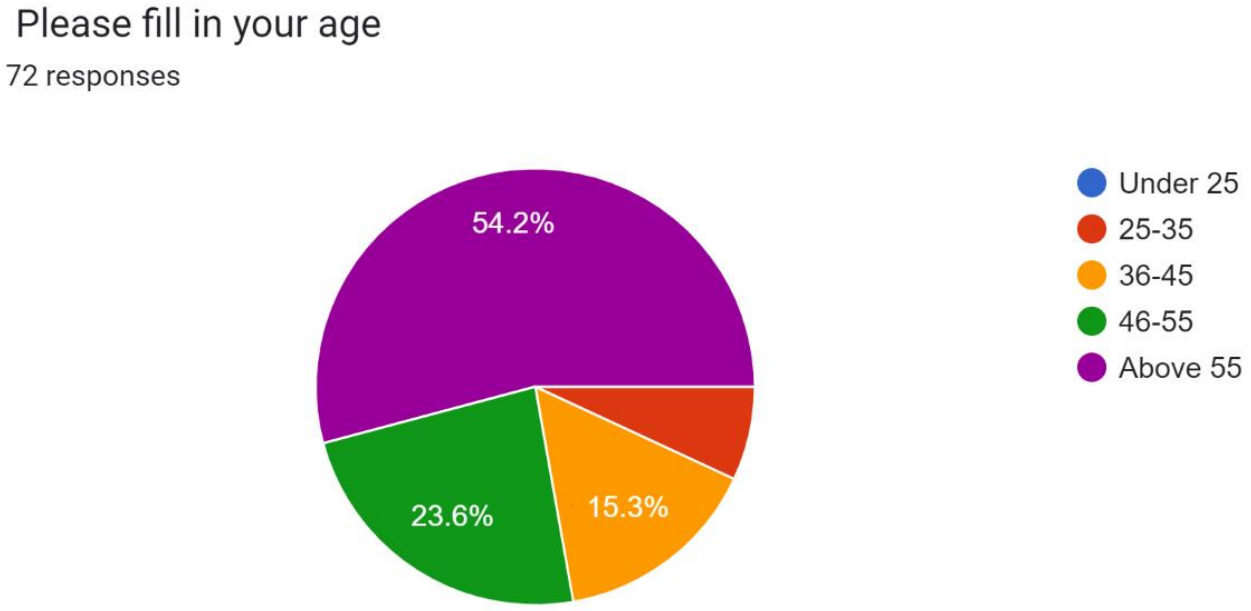
1 Prefer not to say (1.4%).



2. Age:

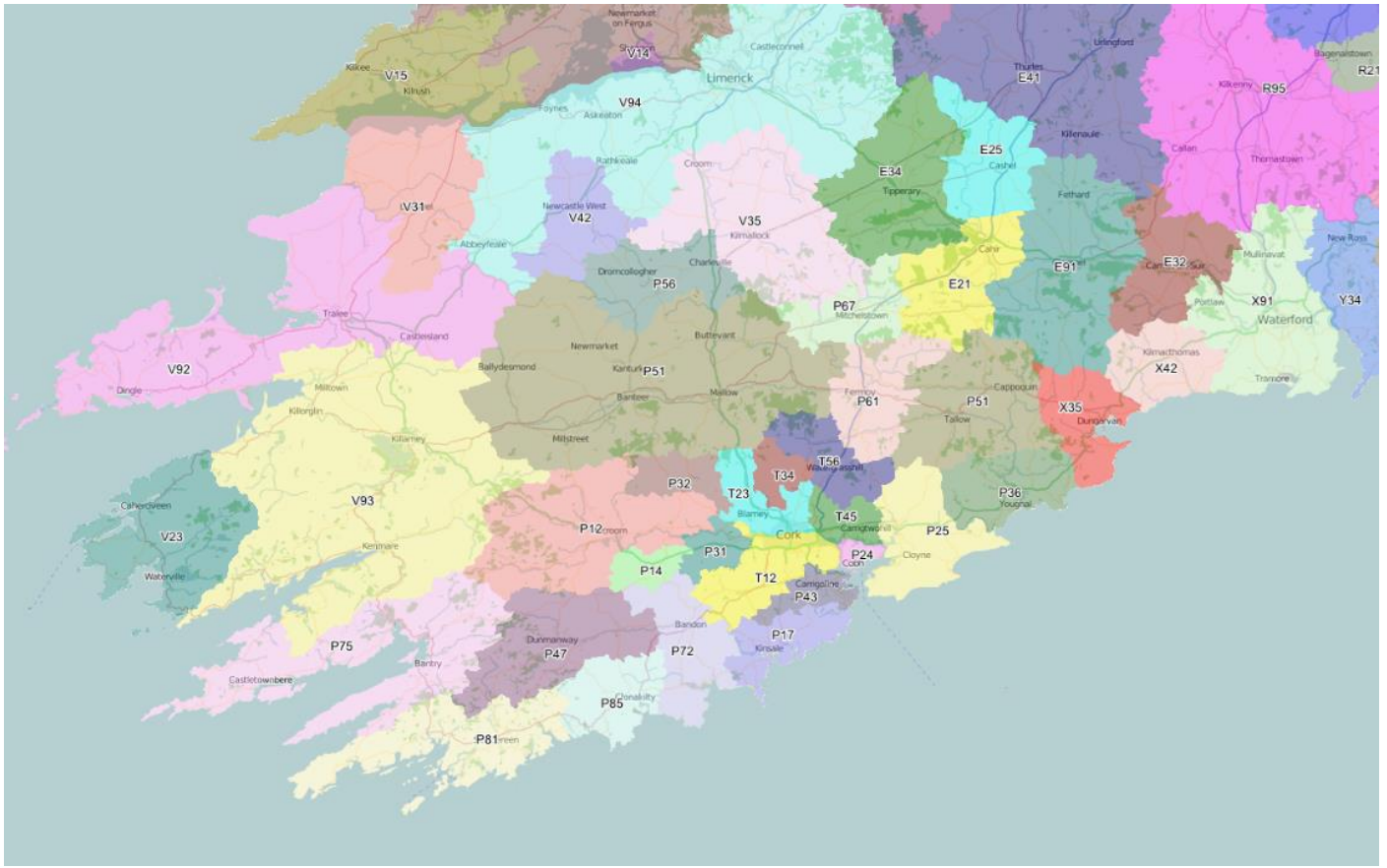
- Response Rate: 72/72

- Answers: 39 Above 55 (54.2%), 17 46-55 (23.6%), 11 36-45 (15.3%), 5 25-35 (6.9%), No Under 25.



3. Location of the farm (Postal Code)

- Response Rate: 63/72



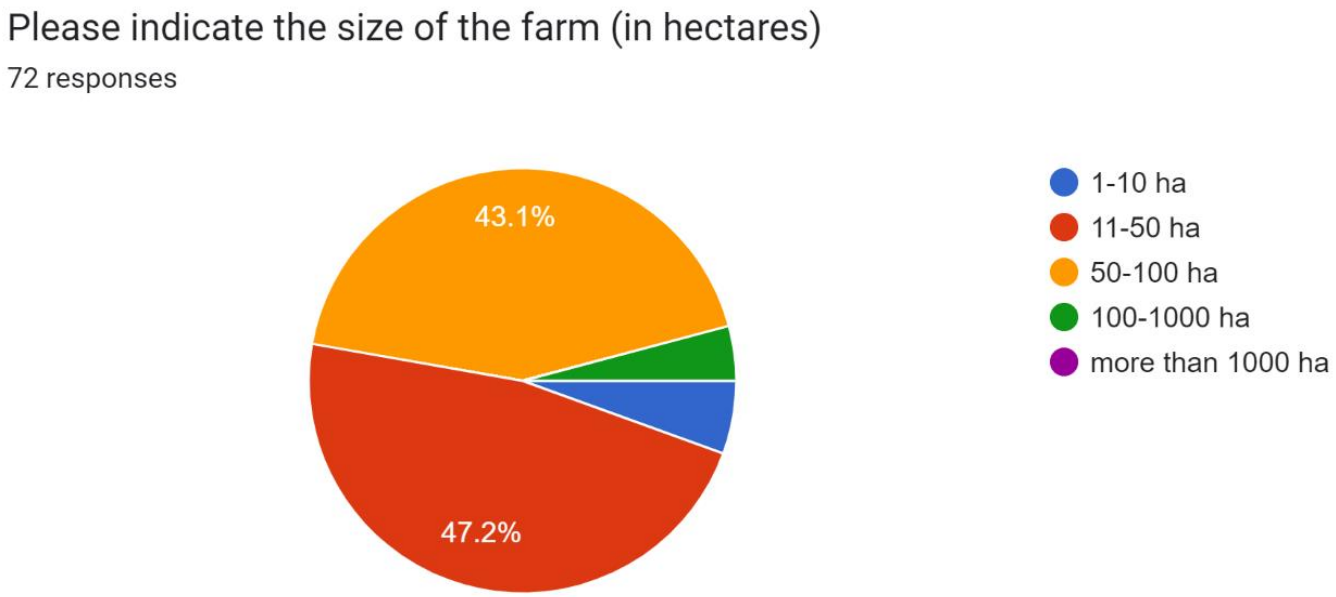
- Answers: P67x735, Cork, Y34 R654, Y34HE63, R21tx32. F93HKV7, N91 V024, P85W896, West cork, P25HW11, Y34EW64, Y34C840, P61 PP78, t34pw61, P25DP64, P25NN73, P51YT20, V42 WE88, P36W085, P25rx81, Mallow Co cork, P51d928, P25a497, T23 FXC6, P51PY6Y, P25xt29, P61wp57, Mohereen Lombardstown, Mallow P51PP76, P36k525, P32XV38, p12 w400, T56ed96, T34yn27, Propogue, Knockanore Co.waterford, P51 TE29, P51 EW83, P51DH98, v35kh58, Castletownroche, Co. Cork, T56, T34v180, T34yf65, T12F61V, P61Y277, P36fy63, P17tk64, P25k338, P36nf84, P51D585, P25p902, T23AP22, P67 T266, P51EH01, P51 WN35, P25DW26, P25E489, P67cx48, P25nd23, P72 HD40, P25YH31 V92FN52

- **Conclusion:** Respondents predominantly from the South of Ireland (County Cork & County Waterford regions).

4. Size of Farm (in Hectares)

- Responses: 72/72

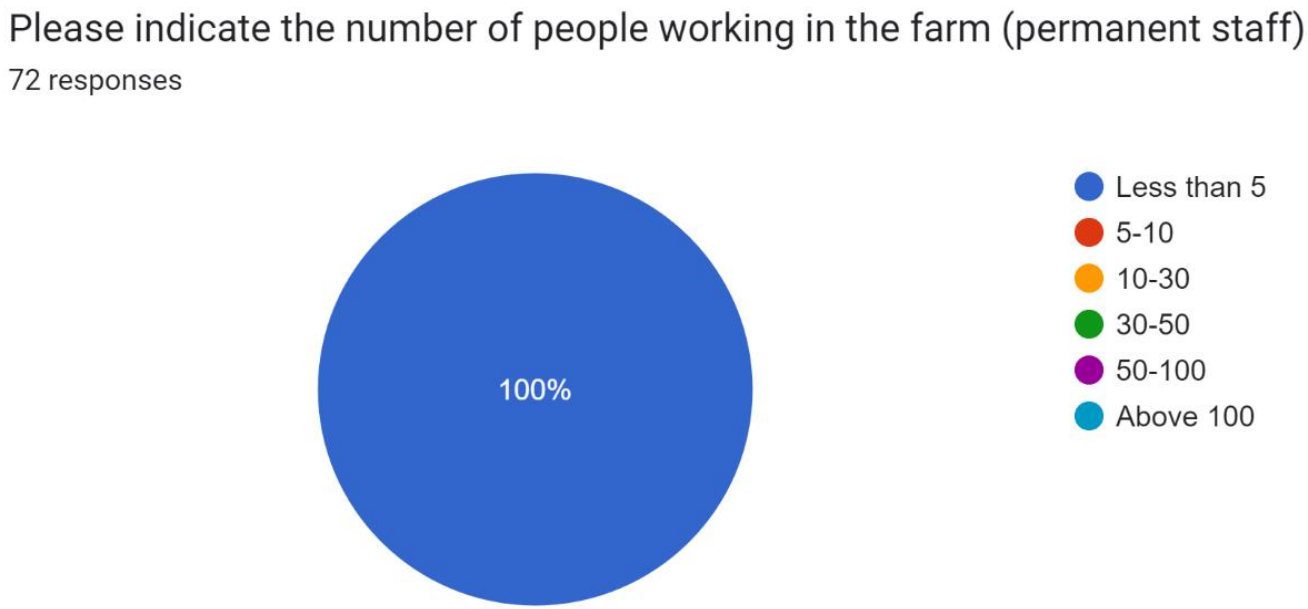
- Answers: 34 11-50 ha (47.2%), 31 50-100 ha (43.1%), 4 1-10 ha (5.6%), 3 100-1000 ha (4.2%)



5. Permanent Staff working on Farm:

Response Rate: 72/72

Answer: 72 Less than 5 workers (100%).

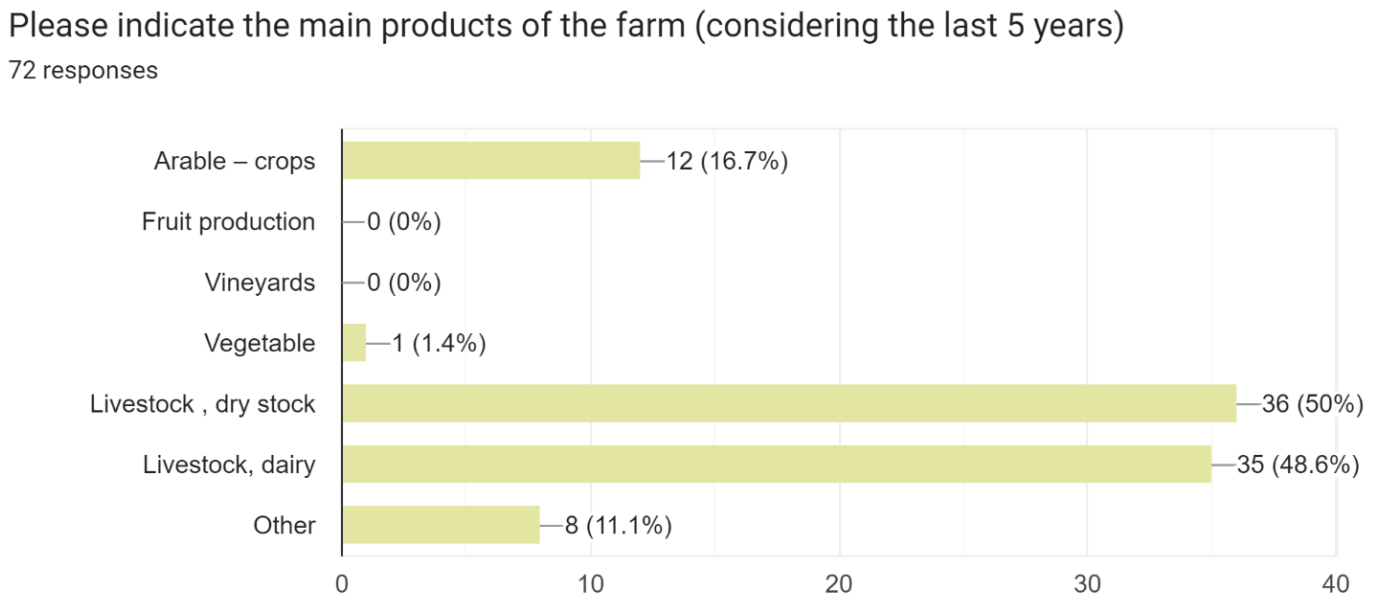


6. Main Product of the Farm (in the last 5 years)

Response Rate: 72/72

Answers: 36 Livestock, dry stock (50%), 35 Livestock, dairy (48.6%), 12 Arable – crops (16.7%), 8 Other (11.1%), 1 Vegetable (1.4%)

Comments: Some respondents noted multiple categories for their main products. No fruit, vineyard and little vegetable production. 8 Respondents stated "other", indicating that we were perhaps missing a main product field.

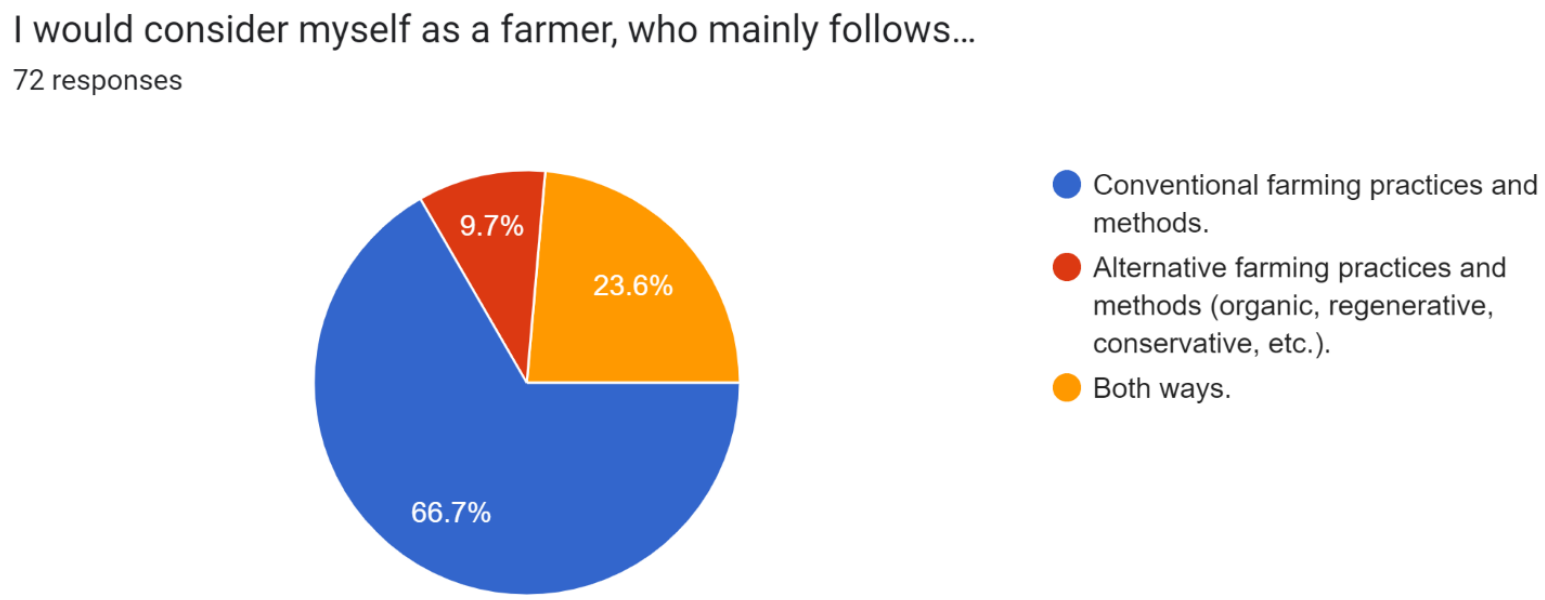


7. “I would consider myself as a farmer, who mainly follows…”

- Response Rate: 72/72

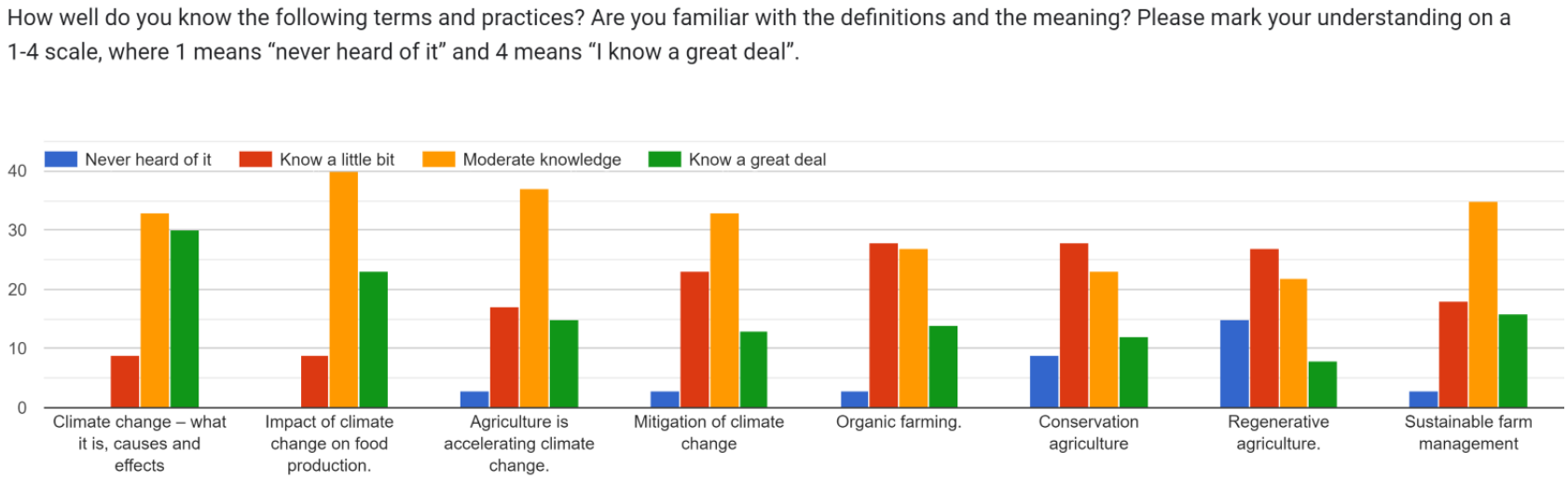
- Answers: 48 (66.7%) said Conventional Farming Practices, 7 (9.7%) said Alternative farming practices, and 17 (23.6%) said both ways.

- Comment: Interesting that 23% say ‘both ways’ this could be perhaps due to farmers trialling out alternative farming; they could be moving from conventional towards more organic and natural farming methods.



PART 1: BASIC INQUIRY AND KNOWLEDGE ON THE PROJECT TOPICS

8. How well do you know the following terms and practices? Are you familiar with the definitions and the meaning? Please mark your understanding on a 1-4 scale, where 1 means "never heard of it" and 4 means "I know a great deal".



Climate change – what it is, causes and effects

Never heard of it: 0, Know a little bit: 9, Moderate Knowledge: 33, Know a Great Deal: 30

Impact of climate change on food production

Never heard of it: 0, Know a little bit: 9, Moderate Knowledge: 40, Know a Great Deal: 23

Agriculture is accelerating climate change

Never heard of it: 3, Know a little bit: 17, Moderate Knowledge: 37, Know a Great Deal: 15

Mitigation of climate change

Never heard of it: 3, Know a little bit: 23, Moderate Knowledge: 33, Know a Great Deal: 13

Organic farming

Never heard of it: 3, Know a little bit: 28, Moderate Knowledge: 27, Know a Great Deal: 14

Conservation agriculture

Never heard of it: 9, Know a little bit: 28, Moderate Knowledge: 23, Know a Great Deal: 12

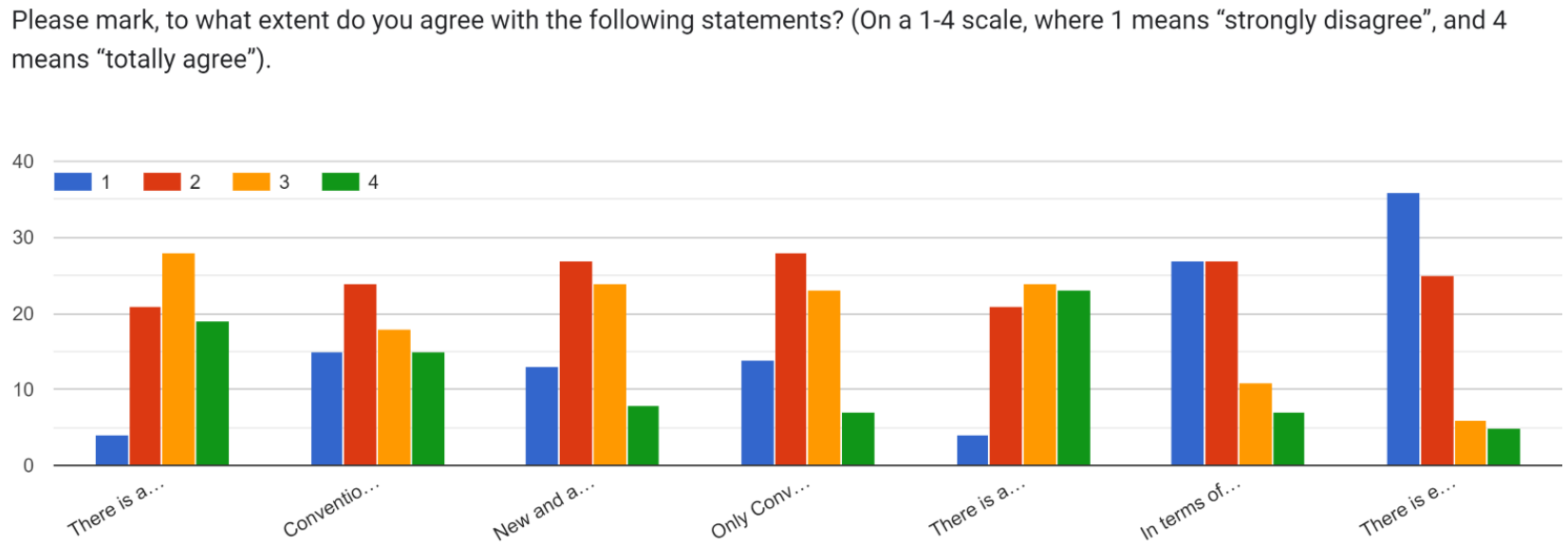
Regenerative Agriculture

Never heard of it: 15, Know a little bit: 27, Moderate Knowledge: 22, Know a Great Deal: 8

Sustainable farm management

Never heard of it: 3, Know a little bit: 18, Moderate Knowledge: 35, Know a Great Deal: 16

9. Please mark, to what extent do you agree with the following statements? (On a 1-4 scale, where 1 means “strongly disagree”, and 4 means “totally agree”).



Answers:

There is a high need to redirect agriculture towards new approaches to help to mitigate climate change.

1: Strongly Disagree: 4, 2: Disagree: 21, 3: Agree: 28, 4: Strongly Agree: 19

Conventional farming methods are not sustainable

1: Strongly Disagree: 15, 2: Disagree: 24, 3: Agree: 18, 4: Strongly Agree: 15

New and alternative farming practices can also contribute to raise the average income of farmers.

1: Strongly Disagree: 13, 2: Disagree: 27, 3: Agree: 24, 4: Strongly Agree: 8

Only Conventional farming methods are able to produce enough food

1: Strongly Disagree: 14, 2: Disagree: 28, 3: Agree: 23, 4: Strongly Agree: 7

There is a general knowledge gap among farmers about the alternative ways of farming (e.g. organic, regenerative...).

1: Strongly Disagree: 4, 2: Disagree: 21, 3: Agree: 24, 4: Strongly Agree: 23

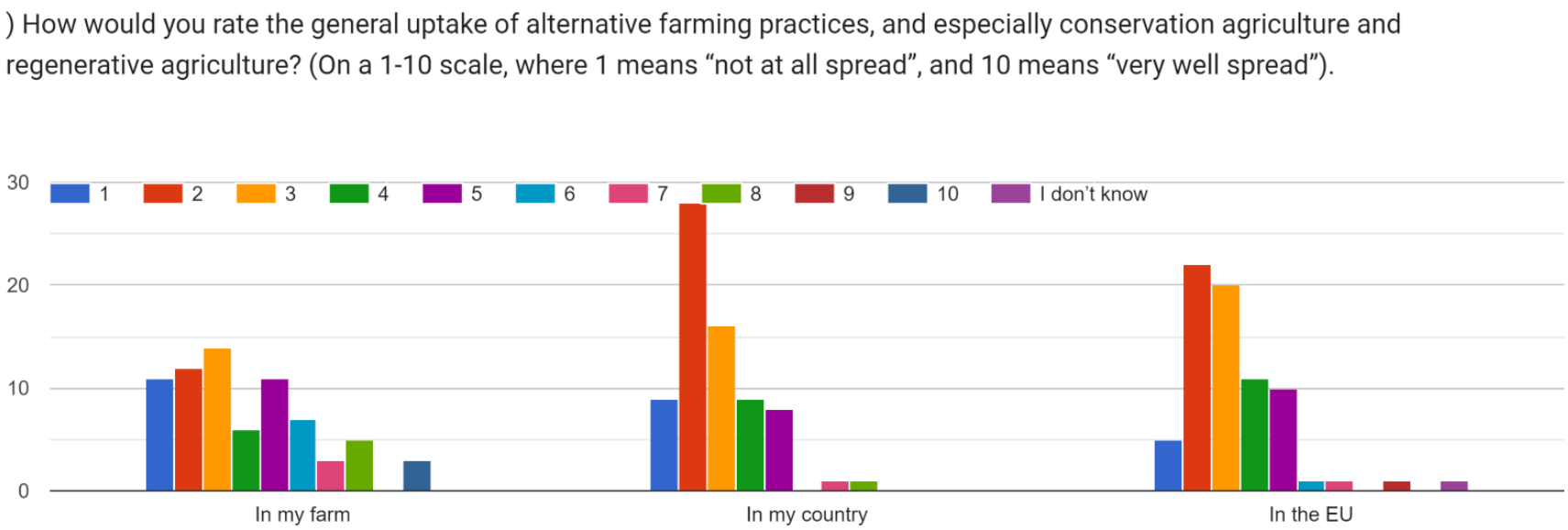
In terms of education, there is enough support for farmers, if they would like to introduce alternative farming practices.

1: Strongly Disagree: 27, 2: Disagree: 27, 3: Agree: 11, 4: Strongly Agree: 7

There is enough financial support for farmers, if they would like to introduce alternative farming practices (e.g. organic, regenerative..).

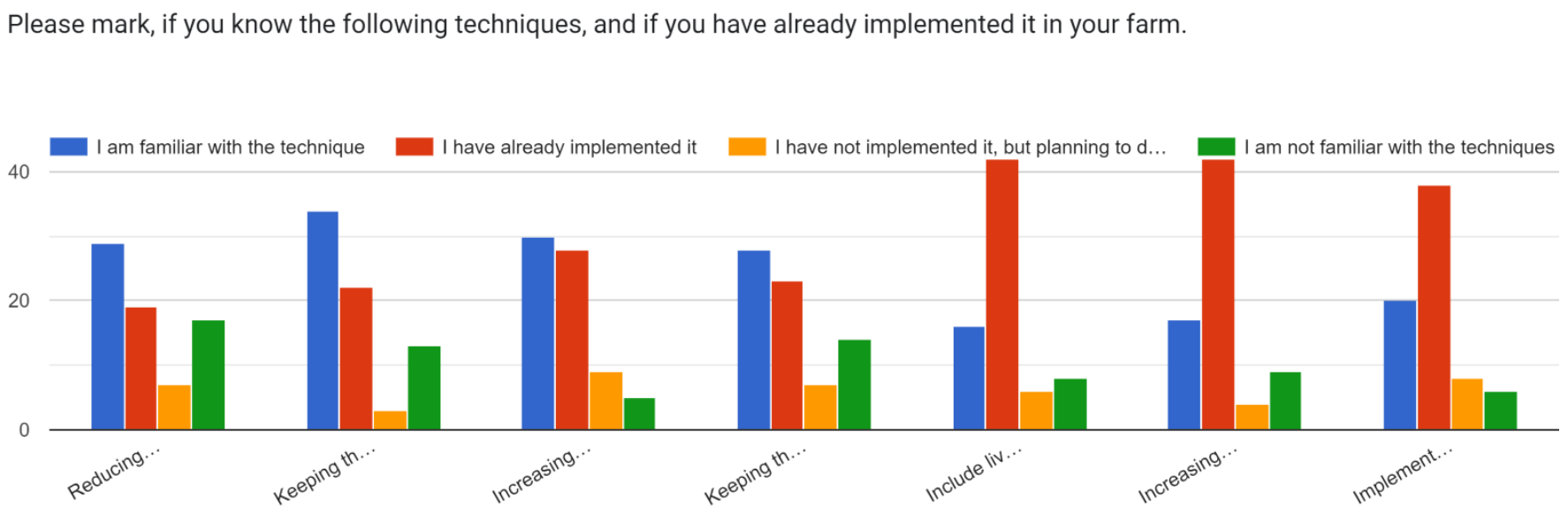
1: Strongly Disagree: 36, 2: Disagree: 25, 3: Agree: 6, 4: Strongly Agree: 5

10. How would you rate the general uptake of alternative farming practices, and especially conservation agriculture and regenerative agriculture? (On a 1-10 scale, where 1 means "not at all spread", and 10 means "very well spread").



Conclusions: Answers indicate that respondents believe alternative farming practices are not well spread in Ireland and the EU. Individual farms have mixed responses to their own interaction with Alternative Farming Methods.

11. Please mark, if you know the following techniques, and if you have already implemented it in your farm.



Reducing or eliminating mechanical interventions in the soil (tillage)

I am familiar with the technique: 29, I have already implemented it: 19, I have not implemented it, but planning to do so: 7, I am not familiar with the techniques:17

Keeping the upper part of the soil overgrown with vegetation (eg. cover crops)

I am familiar with the technique: 34, I have already implemented it: 22, I have not implemented it, but planning to do so: 3, I am not familiar with the techniques: 13

Increasing plant biodiversity

I am familiar with the technique: 30, I have already implemented it: 28, I have not implemented it, but planning to do so: 9, I am not familiar with the techniques: 5

Keeping the roots alive in the soil throughout the year

I am familiar with the technique: 28, I have already implemented it: 23, I have not implemented it, but planning to do so: 7, I am not familiar with the techniques: 14

Include livestock in farmland to fertilize the soil

I am familiar with the technique: 16, I have already implemented it: 42, I have not implemented it, but planning to do so: 6, I am not familiar with the techniques: 8

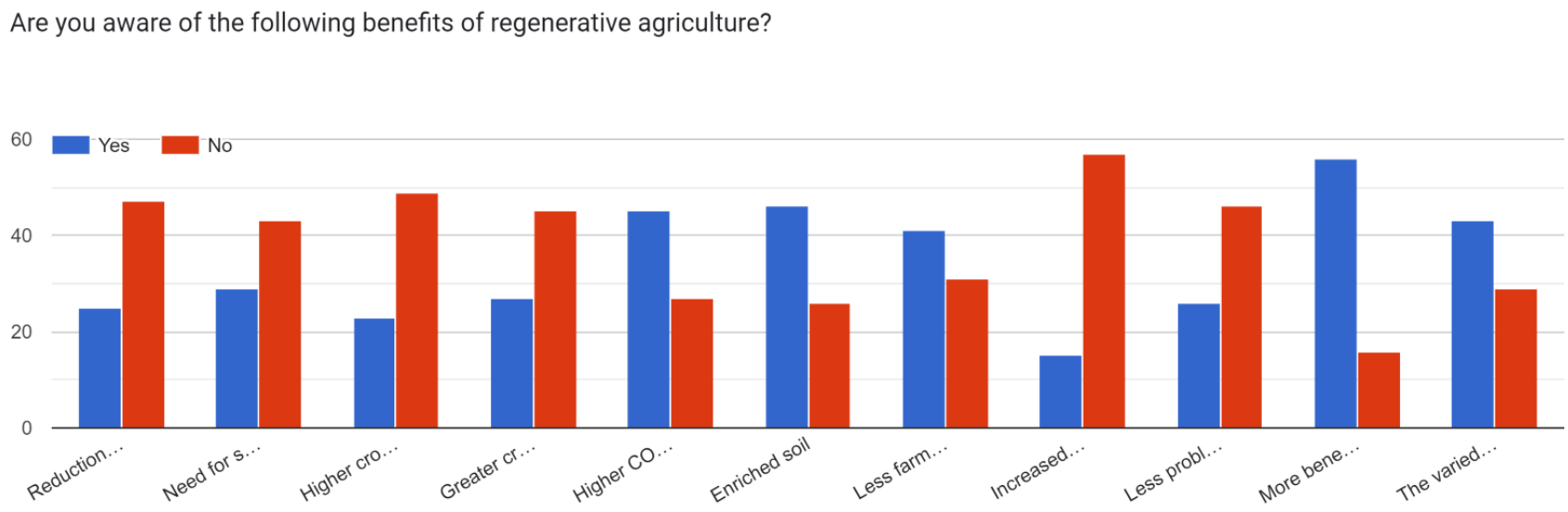
Increasing organic matter in the soil

I am familiar with the technique: 17, I have already implemented it: 42, I have not implemented it, but planning to do so: 4, I am not familiar with the techniques: 9

Implementing habitat conservation techniques e.g Preserving hedgerows, leaving field margins to grow.

I am familiar with the technique: 20, I have already implemented it: 38, I have not implemented it, but planning to do so: 8, I am not familiar with the techniques: 6

12. Are you aware of the following benefits of regenerative agriculture?



Reduction of labour for farming

Yes: 25, No: 47

Need for substantially less water

Yes: 29, No: 43

Higher crop quality

Yes: 23, No: 49

Greater crop stability

Yes: 27, No: 45

Higher CO2 retention in the soil

Yes: 45, No: 27

Enriched soil

Yes: 46, No: 46

Less farm mechanisation

Yes: 41, No: 31

Increased farm revenue

Yes: 15, No: 57

Less problems with plant diseases

Yes: 26, No: 46

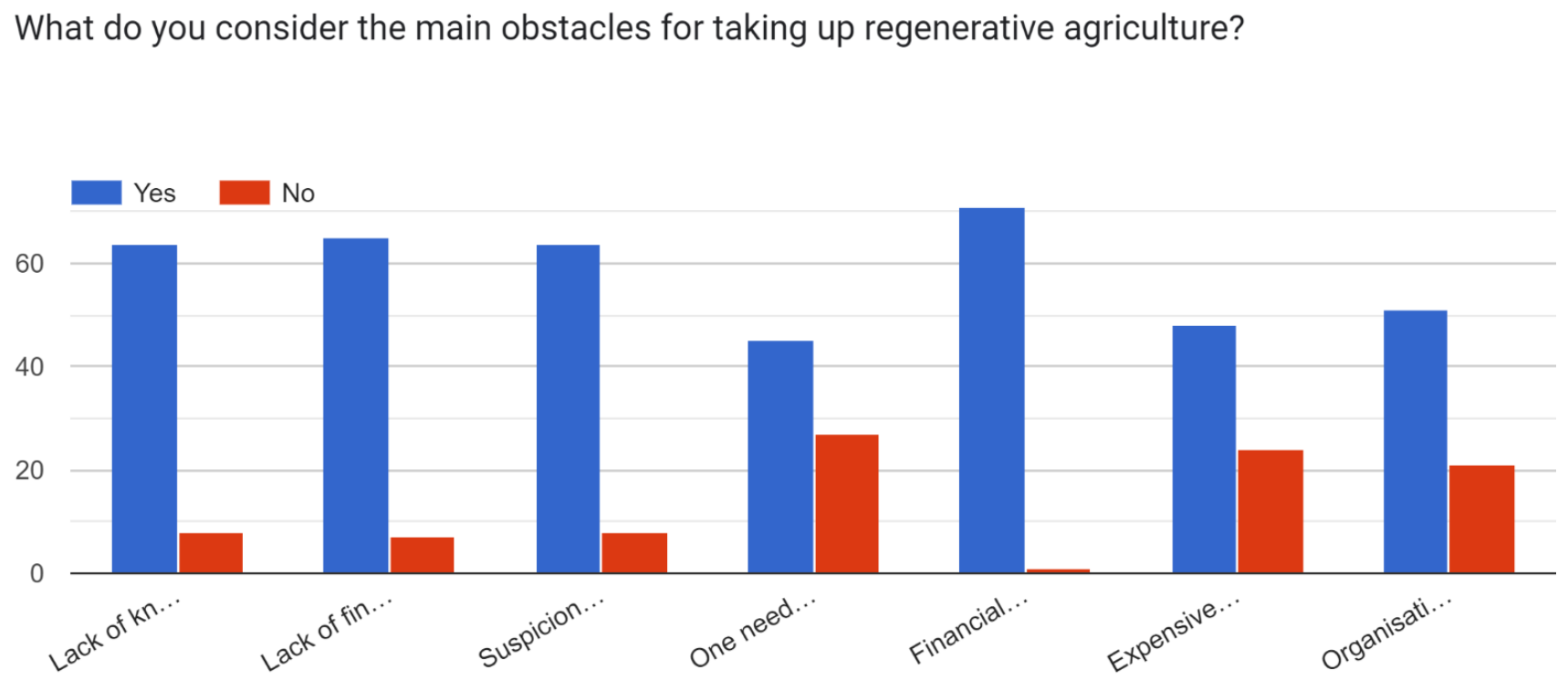
More beneficial for insects (pollinators)

Yes: 56, No: 16

The varied appearance of the cultural landscape

Yes: 43, No: 29

13. What do you consider the main obstacles for taking up regenerative agriculture?



Lack of know-how

Yes: 64, No: 8

Lack of financial support from the state

Yes: 65, No: 7

Suspicion regarding its results

Yes: 64, No: 8

One needs to completely change what they do currently in farming

Yes: 45, No: 27

Financial uncertainty regarding the short-term future

Yes: 71, No: 1

Expensive investments

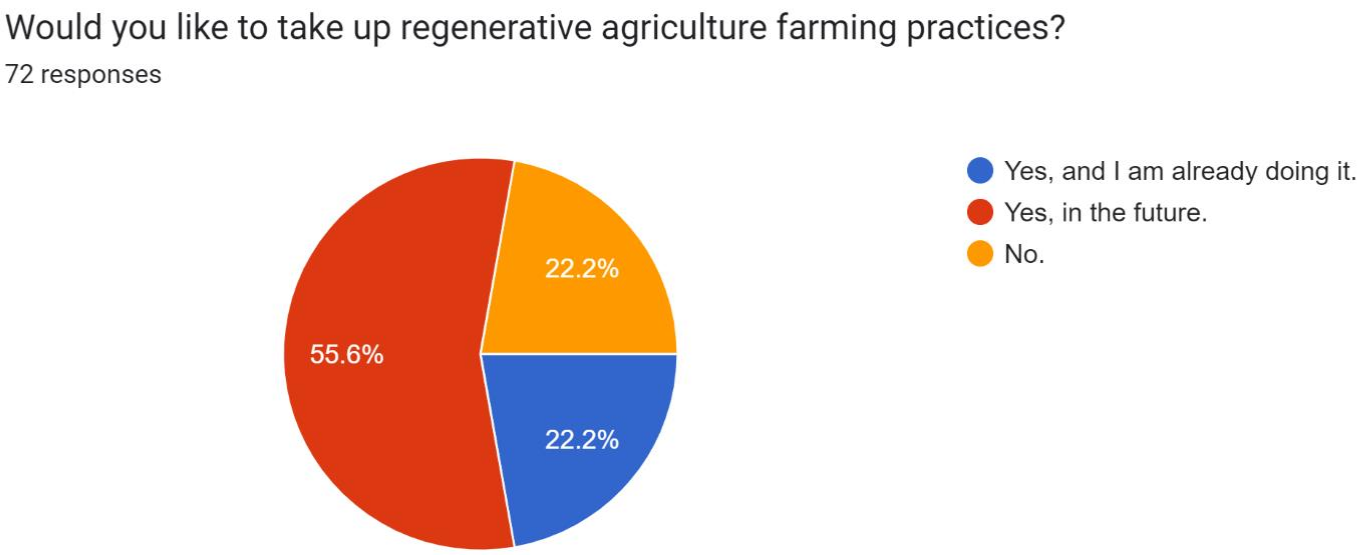
Yes: 48, No: 24

Organisational difficulties in achieving year-round coverage of soils

Yes: 51, No: 21

PART 2: ATTITUDES TOWARDS RA & EDUCATION NEEDS

14. Would you like to take up regenerative agriculture farming practices?



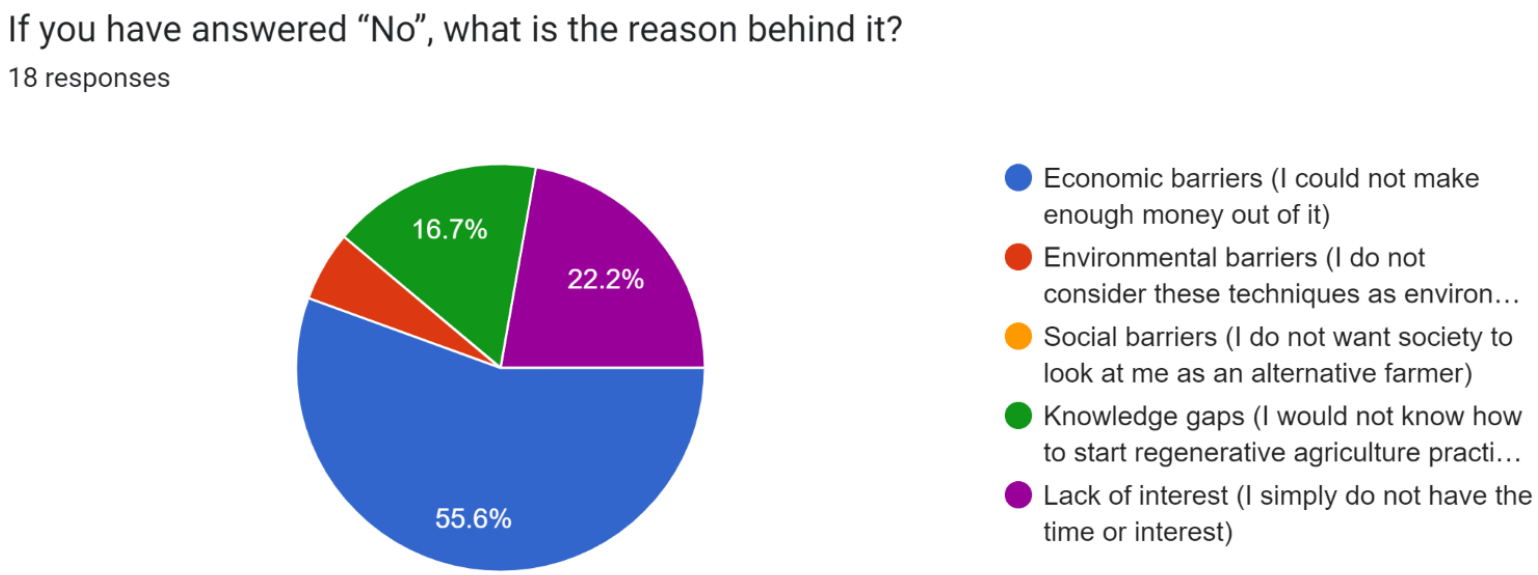
Answers:

Yes, and I am already doing it: 22.2%

No: 22.2%

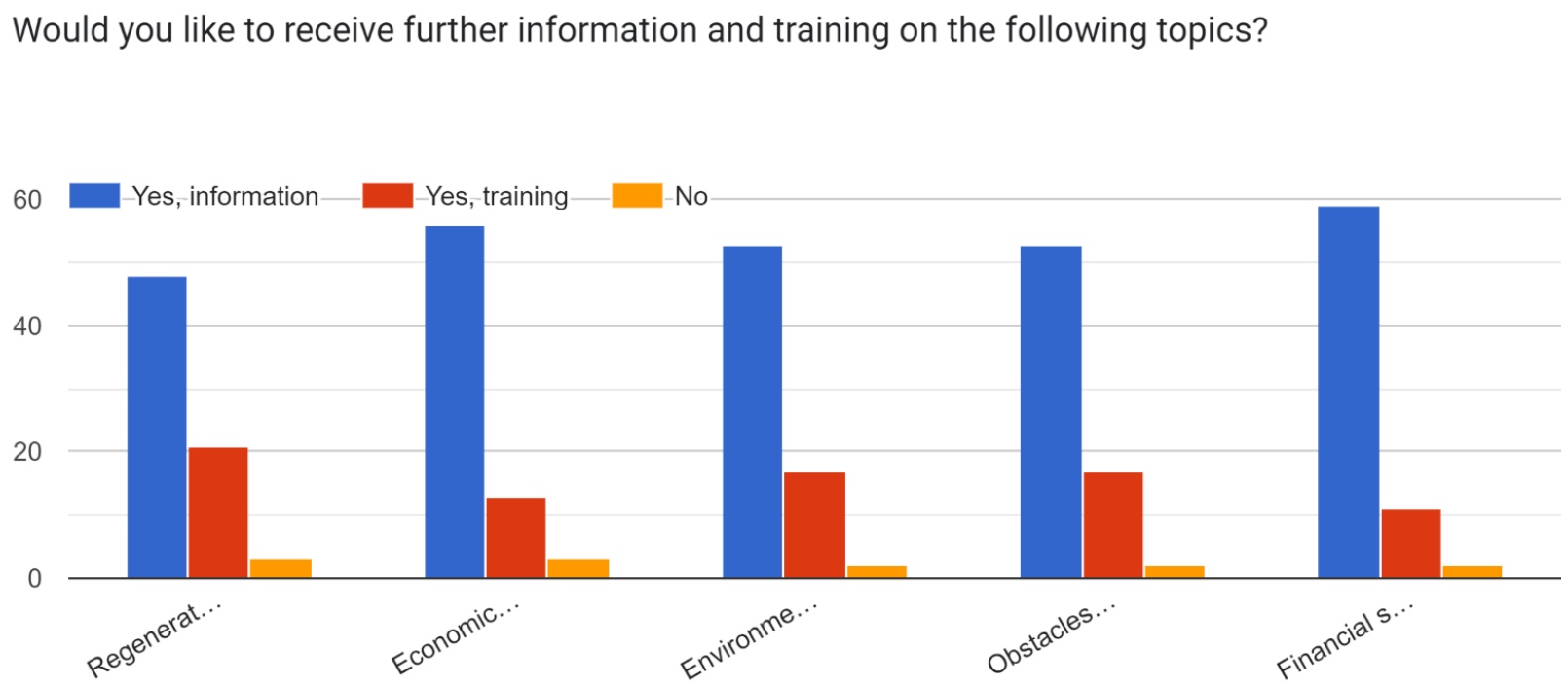
Yes, in the future: 55.6%

15. If you have answered "No", what is the reason behind it?



- Economic barriers (Icould not make enough money out of it): 10 (55.6%)
- Environmental barriers (I do not consider these techniques as environmentally friendly): 1 (5.6%)
- Social barriers (I do not want society to look at me as an alternative farmer): 0
- Knowledge gaps (I would not know how to start regenerative agriculture practices): 3 (16.7%)
- Lack of interest (I simply do not have the time or interest): 4 (22.2%)

16. Would you like to receive further information and training on the following topics?



Regenerative agriculture farming practices (techniques)

Yes, Information: 48, Yes, Training: 21, No: 3

Economic benefits of regenerative farming techniques

Yes, Information: 56, Yes, Training: 13, No: 3

Environmental benefits of regenerative farming techniques

Yes, Information: 53, Yes, Training: 17, No: 2

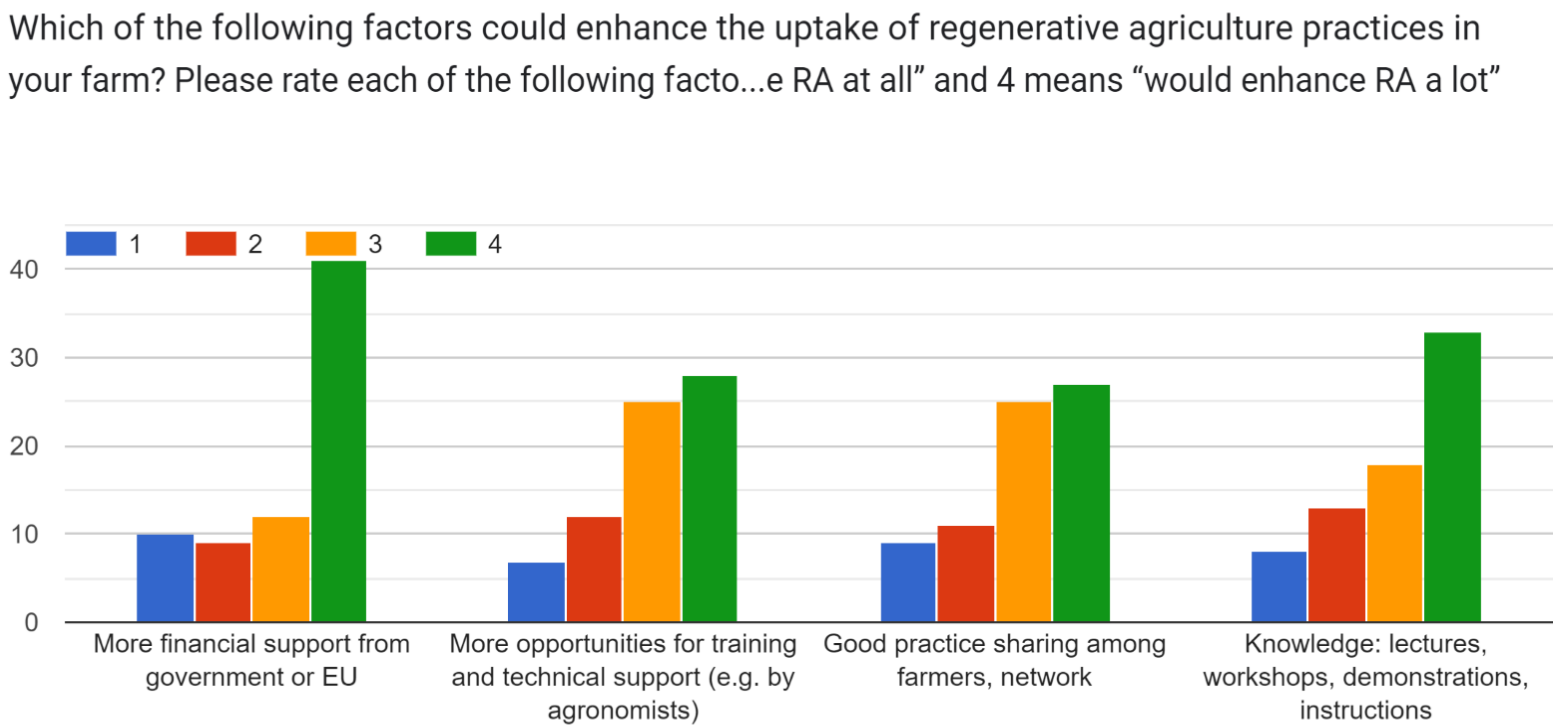
Obstacles and difficulties of regenerative farming

Yes, Information: 53, Yes, Training: 17, No: 2

Financial support possibilities of regenerative/alternative farming practices

Yes, Information: 59, Yes, Training: 11, No: 2

17. Which of the following factors could enhance the uptake of regenerative agriculture practices in your farm? Please rate each of the following factors on a 1-4 scale, where 1 means “wouldn’t enhance RA at all” and 4 means “would enhance RA a lot”



- More financial support from government or EU
    - 1: Wouldn’t enhance RA at all: 10, 2: May not enhance RA: 9, 3: May enhance RA: 12, 4: Would enhance RA a lot: 41
- More opportunities for training and technical support (e.g. by agronomists)

- 1: Wouldn’t enhance RA at all: 7, 2: May not enhance RA: 12, 3: May enhance RA: 25, 4: Would enhance RA a lot: 28

- **Good practice sharing among farmers, network**
  - 1: Wouldn’t enhance RA at all: 9, 2: May not enhance RA: 11, 3: May enhance RA: 25, 4: Would enhance RA a lot: 27
- **Knowledge: lectures, workshops, demonstrations, instructions**
  - 1: Wouldn’t enhance RA at all: 8, 2: May not enhance RA: 13, 3: May enhance RA: 18, 4: Would enhance RA a lot: 33

18. Please feel free to share any other key aspects in RA as a practitioner you feel the questionnaire left.

Answers:

- As a qualified agronomist & arable farmer, I am very aware of the practices of Regen Agriculture. I have a degree in Agricultural Science. I am keen to run my farm in an environmentally & financially positive manner. However, I notice a complete lack of scientific proof to show that many of the Regenerative practices actually work - not only from an actual environmental point of view or a financial point of view. There is a lot of “nice sounding rhetoric” surrounding Regen Ag but little evidence of its actual results.
- Farmers know these actions need to be taken, but with the push on expansion, across all sectors, over the last decade, farmers cannot risk taking a hit on their incomes. Bills have to be paid at the end of the day. A.D plants in my opinion would be massive additions to local communities, jobs in construction and maintenance, let alone a highly nutritional fertiliser as a by-product going back to the land reducing chemical fert. Public perception in this regard must be tackled. Planning Permission laws changed and hard line taken against serial objectors of such projects. When farmers see these types of actions taken then you will see positive actions being taken by farmers.
- Long term financial stability and ability to change back to conventional
- On farm trials supported on ordinary commercial working farms.
- Ra needs to be economically viable to sustain farm families while giving back to nature
- The questionnaire is more geared to tillage, which is understandable, but my answers are given in a dairy husbandry context where permanent cover is achieved. We believe soil structure is important and are trying multi species swards.

Our current efforts are looking at liquid fertilizer. The waste in granular fertilizer is staggering.

- Veganic farming is a type of regenerative agriculture
- We will have to employ sustainable agricultural practices or we perish
- What is the general uptake in regenerative agriculture in ireland

2.3 Conclusions. What we learn from the survey results

Overview:

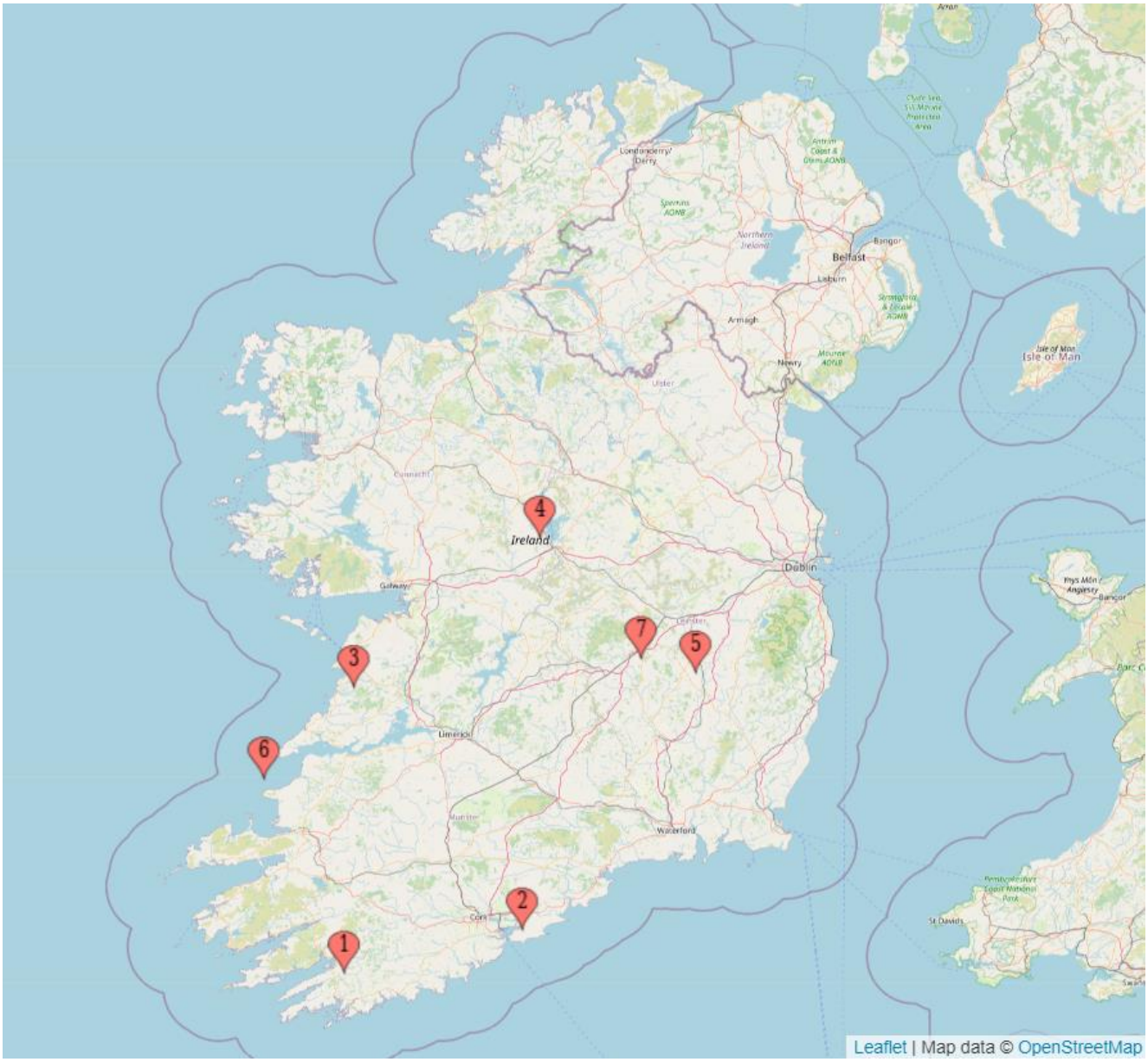
- Farmers want to see more financial support, training and information sessions for regenerative farming.
- Respondents were more likely to have heard of Organic and Conservation agriculture over regenerative agriculture.
- Most respondents agreed that there is a strong need to redirect agriculture towards new approaches to help mitigate climate change.
- Respondents were divided as to whether new farming practices could raise the average income.
- The majority of farmers agreed that there is a knowledge gap amongst farmers about the alternative ways of farming.
- The majority of farmers disagreed that there is enough financial support for farmers for alternative methods.
- Respondents believe that the uptake for alternative farming practices is low in their country and in the EU.
- There was a mixture in understanding regarding mechanical interventions in the soil.
- There was a greater understanding of cover crops.
- The following benefits of RA farmers were not familiar with:
    - Reduction of labour for farming
    - Need for less water
    - Higher crop quality
    - Greater crop stability
    - Increased farm revenue
    - Less issues with plant disease
- The following benefits of RA farmers were familiar with:

    - Higher CO2 retention
    - Less farm mechanisation
    - More beneficial for insect
    - Varied appearance of the cultural landscape
- Main obstacles for RA appear to be:
    - Lack of know-how
    - Lack of financial support from the state
    - Suspicion regard results
    - Financial uncertainty
- 55.6% of respondents said they would like to take up regenerative farming in the future, with 22% saying they are already practising it.
- 22% of respondents said they do not want to take up regenerative practices
    - Economic barriers was the highest reason
    - Followed by a lack of interest and knowledge gaps
- Only 2-3 respondents did not want information or training regarding RA.

Chapter 3. The case studies

3.1 Introduction to the case studies

A diverse range of farmers were interviewed; ranging from Tillage, Dairy, Mixed Livestock, Market Garden, Hemp production and Fruit Production. Some case studies saw farmers who started their farms with sustainable intentions, and others saw conventional farmers who converted to Regenerative practices throughout the years. Farmers were found predominantly online and through recommendations. The farmers were contacted by email and phone, with the majority of interviews taking place over Video Chat on MS Teams. The researcher found it challenging at times to get responses back from the farmers, with two farmers who originally agreed to take part in the project becoming uncontactable, and were unfortunately removed. The Farmers are well-spread out throughout Mid-Southern Ireland, as indicated in the map below.


Belfast
Dublin
Ireland
Isle of Man
Limerick
Waterford
Leaflet | Map data © OpenStreetMap

3.2 Brief presentation of each Case Study

1. Steve & Claire Collins, DerryDuff Farm, County Cork

DerryDuff is a 55 hectare farm located by the wild Atlantic Ocean, established in 2008. Steve and Claire integrated regenerative practices into their farm from the start, and attained organic status in 2010 due to the mandatory 2 year conversion period. The Landscape of this farm is unique; it is mountainous and contains specific native Gorse. Steve and one other worker permanently farm, with temporary volunteers coming to stay and help for a few months at a time. DerryDuff is unlike any other Irish farm that I have ever seen, with their main crops being organic Blueberries and organic Aronia Berries, both grown for their nutritional properties and to be made into luxury health food products.

Derryduff is home to many animals, with a small herd of 38 organic dexter cattle who roam the wild mountainous landscape alongside the chickens. DerryDuff is also home to a Tree Nursery. This farm is certified with the Irish Organic Association. They use

no pesticides or herbicides, and weeding is done manually. Clover and herbs have been mixed into grass swards, with trees and shrubs planted around the edges of several small ponds, to act as an absorption layer between the paddocks and the water, reducing the risk of pollution to the river.

An apple orchard of 80 trees are inhabited by free range chickens, who roam around the established tree trunks. Derryduff excellently integrates animals with the land, ensuring that their animals benefit, rather than harm the environment. For example, the chicken scratch around the radius of the trees, keeping the area clear from weeds, as well as providing precious natural fertiliser.

Steve's goal since beginning the farm was to make it more beautiful, and to do so in a way that was in harmony with the hills and natural landscape. Like there other case study respondents, Steve's knowledge of regenerative agriculture was entirely self-taught, and refined through trial-and-error. Steve believes that much of regenerative farming is "common sense", and he enjoyed the trial-and-error that came with implementing regenerative practices, coming from a scientific background himself.

Steve has seen a variety of benefits throughout his farm such as:

- Economic benefits due to being able to market his products as higher quality than standard.
- His cattle aid in managing the tricky hilly landscape.
- Steve believes that the aronia plant has properties that will aid and regenerate the structure of the soil.
- There is a high level of biodiversity on the farm, due to diverse habitats, wildlife corridors, and no destructive farming practices.

However, there were a few downsides such as the manual work from weeding by hand and a lack of funding in the area of RA.

Overall, regenerative agriculture is working excellently for Steve's farm and he intends to keep up the practices and explore further regenerative practices.

2. Paul Moore, County Cork

Paul is a Tillage farmer with 56 hectares and 4 temporary staff. His main products are Malting Barley, Feed beans and Oilseed Rape. He also had some Drystock.

In 2017, he began experimenting with regenerative practices to see if it would work for his type of farming, and for his land. In 2022, about one quarter of Paul's land is farmed regeneratively. For Paul, the benefits include a reduced workload and reduced input costs. He explained how the transition period to regenerative can produce lower yields as it takes time to get the soil condition right for sowing, but he thinks that this should not be a deterrent from giving RA a go, due to the many benefits that come from long term practice. This transition was also aided by the fact that Paul began in one quarter of his land. As he begins to see more improvements and payback, the idea is to transition more of the land. It's a slow process, but an empowering one. Through strip tilling, implementing wildlife margins, increased wildflowers and plant diversity, along beetle banks amongst crops, Paul has noticed an increase in helpful insects on his land.

Image: Wildlife Margins: Hedgerows and Mature Hawthorn Tree

These include Ladybugs, the natural predator to Aphids, which are a pest on tillage farms. Through the use of no pesticides, ladybugs are able to thrive and keep the aphid population down.

Images: Ladybird Larvae & Other Aphid Predators

Paul has learned about RA Farming practices through talking with other farmers who practise it. An environmental scheme called "GLAS" (Now being taken over by a scheme called 'ACRES') has allowed Paul to attain some financial support for the use of cover crops, which is a regenerative practice.

Images: Strip Till Example & Beetle Bank

For Paul, his main issue with using no pesticides is that he is having to deal with slugs, and he is still experimenting with different ways of combating the pests naturally.

Image: Wildflower Margin

3. Fergal & Sally, Moyhill Farm, County Clare

Fergal & Sally run a mixed 80-acre regenerative farm on the west coast of Ireland. They sell a variety of fresh produce at markets and to local restaurants. Moyhill Farm contains a mix of livestock; cows, sheep and hens, and grow about 25 different crops in their Market Garden.

Fergal moves his livestock daily through the regenerative practise of 'mob grazing', allowing the land to rest and recover. Managing the farm in a holistic manner, Fergal ensures that each farming season is planned-out to allow for as little inputs as possible.

Fergal and Sally began farming regeneratively in 2017, after learning about the practices during a Holistic Management course provided by the Savoury Institute. Since then, Fergal has engaged in many trainings, such as a regenerative farming course run by RA Expert Richard Perkins and NOTS. Moyhill Farm has an Organic Certification as well as an EOV Regenerative Verification. EOV, the Ecological Outcome Verification monitors the farm's soil on a yearly basis to ensure improvement.

Fergal and Sally believe in ‘farming with intention’, and that diversity across their farm is key to health and long term success. While they aren't receiving any financial support to farm regeneratively, indeed the training and EOV certification costs them money, they are able to market their products at a higher price which is a great incentive for the farm. Fergal noted how he has been experiencing the ecosystem on his land ‘thrive’ since implementing RA practices, and he spoke about how this is an affirming experience for him and his family.

4. Mervyn Auchmuty, County Roscommon

Mervyn and his Father Robert farm a 400 acre Tillage and Livestock Farm in County Roscommon. In 2013, Mervyn was first attracted to regenerative agriculture and the idea of "Min Till" due to their land being stoney and difficult to plough. Removing ploughing from the workload would mean less hours picking stones, burning less diesel, and reduced hours in preparing and planting crops. Mervyn convinced his Father that they should try regenerative practices for their Tillage crops. This involved removing the process of ploughing the soil, and investing in a Strip Till Drill to plant crops with minimal disturbance to the soil. Their John Deer Strip Till Drill was part subsidised by a 'TAMS' grant. Mervyn explained the importance of minimum disturbance to the soil in order to keep the soil microbes alive, and to enhance the nutrient quality of the soil over time.

Mervyn explained how the soil degrades when there are no plants to cover it; due to factors such as the reduced ability for the soil to absorb carbon, and the exposure of the soil to the elements. Therefore, cover crops play a crucial role in the periods after harvesting, to cover the bare soil with temporary plants between harvests, a practice which many tillage farmers do not observe.

Mervyn has noticed how the root structure of his crops have improved since 2013. Roots play a vital part in aerating the soil, allowing for better water absorption, and providing vital nutrients for the soil. Mervyn discussed how regenerative farming is much "freer" than organic, due to the rules attached to the latter.

Image: Comparison of Root Structures,

Seeds planted with seed wash & other regenerative

practices on left vs. no seed wash & non regenerative on the right.

The plant on the left has thicker & longer roots.

Image: Long, healthy root structure.

Natural compost is created with grass weeds and farmyard manure. This calls for extra time and man hours from the farmers, but the natural benefits are clearly worth it for the father-and-son duo.

Mervyn has experimented with seaweed and seedwashes for naturally fertilising his cropland. Through his experimentation, he has found the treated seeds lead to strengthened roots and healthier soils.

In 2018, Mervyn joined the farmer-run regenerative agriculture group called “BASE Ireland”. Here, farmers share their RA experiences, ideas, and lessons of advice to other farmers trying out the alternative farming methods. BASE allows farmers to educate each other, chat online, and host knowledge sharing workshops.

As well as this, Mervyn has engaged in a number of NOTS training courses and soil testing. He has learned a lot from youtube and internet resources, and he does his part by sharing his knowledge and experience to other farmers through the BASE group.

Mervyn discussed his frustration that regenerative agriculture isn't recognised at government level, as well as his disappointment in the organic sector due to

oversupply of organic products in the food market and reduced income leading to the sector struggling.

RA has kept Mervyn and his father motivated, and the new RA practices they trial each year *"keeps it interesting"*. Mervyn hopes to continue to learn and trial at least one new RA practice each year.

Image: *Strip Till Drill, minimal soil disruption.*

Image: *Direct Drill, little-to-no soil disruption.*

5. Andrew Bergin, County Kildare

Andrew farms a 90 hectare regenerative tillage farm in County Kildare. Farming the land himself, with occasional helpers at harvest time, Andrew said that Regenerative Practices has made managing his farm much easier by himself. A wide variety of crops are grown, from peas, oil seed rape, winter wheat, spring wheat and oats.

Andrew ensures that he has a cover crop, containing a mixture of plant species, established as quickly as possible after harvest. Maintaining a living root at all times across the land protects the soil from damage. Cover crops come with more benefits than soil health, due to the highest rates of nest birds and wildlife that are attracted to the land. Andrew stated that *"the number of ground nesting birds have exploded"* since he stopped ploughing, a fantastic sentiment given that Ireland have lost the native Corn Bunting bird due to farming practices, with the Corncrake bird being an engendered species.

Hedgerows and Natural margins around fields aid biodiversity and pollinator life. Andrew sees pollinators as an indicator of the health of the environment; *"if you've pollinators, there are a lot of other things going right".*

Andrew is part of a 5 year project called "Danú Farming Group", that involves 12 farms who are transitioning from conventional to regenerative farming practices over a 5 year period. Andrew enjoys learning from other farmers and taking *"pragmatic"* steps to regenerating his land.

In 2013, Andrew saw a demo for a new Strip Till machine, and he could immediately see the advantages; *"the crops and ground seemed happier".* So, Andrew moved away from ploughing that year, and in 2016 he successfully transitioned to no till with the help of a

TAMS grant for buying the new Direct Drill machinery. He believes that these efforts were strengthened from other regenerative practices such as mixed species and lack of chemical inputs to the land.

Andrew encourages farmers who are interested in regenerative agriculture to start slowly, taking one field at a time for example. For tillage farmers, he suggests hiring a contractor with a Strip Till to trial out the min till practices on their land. If it works for them, then a gradual conversion to regenerative farming is the way to go.

Andrew describes how regenerative farming is *"not prescriptive"* or conventional in any way, it's about using your own judgement to assess what is happening with the crop, and to apply the practices that make sense to your specific landscape.

For Andrew, regenerative agriculture and no till farming has saved him an *"enormous"* amount of time and money. Another BASE Ireland member, Andrew believes that regenerative farming *"would be very hard without the BASE community and the internet",* indeed he doesnt think he could have ever transitioned to RA without the knowledge from the internet and other farmers.

Over the years, Andrew has taken part in many regenerative agriculture related courses, such as a 3 day course led by NOTS and Lead RA Expert Gabe Brown, and a David Wallace soils course. Andrew states that engaging in RA involves *"keeping a very open mind",* and engaging with other people and farmers to discuss new ideas and opinions. Andrew expressed the importance of sharing information *"in a non-confrontational way".* He

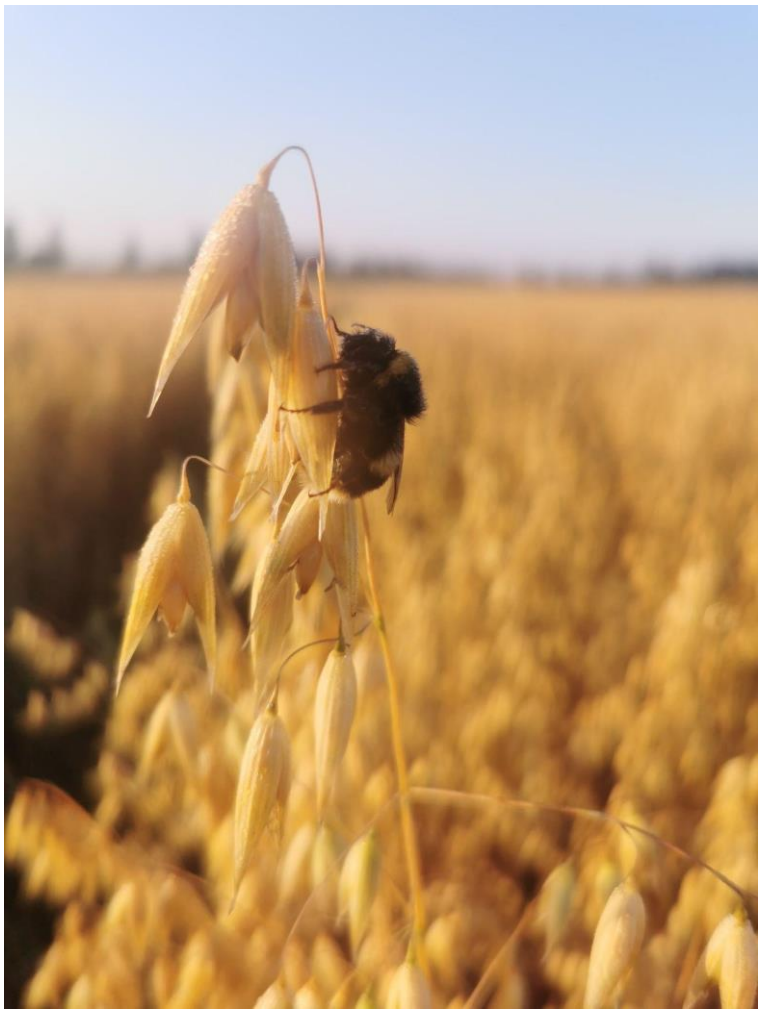
discusses the importance of farmer nature walks in allowing farmers to *"take the day off to chat"* with like-minded farmers who can share stories and ideas with one another.

Andrew discussed how perhaps one of the biggest obstacles to RA is first a lack of information, and secondly, having to take the risk of converting to a new way of farming. He hopes that further research and RA basics will aid in reducing the risks for farmers in their trial-and-error conversion processes. Andrew believes that RA techniques can benefit conventional farming in many ways, and he hopes that the Advisory bodies begin to realise this as more research gets published.

Image: Spreading natural chicken manure fertiliser on the land

Since beginning his journey into regenerative agriculture, Andrew states that for him, *"farming is a lot more engaging and interesting now",* through keeping farming *"fresh and engaging".* Andrew has met a wide variety of *"interesting people and*

younger farmers", expressing how this social element to RA has a huge community and personal development benefit. He finds it exciting to convince other farmers of the benefits of RA, and recognises that this less destructive form of agriculture can look a *"bit scruffy looking"* at times, but beauty is very much so in the eye of the beholder. Andrew intends to continue farming regeneratively and is *"all the time striving to find better ways"* of doing things.



6. Laura Jane Foley & Daniel Lyons, Wild Atlantic Hemp, County Clare

In 2018, Laura Jayne and Daniel bought a 1 hectare plot of land and began their journey into growing Hemp to create high-quality CBD products. When researching the methods of growing hemp, the duo discovered the regenerative qualities of the plant, and the importance of growing the plant naturally to make the end-products food safe. They believe that it is incredibly important to not use any chemical fertilisers or pesticides in the growing process, as the Hemp plant is *"phytomedical"* and any chemical will affect the end product. Regenerative Farming just made sense to the pair for the purpose of growing this crop.

Laura and Daniel have experimented with many different natural farming methods, such as using coffee grounds from local cafes as natural slug deterrent. When planting, they experimented with mycelium powder, seaweed, and microbial teas, which are all ways of naturally fertilising the soil and giving the seed a best chance of growing strong healthy roots.

The duo have taken many soil samples throughout the years to test for any improvements in the soil quality. Due to high fertiliser and glyphosate use from the previous owner of the land, the soil was struggling when they first bought the land. Given this, along with the heavy clay-like texture of the soil,

the duo felt they had to plough the soil in their first two years in an attempt to begin the revival process.

Hemp has many beneficial qualities for the soil. Indeed, the crop was used in Chernobyl to soak up heavy metals such as lead and nickel contaminants from the soil. Hemp plants have long tap routes that break up and aerate the soil, making it very drought-resistant as the taps go deep into the ground in search of groundwater.

Hemp is planted in April and harvested in September. In the off-season, winter crops such as barley are planted in order to keep the ground covered and to continue to sequester carbon from the air. Laura discussed how hemp can sequester more carbon in 3 months than forestry in 4 years.

The pair learned from books, youtube, social media and friends. Peer-to-peer learning aided Laura and Daniel massively in their journey, as Hemp production is an incredibly new area of agriculture production in Ireland. Now, Laura is one of the leads in an EIP Project called

"Hemp4Soil", where 7 other local farmers in the area have been testing for changes in soil quality through growing Hemp. So far, the results look to be very positive.

Laura describes how their land is now *"jam-packed with biodiversity, it's like a bird sanctuary!"*. They have noticed pheasants nesting on the land, which are seen as welcome guests by the pair. Laura and Daniel explained how beneficial it has been for them to not have to buy expensive fertiliser, and they believe their yield and the quality of the crop is all the better for it.

Finally, regenerative farming allows the couple to market their CBD products as high-quality, allowing them a higher price for the products. The couple have said that they hope to inspire more farmers and to continue searching for improvements.

7. John McHugh, Clondarrig Farm, County Laois

John farms a 94-hectare regenerative Dairy Farm, with 60 cows, a small beef herd of about 20 cattle and community garden allotments. John inherited the land from his parents in 2001 and began regenerative agriculture in 2014. Unlike many other Irish Dairy Farms, who bring their cattle in for the winter, John is able to keep his cattle out year-round as his pasture-land is plentiful. Of course, he mentions, if the weather becomes harsh then he will bring the cattle indoors, and indeed, he keeps his winter milking cows indoors for his ease.

John is engaging in the process of semi-re-wilding areas of his land through Agroforestry and Scrubland that he is growing, and keeping the cattle out until the land has matured enough. John believes RA is *"highly contextual",* and that farmers must find the practices that work for them, and their land. John also lets his cattle forage outside of Grassland, as seen in the photo below. This is another innovative regenerative technique that you would not see many other dairy farmers doing in ireland. The cattle have 75 hectares of land to roam.

Alongside dairy, John has allowed members of his community to engage in his Community Farm, whereby people get allotments to grow their own produce. The community farm is planted with a mixture of native trees and vegetables in the hopes to form a Forest Garden with plentiful fruit and nut trees. For John, the community farm is not about profit, it's about social exchange and people working together.

John has multispecies swards of a variety of native grasses and herbs that lead to his fields looking like colourful meadows in the spring and summer. As well as this, he allows his grass to go to seed, which has exploded the biodiversity on his land and greatly increased the number of pollinators.

In 2014, John wanted a change. He wanted to be free from debt and for his farming to become more resilient; both economically and environmentally. He no longer wanted to *"blindly follow advice"* and he wanted to discover what methods of farming would work best for him. So, he began the gradual process of reducing his herd size and has gone from a herd of 160 cows and 70 heifers in 2014, to 60 cows and 20 heifers in 2022. As his mindset around farming began to shift, John wanted to maximise his stocking rate through organic and regenerative practices.

John believes that *"there is not much space for nature in the organic system"* due to the stringent rules, and high costs. So, regenerative was an exciting opportunity for John to make a real change. John believes that dairy farmers can be too heavily focused on trying to have as many cows as possible, while maximising output, but this is a vicious cycle as he came to realise from many years of conventional farming.

Now, after farming more regeneratively for almost 8 years, John's land has grown incredibly resilient. For example, John has not needed to buy any feed in the last 3 years due to plentiful grassland and through growing his own oat feed and silage. He hopes to one day not rely on feed at all.

John believes that you can't claim to be regenerative if you are using nitrogen or phosphorus fertilisers, as they undermine the carbon and natural diversity of our swards. Indeed, these fertilisers have huge issues for diversity and are leading to high levels of water pollution in Ireland. John noticed how when other farmers were struggling with drought and wet weather conditions nearby, his grass was continuously growing strong, and he believes this is due to his regenerative practices.

John sells his dairy to a local organic yoghurt producer called Glenisk. While organic premiums were hit hard this year, he hopes to receive a higher price for his good in the coming years. Through regenerative farming John has found financial resilience, a reduced workload, huge improvement in his animal's health, and more time to spend with his family. John says that RA is a constant evolution, with continual tweaking and reassessments of practices necessary.

3.3 Case Study Conclusions from case studies.

General Conclusions:

- RA allows farmers to become more resilient through regenerating their environment and the carbon in their soil.
- RA is much 'freer' than organic farming.
- It takes a few years to begin to see some of the benefits from regenerative agriculture, such as soil quality, yields & improved animal health.
- RA is a highly contextual and empowering form of farming, that is led by the farmer themself, as they make decisions and experiment with practices that best suit their land.
- There is not enough financial support, training or general recognition for RA in Ireland..
- RA leads to many healthy plants, soil, biodiversity and animals.
- In some cases, RA reduces the workload, and in others, it increases.
- The natural and environmental benefits that come with RA are clear to all farmers.
- RA farming requires farmers to truly think for themselves.
- RA comes with a great sense of community from online and farmer-led groups.
- Many cases stress the importance of learning from other farmers.
- The excitement and sense of accomplishment from seeing clear improvements in biodiversity and soil structure from many of the farmers was clear.
- The farmers interviewed are a naturally curious bunch. The engagement and fulfilment they get from RA is clear.

Lessons learned/ Words of advice.

- Many of the farmers explained how satisfying RA farming is due its empowering and personal nature. Farmers get to make their own decisions based on the understanding of the biology of their own land and decide on the best RA practises to suit their land.
- Don't be afraid of making mistakes. Trial and error is a key part to regenerative agriculture. Many of the farmers encourage farmers to share their experience with other farmers online, so they can learn from each other's failures and successes.
- One regenerative farmer said in response to not being able to do regenerative farming 'perfectly'; *"don't let perfect get in the way of good".*
- Regenerative farming is social; there is great importance in linking with other farmers who are doing RA techniques to learn from one another.
- *"Be confident to make mistakes and to continuously learn".*

Chapter 4 Overall Conclusions

- The regenerative agriculture scene in Ireland is growing.
- There are a number of farmer groups and Irish charities engaging in regenerative agriculture.
- RA is yet to be recognised at a national level, but certain practices such as agroforestry, soil health and cover crops are recognised by the department of agriculture, and in some cases, subsidised.
- More information and training support is needed for farmers.
- There is a low level of understanding of the diverse range of benefits that RA can bring.
- There is curiosity amongst Irish farmers in this more resilient way of farming.
- RA allows farmers to be more resilient: financial, environmentally and socially.
- RA is much freer and empowering than organic farming.
- RA is highly contextual, there is no 'one-size-fits-all' approach.
- The environmental and soil health benefits that come with RA practices are clear.
- RA can be a satisfying and empowering process for many farmers as they make their own independent decision based on their knowledge of the land.
- Trial and error is a key part of RA.
- It takes a number of years to see the full benefits of RA, it is a long term process.
- RA comes with many farmer communities and social benefits.

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Appendix

Farmer Case Studies

Case Study 1: Paul Moore

Case study template for REGINA

PR1 – Library of good practices

- **General information**

Name of farmer/farm (company) Paul Moore
Name of Respondent Paul Moore
Location of farm Country…Cork……. Region……Munster…… Nearest city/town/village……Midleton…….. Show on map, if possible (attached)……..Yes ☐……..N X☐
Size of farm (ha)……56……..
How many people work in the farm? Permanent staff……1…….. Temporary……4…….. Comments……Contractors used when necessary……
What is/are the main products of the farm? (consider the past 5 years)

Crops - what type? ……Malting Barley, Feed beans, Oilseed Rape…… Livestock –what type? ……Drystock…… Other – specify……. Comments…….

2) Current RA practices on the farm

Does the farm implement any regenerative agriculture (RA) practices? Yes...X…….. No ☐
If no, **Do they consider taking up RA in the future?** **Do they feel that they know enough about RA? Or they like to know more about RA?** **Comments……**
If yes, **Is all the farm cultivated with RA practices?** All ☐ Part of it ☐ - specify……About one quarter of the farm…….
Can you describe the RA practices you use in the farm? **…**Strip till crops and cover crops**…….**
What crops are produced with RA practices? **…**Beans, Winter barley, Oilseed rape**……..**
For how long have you used RA practices? (years) From……2017……To …Now……

3) Starting and motivation behind RA

What is the history of starting RA?
How did you/ the farmer decide to start? What was the main motivation?

To see how it would work because I was interested in the concept

Did you/the farmer receive any training about RA?
Yes... ◘…….. NoX◘

If yes,
Who provided the training?

……

If No,
How did you/the farmer learn the farming practices for RA?

……Talking to people who practice
it……..

Did the farmer receive any financial support to start RA?
Yes..X. ◘…….. No ◘

If yes,

Who provided financial support? ...GLAS scheme for cover
crops……..

Comments……

4) Results of RA

Benefits?
(Including economic benefits, environmental, quality of products, workload etc)
Please describe
……Reduced workload, reduces
costs…….

……..

Obstacles & difficulties? Please describe …Transition period can result in lower yields……Slugs may be a problem……Getting the soil condition right for sowing…… ……
How the difficulties have been overcome (if they have)? Please describe Trial and error …… ……..
Are you/the farmer happy overall with RA? Yes …….
Do you/the farmer intend to continue RA? Yes. X. ☐…….. No ☐ If yes Do you/the farmer intend to introduce changes in RA methods or crops? Comments Possibly

Image 1: Beetle Bank

Image: Earthworms and Beetles thriving in the soil

REGINA

SECAD PARTNERSHIP

Image: Natural Pest Control; Ladybird Larvae feeding on Pests (Aphids)

Image: Strip Till Barley and Beetle Bank3- No Ploughing or disturbance of soil- creation of habitate for natural predators to barley pests to reduce pesticide use.

Image: Strip Tille Crop; No Plough method of sewing seeds with minimal soil distrubance.

Image: Wildflower Margin beside Crops

Image: Winter Birds feasting on the land

Case study template for REGINA

PR1 – Library of good practices

Case Study Question Template.

- ***Interview with Mervyn Auchmuty 19th October 2022***

- **General information**

Name of farmer/farm (company) Mervyn and Robert Auchmuty
Name of Respondent Mervyn
Tell me a bit about yourself and how you got into farming? Grew up on a family farm, farming has been his way of life. Helping with lamb and sheep as a child. He never became a farmer, he was always one.
Location of farm Lecarrow, Co. Roscommon. Show on map, if possible (attached)……..Yes ☐……..No ☐ https://goo.gl/maps/UHjnp3XtdnDaEdv4A
Size of farm (ha)…….400 acres- some is rented- 400 acres
How many people work in the farm? Permanent staff……..2 permanent Temporary……1 every Saturday and summer usually 2 Comments……
What is/are the main products of the farm? (consider the past 5 years) Crops - what type? ……Wheat, Barley Oats and Bean

Livestock –what type? ……Sheep, Beef

Other – specify…….

2) Current RA practices on the farm

Does the farm implement any regenerative agriculture (RA) practices?
Yes... ☐…….. No ☐
Yes, on the crop side

If yes,
Is all the farm cultivated with RA practices?
All ☐
Part of it ☐ - specify…….100% of the cropland is regenerative.

Can you describe the RA practices you use in the farm?

……..

- Direct drill all the crops
- They don't plough – unusual in Ireland for a tillage farmer to not plough. There is great cultural heritage in ploughing in Ireland.
- Every crop is sewn with a disc drill; no disturbance.
- Cover crops; no bare ground over the winter.
- Keeping the soil alive - microbes
- Plants creating nutrients; symbiotic relationship between plants and soil
- Absorbing carbon
- Into roots
- Soil degrades when no plant is there
- Cover crops; every different plant brings something different
- Roots can mean a lot – he can tell when a root is healthy or not.
- Natural life cycles; organic matters; plants used as compost
- Soil structure; by not ploughing you are building soil and root structure
- Good soil structure; aerates soil for worms
- Better water management
- Less runoff
- RA is lot freer than organics
-

Composting

Grass weed- sterile broom- heat of composting will kill weeds- farmyard manure- huge benefits to it- takes time- overheating composting- extra work with regenerative in these ways – natural fertilisers and composting takes time and effort.

Seed treatments- home saved seeds- using seaweed and seed wash- as many seeds as you can into an ibc cube- barley, wheat oat, beans and linseed- throw in all the seeds and cover with rainwater- leave for 24-48 hrs- this is seed wash- comes out looking like tea- you can see bacteria- they [put this on the barley or wheat and it strengthens the roots, dreadlock roots very happy roots and soils- strained compost slurry and seed wash

What crops are produced with RA practices?

…….
All crops.

Discussed his yearly crop rotation; Coming out of a grass rotation; spring bean into grass, then first wheat, second wheat, then barley, oat, etc.

For how long have you used RA practices?

(years) From……To ……
2013 to Now

Minimum tillage
Easier way of doing it, mostly.
In 2015 he saw a demo of strip drill till- and he used till 2019
Seeing the benefits min till throughout the years.
In 2019 he bought a john deere direct drill
No disturbance of ground with this drill.

3) Starting and motivation behind RA

What is the history of starting RA?
How did you/ the farmer decide to start? What was the main motivation?

His farm has stony land- hard to plough- easier to not pick stones etc- burning less diesel and manhours with direct drilling.

Joined BASE- Irish RA Farming Organisation in 2018

Did you/the farmer receive any training about RA?
Yes... ☐…….. No ☐

If yes,
Who provided the training?

……

Base Ireland provides some training and support groups.
-group of farmers and agronomists
Farmers educating farmers
Members and forums
Whatsapps and Workshops

A few NOTS (National Organic Training Scheme) courses; soil, doing diff tests, brecks tests and

Organic training-

Learning off youtube etc, he wanted to do the Gabe Brown method

If No,
How did you/the farmer learn the farming practices for RA?

……..

Did the farmer receive any financial support to start RA?
Yes... ☐…….. No ☐
No but only support would have been TAMs (Machinery support grant) on the Direct Drill Planter

RA is not recognised by the Department at all. Only thing that's being recognised is organics. He thinks that organics is struggling as it is oversupplied and consumer cannot afford organics.

4) Results of RA

Benefits?
(Including economic benefits, environmental, quality of products, workload etc)
Please describe

Cheaper
Less manhours
Soil structure

Own satisfaction- not being told what to do! Making your own decisions and understanding your land and the biology of your land BASE Ireland and nova crop He is noticing the soil is lot healthier ……. …….
Obstacles & difficulties? Please describe Knowledge and encouragement to do it Teagasc (Irish agricultural advisory and research agency) only now coming over to the idea …… …….
How the difficulties have been overcome (if they have)? Please describe Connecting with other farmers Benefit of farm walks It's not all about yields!!! Openness of farmers- trial and error- taking control of their farms Learning from each other's mistakes Learning from failures The number of plants in the grazing land A number of species Multispecies swards ……. …….
Are you/the farmer happy overall with RA? yes …….

Do you/the farmer intend to continue RA?
Yes... ◘…….. No ◘
Yes

If yes
Do you/the farmer intend to introduce changes in RA methods or crops?

Improve methods
Last year; learning to melt urea
This year; experimenting with seaweed
Learning a new RA Method every year; keeps it interesting for him.
Keeps him motivated
Need to keep mind working and learning
Fermented seaweed- - natural fertilisers but also it helps the plant to take in carbon
Urea can have an excursion affect in some weather
Seaweeed helps with stress plants
Comments

1. Ladybird nymph on a head of barley
2. Funnel web from a funnel web spider
3. Folier feed for the crops spray of melted urea, molasses, seaweed and epsom salt
4. Comparison of treated seed and none treated- healthy soil, healthy roots, dreadlock look, never good to see a bare w
5. Nest of baby hedgehogs
6. Butterfly in a field margin

Direct Till:

Strip till:

Case study template for REGINA

PR1 – Library of good practices

- **General information**
  - 4pm Tuesday November 1st

Name of farmer/farm (company) Laura Jane Foley and Daniel
Name of Respondent Laura Jane Foley Story: In 2018 Laura and her partner started a farm growing hemp Learned from US and Canadian farmers Great working being done growing hemp and cannabis plants regeneratively in northern America They learned a lot about RA watching videos Read a book by famous hemp author No pesticides etc. Books: Jeff lyingfield-- teaming with microbes, teaming with fungi, teaming with nutrients Cannabis guru Very important no chemicals used in the process of growing hemp 'evangelical' growing method Growing in a way as close to nature as possible Biochar – Korean farming
Location of farm Loop Head peninsula- West County Clare Show on map, if possible (attached)……..Yes ☐……..No ☐ https://goo.gl/maps/6F9DSHQj3v8eSrEW8
Size of farm (ha)……1 hecter – small
How many people work in the farm? Permanent staff……..2 permanent

Temporary……occasional helpers Comments……
What is/are the main products of the farm? (consider the past 5 years) Crops - what type? ……hemp, cover crops after hemp harvested in September such as winter oat Livestock –what type? …… Other – specify…… Comments……

2) Current RA practices on the farm

Does the farm implement any regenerative agriculture (RA) practices? yes **yes**
If no, **Do they consider taking up RA in the future?** **Do they feel that they know enough about RA? Or they like to know more about RA?** **Comments……** **The interview will stop here**
If yes, **Is all the farm cultivated with RA practices?** All ☐ all of it Part of it ☐ - specify…… All of it (in their opinion)
Can you describe the RA practices you use in the farm?

Coffee- keeps away the slugs- natural pesticide- the caffeine

Get waste from local coffee shops

Has nitrogen in it as well

Never used glyphosate

Hemp is phytoermedial- any chemical will affect the oil / product

Soil in west Clare- very heavy clay- they needed to plough the land a small bit in the first year or two

Power harrow

Seed drill

Mycelleum powder when planting

Right by the seaweed- seaweed washed up- regenerative farming

Microbial was made form worm casting- feeding waste to worms- worm poo full of

Spray microbial tea biochar

Soil is getting better

First year or two had to plough

Hoping to reduce their disturbance of the soil

Hemp4soil project – EIP funded project

Soil in much better condition

Hemp

- Hemp is good for phytoremediation
- Used in Chernobyl to decontaminate the soil
- Because of this, they want to use no chemical inputs as the plant wouldn't be safe to ingest
- They took soil sample from before they started planting hemp to plot the improvements
- A lot of glyphosate had been spread on the land before

- Aerates the soil with tap soil
- Deep tap root- big long route- breaks up the soil- makes it drought resistant- goes deep into the ground and finds the water
- It's a good rotational crop
- Planted in April may and harvested in September
- other plants grown after- 20% increased yield for winter barely etc- next rotation
- Sequesters a lot of carbon into the soil
- In such a small period- hemp sequesters more carbon in 3 months and then forestry in 4 years
- 10-15 tonnes per hectar for hemp
- Using charcoal for the soil to benefit microbes

……

For how long have you used RA practices?
2018 to now
(years) From……To ……

3) Starting and motivation behind RA

What is the history of starting RA?
How did you/ the farmer decide to start? What was the main motivation?

Many aspects
Consumable product
Food safety – best quality product
Organic wasn't good enough-
Huge interest in microbes

Did you/the farmer receive any training about RA?
Yes... ☐…….. No ☐

Books, youtube, social media
Friend microbial ecologist- pilot project growing hemp
Biochar soil had a massive difference in the height of the plant
Microbiome of the plant
Peer-to-peer
Understanding soil food
A lot of reading

If yes,
Who provided the training?

……

If No,
How did you/the farmer learn the farming practices for RA?

……..

Did the farmer receive any financial support to start RA?
Yes... ☐…….. No ☐

Hemp4soil EIP funded project
Regenerative agriculture project
76k funding to trial RA practices
Only loop head farms – they got their neighbour farmers involved in growing hemp on their land through this EIP project
Other hemp

Loopheadtogether.ie- blogs on this project here- soil biodiversity- microbes and soil health
Common plant amongst 8 farmers in hemp
Community biodiversity project
Universities involved; LIT and university of essex and teagasc have a worm assessment

If yes,

Who provided financial support? .....

Comments……

4) Results of RA

Benefits?
(Including economic benefits, environmental, quality of products, workload etc)
Please describe

Their site is jam packed with biodiversity- it's like a bird sanctuary
Hemp waste- pheasants laying eggs on top

Not spending money on the expensive fertiliser

Yield and quality of material much better

Protecting the soil

Overuse of chemicals will worsen the soil over time

Marketing point of view- very strong ethos around how they grow and consumer it
Amazing marketing tool

……

……..

Obstacles & difficulties?
Please describe
Weed control, can be a problem
Only on a small scale- could be diff on a larger scale
Must get seeds very soon after land is prepped so weeds don't geta head start
Biochar is inoculated with tea
Powder onto seeds- seeds inoculated with seeds

Karen Hanlan – makes microbial teas- sells to bonsai companies- ProCarbon
……

……

How the difficulties have been overcome (if they have)?
Please describe

Convincing farmers to grow it this way
Convincing suppliers
Changing suppliers mindsets
6-7 farmers growing for them for their products (cbd oil)and they would have grown with RA before

……

……..

Are you/the farmer happy overall with RA?
Yes
Trying to get more on board!
Must look after the land

……

Do you/the farmer intend to continue RA?

Yes... ☐…….. No ☐
yes
If yes
Do you/the farmer intend to introduce changes in RA methods or crops?

Always looking to improve and do more research- try new varieties- always doing research to see how they can improve on before
They work a lot with universities- learn more- karen o hanlan

Laura and Daniel (farmers)

Daniel:

Laura 

Their products: CBD oil and honey


IRISH CBD OIL
FULL SPECTRUM
NUTRITIONAL FOOD SUPPLEMENT
IRISH CBD OIL
FULL SPECTRUM
NUTRITIONAL FOOD SUPPLEMENT
IRISH CBD OIL
FULL SPECTRUM
NUTRITIONAL FOOD SUPPLEMENT

Case study template for REGINA

PR1 – Library of good practices

Name of farmer/farm (company) John McHugh – Regenerative Dairy Farm
Name of Respondent John McHugh
Location of farm Country……..Ireland Region……Portloaise, County Laois Nearest city/town/village……..Portlaoise Show on map, if possible (attached)……..Yes ☐……..No ☐
Size of farm (ha)…….94ha
How many people work in the farm? Permanent staff…….. Just himself People from the local area have allotments in his community garden.
What is/are the main products of the farm? (consider the past 5 years) Crops - what type? ……. - community garden- volunter allotment- people have their own plots and then share their surplus vegetables and fruit. Livestock –what type? …… - small bit of beef, Other – specify……. - Mainly Dairy- 60 cows - Organic dairy sent to Irish company Glenisk.

Comments…….

- He used to produce oats and pork.

2) Current RA practices on the farm

Does the farm implement any regenerative agriculture (RA) practices?
Yes... ◘…….. No ◘ YES

If yes,
Is all the farm cultivated with RA practices?
All ◘ All of it, in his opinion, he recognised that 'Regenerative' can be a subjective term.

- Focusing on natural
- Regenerating nature and the environment
- Importance of soil
- Doing what suits your land

Part of it ◘ - specify…….

Can you describe the RA practices you use in the farm?

- Mainly grassland- holistic grazing

- 2015-2020 was doing holistic grazing management

- Now he is moving away to a new technique; **Rotational grazing**; long rest intervals between rotations; as he was finding diversity was being smothered out with the previous short rotations. He found his land needed more time to rest.

- Semi natural grasslands in Ireland

- Our grasslands didn't form naturally

- These Semi natural grasslands have evolved with farming

- **The diversity we have in Irish grasslands don't do well with long intervals without livestock**

- John is driven by nature and natural solutions

- Some birds and beetles dependant on animals being out year round

- Practise in the Swiss alps- **short grass grazing**

- He became interested in short grass grazing

- **Holistic grazing didn't suit his land**

- Continuous grazing- its frowned upon typically

- But he is grazing all year round with no other inputs!! (no feed)

John states, to achieve this; you must have appropriate stocking rates to be able to feed outside in the winter.

- He reflected on the ancient Irish practise called the "Burren winterage"- delicate ecology have formed based on cattle grazing outside over the winter.

- John still keeps an element of rotation on his farm.
- He is seeing huge benefits here
- Carbon and storing carbon in the soil
- Short lived carbon and long term

- Dead grass, cow manure in this short-lived carbon – 1-3 year cycle

- **This grazing maximises photosynthesis**

- **Grass grows much more densly when continuously grazed- protects the soil more than thin grass**

- Building a long-term pool of carbon

- A long process!

John is Semi-rewilding areas of the land through agroforestry and scrub land- not grazing until it matures- then allowing cattle in to forage.

John believes that RA is Highly contextual

He explained that These practices are just the practices that are working for him

75 hectares of land- cows have roam to

He might reintroduce them to new parts of shrublands

80 livestock - **1 livestock unit per hectare** (babies)

……

What crops are produced with RA practices?

……

- Community farm is integrated with his farm.
- Allowing the community to come in to bring more diversity onto his farm.
- Began in 2017/2018 when a group of home schoolers were looking for nature based activities. So, they created a community garden- 20 Ancient Irish "Ogham" alphabet letters. They planted native trees with vegetables
- Interaction of trees, vegetables, people
- Collectively managing the garden
- He wanted the people to take more initiative; he didn't have time to tell them what to do. So this is why he decided to divide up the land into allotments.
- In 2020- people started taking their own plots Eg little tunnels
- He gave up with social media so let it grow through word of mouth
- Risk factor- engaging with people he never met before- he let it happen naturally

- A lot of Polish families- going back to their routes

- John loves the idea of permaculture
- He wanted to try a **forest garden**
- Loads of fruit and nut trees

- Not about profit, it's about an exchange and people working together

For how long have you used RA practices?

(years) From 2015 to Now.

- Multispecies swards
- 2016- tried out holistic grazing- but he felt this wasn't natural for his land
- John was moving from conventional Dairy.
- Huge more biodiversity with grasses going to seed.
- His fields looked like meadows- lovely looking- however perhaps isn't as natural for his land.
- June- evenly grazed.
- Cows will naturally move away from some land- scattered natural bits
- Yarrow growing across the field- much more natural for his land
- Allows more space for plants to have light vs **meadow which is man made- a lot of light competition**
- Healthier plants

- When he started farming it was all about achieving higher profits
- But he felt he was vulnerable
- **He felt the change coming**- economic crash, environment etc.
- He wanted to be out of debt
- Sparked him to research organic and becoming more resilient.
- *'I couldn't run away quick enough from what I was doing' - conventional farming.*
- It's not about profit maximising, he is much more resilient now- sustainable thinking.

- He advises that farmers must be constantly reassessing their farming and actions- questioning is this really working?

- **He no longer wanted to 'blindly follow advice'**
- Wanted to work out what was best for him
- Can't follow what everyone else is doing
- **Continually reassessing is a key part of it for John.**

- **2014 160 cows + 70 heifers**
- **200 cows in 2015- upper end derogation farmer**
- He wanted to contract another farmer to increase more!
- Heifers were valuable- high genetically regarded stock
- When he realised he needed to make a change and get out of derogation farming (derogation farmers in ireland are allowed to have a higher stocking rate per hectare if they abide by certain environemntal factors)
- He sold all the heifers first

- **2016- set the stocking rate at 100 cows**
- He got through that year well
- **Had reduced 90 cows by the end of 2016**
- 1.8 livestock units per hecter
- It was viable
- **Feeding concentrates here- in organic conversion**
- Non gmo concentrates
- **Still inputs coming in then**

- **His thoughts started to change here- becoming more aware- he wanted to maximise his stocking rate**
- It's no longer about maximising the number of cows-
- John reflected that there is an 'ego' around how many cows you are milking, if you are a dairy farmer.

- He wanted to prove that this way of farming could be a high output

- **Not much space for nature in the Irish organic system + High costs organic**
- So he began to move away to regenerative
- He moved away from Working groups and moved away from that judgement from organic groups.

- Here, he found a positive a turning point
- Some of his old discussion groups colleagues are visiting his farm for advice
- Easier to explain the rewilding processes now
- *Farmer's mindsets are changing*
- It's not about taking everything away for a cow
- **Focus on resilience and look to nature**
- Not getting sucked in to trying to have as many cows as possible and maximisation of output

- **John hasn't bought in any feed in the last 3 years, before that feeding his own oats!!**
- Cows mainly eating grass
- Third year out – **wintering method**
- **Silage still made and fed and milked through the winter**
- **Winter milking brought in for the winter for convenience**
- Majority of the herd out grazing until the 26th of January
- Close to spring calving
- **Calved indoors**
- Past 2 winters have been pretty mild so it's working well
- You can never be cocky in this Winterage method *extreme weather may come-* and you may then have to bring the herd indoors.
- Buffer of silage in case he needs to bring them indoors.

- Organic- no chemicals or harsh fertilisers
- **You can't claim to be regenerative if you are using nitrogen or phosphorous- undermining the carbon and natural diversity of our swards**
- Phosphorous brings huge issues for diversity
- Takes 30 years after the last phosphorous application for the land to come back to its natural state.

- Selling milk to Glenisk for organic yoghurts and milks.
- He is getting a lower price this year than conventional … issues with pricing for organic farmers

- Conventional prices skyrocketed above organic this year
- He is on a Grass-fed only scheme - 2 year contract with a fixed price
- No meal or grains given to his cows
- Conventional dairy farmers were paid higher this year unfortunately
- **Flip side- he has no inputs where conventional will have many inputs and costs**
- May reverse next year
- He hopes a premium will emerge again
- He hopes consumers will begin to recognise that Organic is better
- He is paid an organic payment from the Department of Agriculture.

3) Starting and motivation behind RA

What is the history of starting RA?
How did you/ the farmer decide to start? What was the main motivation?

- His main motivation was RESILIENCE.
- Regenerating his environment, soil and nature.
- Regenerating carbon in his soil,
- Cabron brings increases in life, water storage, etc
- **This year, most neighbouring farmers around John suffered with drought, they were Feeding their cows silage during August.**
- Then, there was huge wet weather- and many farmers had to put cows off grazing due to this- to avoid damage to the ground, where as his soil was strong and withstanded this weather.
- More stress and management required with conventional farming.
- **John hasn't had any of those stresses due to his management techniques**
- **The grass was continuously growing**
- Tied in with the type of grazing he is doing
- Contant low grazed and constantly growing- the root hairs stay strong and hold the moisture-.
- **His farm remained green throughout the time where other farms were drought**
- **Dense grass** with his style of grazing

- **Root density holding the cows up**- cows constantly moving around- they aren't having a big impact on the soil anywhere as they are constantly moving

Did you/the farmer receive any training about RA?
Yes... ☐…….. No ☐ Indirectly, yes.

- Holistic management course with NOTS in 2020
- When he went organic, he started reading loads.
- Newman Turner - writer from the 40s and 50s.
- Took part in a permaculture course.
- Tried out Holistic management 2016-2020
- Started questioning Holistic Management in 2020
- Holistic Management had some flaws with how it is adapted to our environment
- Alan Savoury- American
- Rest period and animal impact dealt with differently
- **Mob grazing- huge animal impact- a lot of animals put into a small piece of land- carbon lost quicker- soils don't get healthier for John**
- Mob grazing will have its problems
- When you rotate animals every day- **animal performance can suffer**
- **Easier as a dairy farmer- as you will see the milk yield being hit before the animal condition is hit**
- Harder for beef farmers to notice- **forcing the animals to graze too hard**
- Hard to know what nutrition is there
- **Farmers can go against holistic/regenerative for this reason**

Who provided the training?

- NOTS facilitation
- 3LM – linked with the savoury institute online course in 2020

……

If No,
How did you/the farmer learn the farming practices for RA?

- Reading

- Learning yourself
- Trial and error!
- Unique situations on every farm
- Hard to be universal
- Farming for Nature Charity in Ireland - he found this very informative
- Meeting the farmers doing these practises helped a lot.
- **Farmers learning from each other-** crucial for John
- He found bail grazing not natural
- **Looking at nature, observing nature and figuring things out**

- Met other farmers from being a Farming For Nature ambassador
- Organic walks- seeing other people's farms. Incredibly insightful.
- Grahame Rees- big regenerative farmer came over to Ireland to do a workshop with NOTS.
- **Christine jones- author-** is phenonenal- **liquid carbon pathways**- she explains a lot over how carbon is stored in the soil.
- These explanations of carbon and soil really helped John to visualise the science behind soil and the importance of crops.
- Soil scientist- likewise, she could lack knowledge of Ireland- how to apply her findings as she is based in Australia
- The farmer must apply it to your own circumstances
- Hugh Lovel - biodynamics

……

Did the farmer receive any financial support to start RA?

Yes... ☐…….. No ☐ INDIRECTLY THROUGH EIPS

- EIPs European innovation projects- for restoring nature.
- Pollinators EIP- for taking actions on hedgerows- allowing hedgerows to grow
- Farmland pollinators EIP project
- Danu project on biological farming too- he is on setting up committee
- MOT monitoring programme

If yes,

Who provided financial support? ……

Comments……

4) Results of RA

Benefits?
(Including economic benefits, environmental, quality of products, workload etc)
Please describe

- Economic status has improved- no more debt!
- **Financial resilience**
- Cash strong position

- **Workload difference is huge- much more relaxed, easier way of life.**
- Start *working with nature* rather than controlling it!
- Hasn't topped a field since 2015
- Many farmers top fields to stop flowers going to seed

- **Huge improvement in animal health**
- Cow lameness tend to disappear- heavily linked with grains and nitrogen application

- More rewarding – **more time for his family**
- **The farm is a safer place for his kids**

- **Community garden brings more people to the farm- farming can be lonel**y
- On a sunday- a small campfire and have sausages with everyone
- A love **social side to this**

- In line with the community garden
- **Little processing room for making cheese and butter**
- People come and make some cheese for personal cheese
- **Time for extra activities such as this**
- Trying things you would have never done

- **Nature has greatly benefitted**
- **Huge more earthworms and live below the soil**
- Allowing plants to seed- not mowing
- Always flowers in the field year round
- **Allowing 'weeds' to flower- birds and insects and butterfliers- nature is a huge benefactor to this as well**

……

……

Obstacles & difficulties?

Please describe

- Social pressure!
- We all live our lives through the eyes of someone else
- **Ideas of 'good farming'- largely based around control**
- E.g. fields weeds free and high yields
- Farmers beside roads feel more pressure
- Feeling JUDGED!!!
- Farmers feel this social pressure to farm a certain way
- Can also come from parents
- His dad had a big environmental interest
- He had more freedom because of this.
- He can do his thing without being judged- not beside a major road

- **Taking risks that you don't know will work with regenerative!**
- Pulling out of discussion groups helped him in fact
- They can stifle change- the bad side to working groups
- **Taking away any sense of judgement**
- Number one obstacle for himself and many farmers that is often overlooked

- A lot of farmers; **a fear of finance**
- We inherit a certain situation (debt from previous generation) and it slowly evolves
- **People afraid to make big change**
- **He sat down and did the figures in 2015**

- **Afraid of the unknown** – afraid to make changes
- People have diff levels of debt, land, other incomes, etc
- He had a sense of security so **he could afford to make mistakes**

- Regenerative is safer than people realise
- John urges farmers to CHASE RESILIENCE!

- **Policy obstacles**
- **Previous CAP- penalised for having no productive areas of land- which is a lot of the things he does**-
- In theory he could have let that rule block some of his regenerative practices
- **Risk of losing some of your basic payments**
- **This will change in the next cap**
- **But there is a legacy of this...**

- Farmers ripped out areas of gorse and trees as non-productive...could risk losing their single field payments
- Creating a mindset of nature is bad and not paying money!

- Still problems in the new cap
- **A reductionist mindset**
- Trees and forestry- animals should be integrated to these
- New ACRES scheme- **payments to encourage planting trees**
- **If he went into ACRES- he would forgo his organic**
- **Balck and white management practices**
- The government schemes tend be reductionist and black and white

……

……

How the difficulties have been overcome (if they have)?
Please describe

- John is confident in what he is doing.
- Well researched in the area of RA.
- He can justify his decisions and he is capable of justifying his decisions and other farmers are acceptable to it now
- He left twitter etc.
- Many conventional farmers expressing negative opinions on twitter
- He felt preachy
- **A lot of farmers being put off by the preacher farmers**
- Opposite affect- divide people
- They feel judged by you – conventional farmers can feel judged by the environmentally-focused farmers.
- He didn't want this to happen
- Social media can be toxic in this regard
- Regenerative farming website and facebook group- he felt it was a bit 'know it all'-wasn't really facts – John had a negative experience with social media communities in RA and Irish Farming.
- He didn't feel he was losing out too much by leaving social media.

- **The importance is; thinking for yourself!**
- Don't look to others who think they know more than you.
- **No black and white answers to regenerative; you must think for yourself**

- Eg glyphosate- really destructive

- Organic- no crutches of chemical to allow bad farming practices to happen

- **You will never overplough a field with organic**

- Glanbia true grassfed- **greenwashing regenerative farming**
- Guiness, danone
- John discussed the dangers of companies using RA as a greenwashing term.

- **It will never be regenerative if it doesn't have organic principles**
- Organic has been divisive in the past whereas regenerative is more free however he does think **organic needs to coincide with regenerative**

- **Start at community level- how do we feed my own family sustainability? How do we feed community sustainability?- community garden**
- Lay foundations to a sustainable food system at a small level before you go city-wide/international
- However, we have been approaching food issues from international first- he urges that we must start from the Bottom-up.
- Artificial foods on the rise
- Removing humans from nature- in our current modern food system.
- Hydroponics- soluble dead nutrients- he disagrees with hydroponics.
- Nutrients and nitrogen come into a plant as amino acids and protein- more organic and natural- healthier for people and animals.
- **Huge health benefits for animals and humans with RA farming.**

……

……

Are you/the farmer happy overall with RA?

Yes extremely
It's a much more rewarding way of farming.
……

Do you/the farmer intend to continue RA?
Yes... ☐……. No ☐

Yes!!

Do you/the farmer intend to introduce changes in RA methods or crops?

- It's a constant evolution for John.
- Moving towards more natural farming
- **Constant tweaking and reassessments going on**
- He might go back to growing plants for human consumption

- Doing experiments- wild vegetables
- He had pigs- spread out vegetable and wildflower seeds
- Zero labour ways of trying to grow vegetables like this
- **Yellow rattle- parasitic flower- suppress grass from taking over**

Comments

Visual material:

Cattle integrated with pigs

Cattle foraging in scrubland

Cattle out on diverse swards that were allowed to go to seed

Integrating trees, multispecies swards and cattles

Case 5: Fergal Smith

Case Study Question Template.

Interview with fergal smith 28th sept 3-3:45pm

Fergal and Sally Smith - Farmers

1. **Tell me a bit about yourself and your farm**
    1.1. Size of farm in hectares **80 acres**
    1.2. Permanent staff? Temporary staff?
        1.2.1. F
        erghal, sally,(two permanent) intern, summer staff
        1.2.2. 3
        interns
        1.2.3. T
        hey sell to 2 markets and farm shop and local restaurant

2. **What have been the main products of the farm in the last 5 years?**
    2.1. Crops, livestock?
        2.1.1. L
        ivestock; cows, sheep, hens.
        2.1.2. 2
        0-25 crops – vegetables, fruit, etc (market garden)
        2.1.3.
    2.2. Agroforestry
3. **Do you implement any regenerative agriculture practices on farm?**
    3.1. Mob grazing- moving animals everyday
    3.2. Rest to the land
    Holistic management savory institute- planning out season –little input as possible into the land.
4. **How much of your farm is cultivated with RA principles?**
    4.1. Whole
5. **Can you describe the RA practices you use on the farm?**
6. **What crops are produced with RA practices?**
    6.1. All crops
    6.2. No dig garden – no till
    6.3. Lay compost
    6.4.
7. **For how long have you used RA practices? - what year did you begin?**
    7.1. 2017
8. **What was your main motivation for starting regenerative agriculture practices, and how did you start?**
    8.1. Passionate
    8.2. From website: "fergal has a **background in horticulture** from growing up on his parents market garden outside westport in co. mayo where **fergal's dad was a pioneer in small scale horticulture**."
9. **Did you receive any training about RA?**
    9.1. If yes, Who provided this training?
        9.1.1. I
        n person savoury institue – holistic management – community around the world

9.1.1.1. G

overnment doesn't recognize RA, only organic.

9.1.1.2. O

rganic cert and RA verification – EOV far superior

9.1.2. E

ov- ecological outcomE verification – online regenerative verification – 2 years- next test is October- monitoring soil – NOTS part funding 40% 70 euro – this verification is a cost to him but allows him to track his progress with RA

9.1.3. R

ichard Perkins training- first

9.2. If not, how did you learn the farming practices for RA?

Farming with intention

Diversity is key

10. Did you receive any financial support to start RA?

10.1. I

f yes, who provided the financial support?

10.1.1. O

nly costing him money!

10.1.2. E

ov- charging more

10.1.3. I

ncentivizing through quality of food and charging a higher price

11. Describe some of the benefits that you have noticed on your farm since introducing regenerative practices

11.1. E

conomic, environmental, quality of products, workload, etc

11.2. S

eeing the ecosytem thrive- lovely to be a part

12. What have been the difficulties and obstacles to RA?

12.1. H

ave you overcome any of these difficulties?

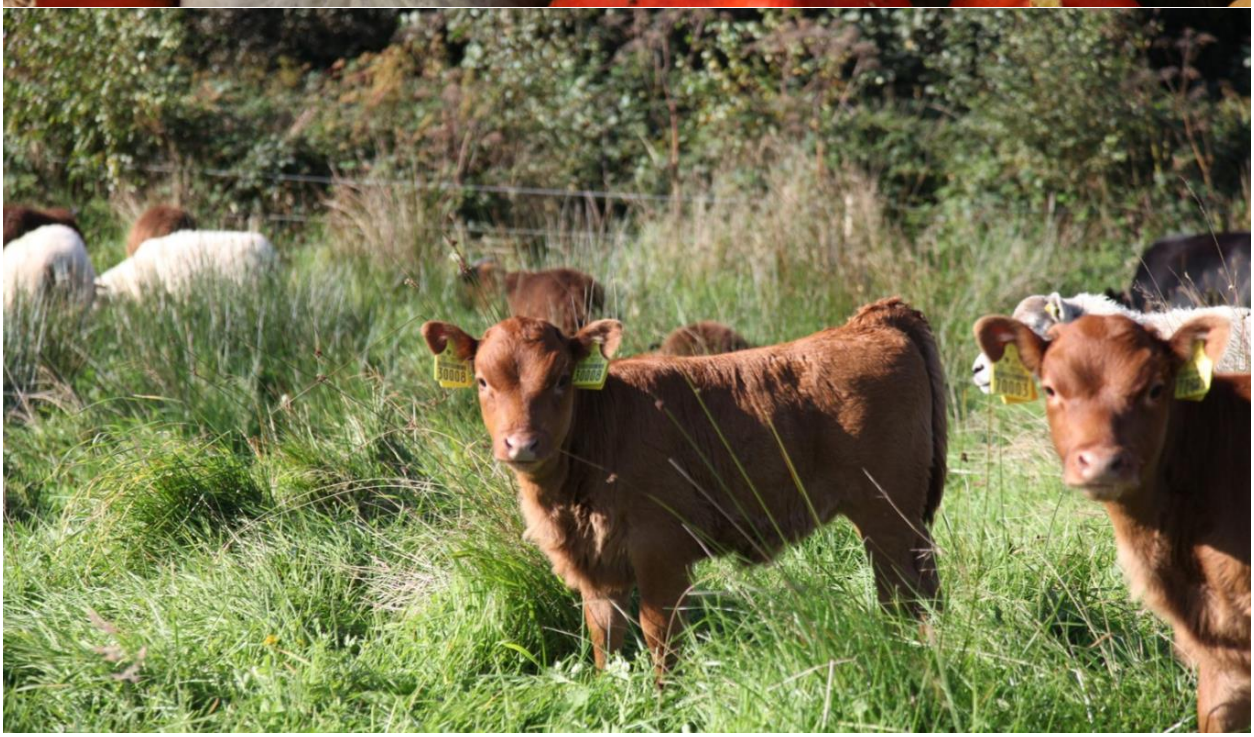
12.2.

13. **Are you happy overall with RA? yes**
14. **Do you intend to continue using RA practices?**

14.1. D

o you plan on introducing any new RA methods or crops?

https://www.moyhillfarm.com/



Case study template for REGINA

PR1 – Library of good practices

- **General information**

Name of farmer/farm (company) "Derryduff Farm" - Steve & Claire Collins
Name of Respondent Steve Collins
Location of farm Country……Ireland Region……Cork Nearest city/town/village……Bantry Show on map, if possible (attached) https://goo.gl/maps/FY8hLAWwhwoEpruH6
Size of farm (ha)……55 ha
How many people work in the farm? Permanent staff……Steve + 1 permanent staff member Temporary……0 or 1 for a few months of the year Comments……Once year gets a temporary volunteer to work for a couple of months
What is/are the main products of the farm? (Consider the past 5 years) Crops - what type? - Organic blueberries, - Organic Aronia Berries (a new high polyphenol berry) Livestock –what type?

- Suckler herd of 28 Organic Dexter Cattle. From herd they sell pedigree breeding stock as well as meat.
- Free range chickens

Other – specify…
- Tree Nursey; walnut and apple.
- beehives

Comments…
Has been decreasing number of cattle on the land over the years. At one stage has 80 cattle but is now down to 28. As a high stocking level of cattle on a marginal hill farm did not pay accordingly.

2) Current RA practices on the farm

Does the farm implement any regenerative agriculture (RA) practices?

Yes... ☐ YES

If yes,
Is all the farm cultivated with RA practices?

All ☐ Yes

Can you describe the RA practices you use in the farm?

- Farm is fully certified organic with Irish Organic Association.
- No pesticide or herbicide use on the farm. Weeding is done manually.
- Clover has been sown into any swards of grass on the farm. Some herbs have also been sown into grass swards.
- Trees and shrub have been planted around the edges of several small ponds on the land that any runoff might make it way too, and these trees/shrubs aid in absorbing any runoff before it reaches the small ponds.
- Blueberries are inoculated with micro-rhizomes, and blueberries are hand planted on the farm.
- Agroforestry- One area of low-pasture has been planted with widely spaced walnut trees.

- There is an apple orchard of about 70 -80 trees on the farm. Free range chickens inhabit and roam the orchard and are fed around the tree trunks. Therefore, scratching and keeping the radius around the trees clear of weeds, as well as providing fertilizer for the trees.
- Perennial bushes like the Aronia berries are starting to be planted high up the mountain, because they start to create soil by putting their roots deep into the subsoil (1 metre deep). The roots are taking carbon and microbial matter into the clay sub-soil and generating new life
- There are 3 beehives managed on the farm
- Blocks off trees planted on the farm as windbreakers for the crops
- Wildlife corridors throughout farm
- Hedgerows on farm managed for wildlife

What crops are produced with RA practices?

Blueberries, Aronia Berries & Organic Beef.

For how long have you used RA practices?

From: 2008 To: Present

Began farming at Derryduff in 2008. Though not certified organic in 2008, organic/ regenerative practices were followed from the start. Farm became fully certified Organic in 2010, after the mandatory two-year conversion period from 2008-2010

3) Starting and motivation behind RA

What is the history of starting RA?
How did you/ the farmer decide to start? What was the main motivation?

The motivation was there from the beginning after purchasing the farm. Steve's goal was to make the farm more beautiful, and to do so in a way that was in harmony with the hills.

Did you/the farmer receive any training about RA?

No ☐

If No,
How did you/the farmer learn the farming practices for RA?

Steve's knowledge of RA and farming practices was entirely self-taught, through reading and learning through trial and error. As well as simple "common sense" and what was

considered the most nature friendly. Steve is not from an agricultural background, but comes from a scientific background, so followed a trial-and-error method on the farm when implementing practices. Would also chat informally to other local farmers.
Did the farmer receive any financial support to start RA? No ☐ **If yes,** **Who provided financial suppor**t? ..... Comments: No official RA specific financial support in Ireland. However, grants are provided for being certified Organic. As well as the Single-Farm payment under EU CAP Policy. But no specific RA funding

4) Results of RA

Benefits? (Including economic benefits, environmental, quality of products, workload etc) ● Economic benefits are felt through the high quality of blueberries being grown. They are a unique organic product, with a signature taste that allows Derryduff to charge a high price for this premium crop product. ● Areas of the mountain are being monetized through allowing the cattle to graze on such rough pastures. If not for the cattle, it would be hard to monetize such plots of land on the farm. The mountain can only support a small stocking level of cattle, and this level is respected. If there was a higher stocking level on the mountain, additional feed inputs would have to be purchased to maintain the cattle's diets. ● Aronia berries are now also being planted on the areas of the mountain, and this will supplement income, as well as creating new soil habitats up high on the mountain. ● High level of on the farm due to diverse habitats spread across farmland, and presence of wildlife corridors. ● The fact that the farm has been regenerative/organic since the start has been a huge benefit. There was no drastic transition from conventional or intensive to regenerative.

- No use of pesticides/ herbicides or artificial fertilizer reduces input costs. As well as reduces veterinary input costs for cattle

Obstacles & difficulties?

- Increased workload due to reliance on manual labour of weeding / hand planting etc, and no use of pesticides etc.
- Weeds are controlled as well through heavy mulching, as well as an expensive practice. About 400-500 cubic meters of wood chip mulch each year is used to control weeds. This mulch has to be bought in. Steve explored producing his own mulch, but several hectares of coppice would be required to produce enough mulch annually, and this does not seem feasible to do at Derryduff currently.
- Lack of RA funding
- Remote location of farm results in poor access, resulting in large costs to get anything delivered to farm etc.
-

How the difficulties have been overcome (if they have)?
Please describe
Already mentioned

Are you/the farmer happy overall with RA?

Yes

Do you/the farmer intend to continue RA?
Yes... ☐

Do you/the farmer intend to introduce changes in RA methods or crops?

Comments: Steve views RA as the way forward for agriculture.

In the future Steve plans to grow more Aronia berries, and to diversify further by growing both thornless blackberries and elderberries- to increase to increase the range of berries produced on the farm

Website:
https://www.derryduff.ie

Visuals:

Aronia plants up high on hill

Aronia plants

Blueberry fields aerial

Blueberry rows

Blueberry rows

Chickens grazing on apple orchard

Dexter on the farm hills

dexters

Diverse hedgerows


25/11/2021

Mix of aronia and apple trees

Newly planted trees

Steve and Dexters

Case study template for REGINA

PR1 – Library of good practices

Name of farmer/farm (company) Andrew Bergin
Name of Respondent Andrew Bergin
Location of farm Country: Ireland Region: Athy, County Kildare Nearest city/town/village: Athy, Kildare Show on map, if possible (attached)……..Yes ☐……..No ☐

Size of farm (ha): 90 hectares

How many people work in the farm?

Permanent staff: 1, himself. *"Regenerative farming is much easier to run on your own".*

Temporary: Harvest help occasionally

What is/are the main products of the farm? (Consider the past 5 years)

Crops:

- Peas- canning,
- oil seed rape- animal feed and oil,
- winter wheat- animal feed and bread,
- spring wheat- milling for bread,
- spring barely- beer,
- oats- animal feed and porridge, sometimes grown for seeds

Andrew grows as much variety as he can make money on, he wants to grow more variety.

Livestock –what type? ……

Other – specify…….

Comments…….

2) Current RA practices on the farm

Does the farm implement any regenerative agriculture (RA) practices?
Yes... ◻…….. No ◻ YES

If yes,
Is all the farm cultivated with RA practices?
All ◻ 100%

As we will come to learn from the interviews, this figure is subjective.

Can you describe the RA practices you use in the farm?

After the harvest, Cover crop is sewn. A mix of species is sewn for biodiversity and to maintain a living root all the time. He establishes this cover crop as fast as he can after harvest. This cover crop A protects the soil and supports a lot of wildlife.

Chicken manure is used as a natural fertiliser to Feed the cover crop.

Cover crop sprayed off before replanting as cover crop must be suppressed for feeding (could argue this is not regenerative). Andrew is Trying to find non-herbicide ways of doing this. He has tried suppressing the cover crop tried many ways without herbicide.

When asked about this struggle of trying to find a more natural way of suppressing the cover crop before resewing for harvest, Andrew said, ***'Don't let perfect get in the way of good***'- a nice quote for Farmers who are trying to be more regenerative on their farms.

His aim is to try to minimise physical disturbance of soil; Rather than ploughing the soil. Andrew suggests to farmers looking to get into regenerative to Try to reduce synthetic fertilisers as far as possible. Look at a broad spectrum of plant nourishment. What organic fertilisers can you use?

General management: Hedgerows and field margins for biodiversity and wildlife are staples across his farm. He takes part in a Farmland pollinator EIP- Protecting farmland pollinators, run by the National biodiversity data centre. Pollinators for Andrew, are an indicator of the health of the environment ***'if you've pollinators there a lot of other things going right'.*** This Pollinator EIP trail 'Results based farming', which he is finding very rewarding:

- Farmers get paid according to annual scores
- Small changes are recorded and rewarded
- Scorecard completed by yourself, the farmer
- Photographs and geotags are used
- This method puts the farmer in charge- he is finding this system very rewarding.
- Make it easy and enjoyable
- Making farmers feel like they're gaining
- 12 farms, 5 year project; Danu Project; started 2018
- Mapping these farms transition from conventional to regenerative agriculture.
- Andrew started trying out RA in 2013- started moving away from no plough – 2016 Andrew began no till.
- Andrew says No Till only works if you are doing other regenerative practices
- Advice: **Start slowly- take one field**- get a contractor in for no till machines for example- the system must work for you- and **gradually convert to fully regenerative.**
- Regenerative farming is not prescriptive- it's not conventional
- RA Saves Andrew an enormous amount of time- and money

What crops are produced with RA practices?

All

For how long have you used RA practices?

From 2013 to now (2022)
Almost 10 years

3) Starting and motivation behind RA

What is the history of starting RA?
How did you/ the farmer decide to start? What was the main motivation?

2013:

- New technology emerging – specifically new machine **doing demos of the strip till.**
- He could see the immediate advantages
- The crops and ground seem happier: ecological and crop benefit.
- The feel of the ground underfoot changed immediately
- Simpler operation: personal benefit.

- BASE Ireland organisation is a new organisation of farmers interested in this alternative way of farming: regenerative and ecological farming- a space for these farmers to learn from each other and share their experiences and trials. Andrew said the move to regenerative would be very hard without this BASE community of other Irish farmers and the internet. **Andrew doesn't know if he could have made this regenerative transition without the help of internet**.

- Andrew enjoys this regenerative farming movement as it is **Farmer led**, not government led; Bottom Up.
- Farmers educating farmers

Did you/the farmer receive any training about RA?
Yes... ☐..... No ☐ YES

- Andrew has attended many courses and conferences in this area- Gabe Brown through NOTS- he is almost coursed out.
- Many in person trainings
- Groundswell in the UK – Regenerative Agriculture Festival
- David Wallace soils course- he has completed this 3 times.
- NOTS, Joel Williams https://nots.ie/neww/?p=2051
- Online things run by the trainers
- Joel Williams training on **foliar feeding**- specific for UK and Irish climate

Outside of training and BASE

- Andrew does a lot of Reading in this space
- He has found huge information online about RA
- Meeting other farmers has helped him on his RA journey.
- **Through keeping a very open mind** – KEY.
- Andrew is a 'Farming for nature' ambassador in Ireland.
- People's approach to things- how they deal with issues can be very useful; Learning from each other.
- Burren winterages; unique aspect to Irish farming.
- Meeting and taking to people- very refreshing like airing your brain

- Winterage- many non farmers attending- great for chatting with community- urban people cant just come to a farm- becoming more and more important to connect people with farms.

For Andrew's farm, the number o**f ground nesting birds, many of which are endangered in Ireland,** have explode **since they stopped ploughing**

Andrew states the importance of building informal relationships **to learn from one another**- e.g. connecting Birdwatch Ireland with farmers trying regenerative agriculture. **The importance of sharing these new methods in a non-confrontational way**

Did the farmer receive any financial support to start RA?
Yes... ☐…….. No ☐ YES, INDIRECTLY.

Government grants and schemes:

- TAMs grant for equipment helped him to **change the original direct drill for a new one**
- TAMS **gps autosteer for tractor-** really helpful for regenerative cropping- **very hard to see where the machine has travelled as so little damage to the soil**- helps him see where he is going-

- GLAS Scheme- **cover crops and arable grass margins supported financially through this environmental scheme** - he never had arbale grass margins **he would have worked up to the hedgerows before**- amount of plants that have appeared in these margins- **excellent for pollinators**- butterflies- meadow brown butterfly-

EIP Projects:

- Pollinator EIP has given results-based payments.

4) Results of RA

Benefits?

"Farming is a lot more engaging and interesting now"

- RA is Keeping it fresh and engaging for the farmer
- RA has allowed Andrew to Meet a lot of interesting people and younger farmers
- Huge social side to RA: the community aspect
- **Huge social benefits and personal development**

Andrew finds it Exciting to convince other farmers about RA.

For some, RA practises leave their farms 'a bit scruffy looking', but 'Beauty is very much in the eye of the beholder'

Obstacles & difficulties?

- Initially information and knowledge around RA was hard to obtain.
- Having to take risks at first.
- **Everything new is a risk**
- **If you can derisk a conversion then more people will be able to do it**
- Idea behind the **DANU EIP project- establishing the basics**
- Farmers in debt may be much less likely to take part
- Lack of research in RA in Ireland.
- Reluctance and inability of research and advisory body to see this as something good that **adds to conventional agriculture.**
- He would love to see a **more open-minded attitudes towards regenerative and new ideas in farming**
- Advisory service that was **less patronisng** to farmers
- Rather than be told exactly what to do

How the difficulties have been overcome (if they have)?
Please describe

For Andrew, the right things happened at the right time- he recognised that RA was a fit for his farm.
Being confident to make mistakes to learn
Prepared to make mistakes and own them- **a change in attitude**

Are you/the farmer happy overall with RA?

Yes

Do you/the farmer intend to continue RA?
Yes... ☐…….. No ☐

Yes! Andrew is all the time striving to find better ways

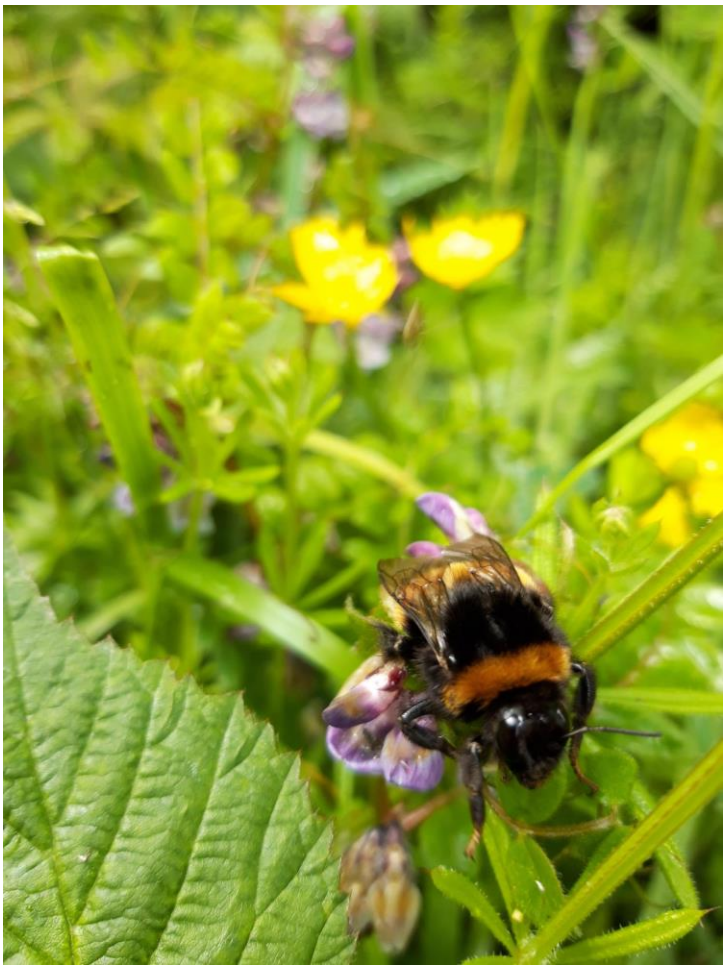
Comments
Farming for nature walks- sharing ideas- weekends- take the day off to chat to other farmers who are changing their way of farmer to benefit nature.

Visuals:


Strong root systems.


Various Cover crops

Direct Drill

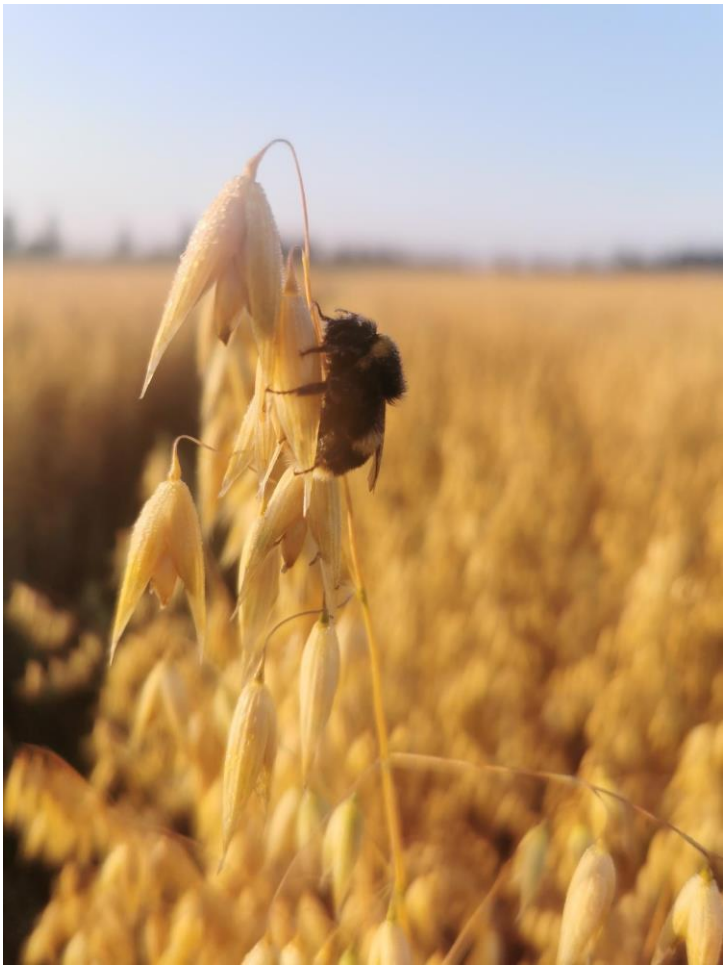


Chicken manure being spread on cover crop


Heineken

Delivery of Chicken Manure fertiliser

Brown Butterflies thrive on the farm; in the field margins between the field and hedgerow



Interview 1: Bord Bia Ireland

Bord Bia Ireland - Stakeholder Interview

Mick Houlihan: Senior Manager for Agricultural Sustainability

December 15th 2022

Bord Bia: "*Bord Bia is an Irish state agency with the aim of promoting sales of Irish food and horticulture both in Ireland and abroad. Bord Bia works for small producers by promoting and certifying farmers' markets, and for bigger producers by offering a great range of international marketing services."*

Bord Bia views regenerative agriculture as an important 'micro trend' under their 'environment & planet" section of their website, alongside water quality, carbon footprint, circular economy and biodiversity.

Q. Please introduce yourself and outline your role at Bord Bia

Mick is the senior manager for agricultural sustainability in Bord Bia. His role encompasses many different things such as: developing schemes to advance the sustainability agenda at farm and processor levels. Bord Bia facilitates collaboration within the Irish Food and internations Food industry, and they have an international level of sustainability. Mick's team looks at data through quality assurance systems from farms, processors, etc. Bord Bia tries to stay on top of the trends and react accordingly.

1. Are you familiar with the term Regenerative Agriculture (RA)?

Yes.

Every number of years, Bord Bia conducts extensive customer research. 2021 research on customer trends unveiled topics of most concern to consumers and customers, in which Regenerative Agriculture came through as a topic of interest. Further, RA was identified as being important in other markets, especially the North American market.

RA is now within Board Bia's top sustainability concerns. The term has been arising for a couple of years within their customer interactions, now Bord Bia are trying to figure out what their role could be in this RA space. They are also brainstorming how they could capture information regarding RA.

2. Are you aware of any members of your association or of any farmers more generally

who practice RA in Ireland?

Mick said that there are a few farms under their remit that would practice RA. For example, he referred to the 'Farming for Nature' non-for-profit campaign which highlights farmers for their work with sustainability across their farms. Last year, the winners of the Farming for Nature awards were regenerative tillage farmings. As well as this, Mick is aware of a few regenerative dairy farms.

Bord Bia sees **elements of RA** across a lot of Irish farms, but Mick is nervous of the concept of RA - given its broad nature, and the fact that RA is very relative to the local production systems and environment in which it is taking place. Therefore, it is a difficult one to monitor and assess.

Bord Bia are looking to other farming authorities and other country food boards to see how they are interacting with RA. At the moment, **they are trying to discover what elements of RA are most relevant for their Irish farmers.** These voluntary actions are not always recognised by companies.

Bord Bia do immense marketing work for the Irish food industry - ultimately they market Irish food and drink, this is their goal. To aid in this, Bord Bia have created a number of certifications in which meat suppliers can get a quality stamp if they abide by a set of quality and health standards.

As part of their accreditation programmes and schemes, Bord Bia collects a vast amount of data from farms, in which a number of sustainability-related factors are collected. Currently, Bord Bia are analyzing this data to 'make sense of it' and to see if the information that they are already collecting could be of use to them in some sustainability schemes, for example, monitoring the soil health of their Bord Bia Assured Farms.

For example, Bord Bia asks farmers if they are conducting soil tests, spreading clover in grasslands, and making use of multispecies swords, among other relevant RA methods. While Bord Bia are collecting this data, they have yet to **quantify the impact** of these sustainability efforts on their farms, but they hope that this will come in time. They want to calculate if the farms are impacting their soils, waterways and biodiversity in a positive way. As well as this, Mick mentioned the challenge around comparing their schemes on an international level- for example, it would be much better if there was an internationally-agreed upon set of rules for RA rather than them trying to come up with their own, and having different rules to other countries.

Bord Bia are testingfarm emissions overtime, but are struggling with quantifying RA, water quality, biodiversity, and other sustainability efforts. This is something that they hope to improve upon.

3. What is your opinion about the feasibility of RA at present?

Mick discussed how it is difficult to determine the feasibility of RA without first determining exactly what RA is in an Irish context. He stated how there needs to be agreement on a term for RA nationwide/worldwide.

Mick acknowledged how each farm is different, and therefore, RA will be different on every farm. He noted how RA does not have a global standard, which organic does. In fact, organic has EU laws around its practices. He reflected on how RA is only a 'claim' at the

moment, there is no independent oversight or laws around RA. He believes that this needs to be established before they can begin to effectively interact with RA as a governing body.

Mick believes that RA may not be viable in every farming sector. He thinks that RA may not work with the conventional Irish dairy model- which has been streamlined and perfected over the past decades and has allowed dairy farms in Ireland to bring in large profits. He believes that the Irish dairy farmers have invested so much into their business, and that they are making so much money through this way of working, that they will not want to change this.

4. Are there any significant obstacles for taking up RA?

Mick believes that the lack of a definition around RA is its biggest obstacle.

He thinks that the RA concept will appeal to a lot of farmers. RA is not conventional, but it's not organic. He acknowledged how; ultimately, most farmers want to do the right thing for the environment- and the concept of RA really speaks to this.

Mick believes that RA is not the full-on commitment that organic is. RA allows farms to change their processes slowly over time. This is unlike organics, where you must complete a set conversion period. The key questions are…

- Whatactually is RA? (and can this be agreed nationally/internationally)
- What things would I need to do to be regarded as a RA farmer?

5. Are there any substantial benefits

● for farmers,

● society

● the environment?

Mick believes that there are opportunities on the cost efficiency side:

- Promoting practices that will enhance soil health and nutrient status: this is where RA begins, and is fundamental for increasing yields and becoming more resilient in production.
- The opportunity to make savings through not having to buy chemical fertilizer is huge- long run cost savings for the farm.

Mick said how there are opportunities for stocking rates, outputs and tillage. Tillage is fully dependent on the soil in order to grow their crop, and **RA is an opportunity to make our farming system more robust.** Farms that are regenerative are less susceptible to weather changes for example. RA has the potential to make the farm more resilient to upcoming environmental legislative changes- e.g. fertilizers and chemical pesticides may be ruled out eventually anyway, why not get a head start?

The associated benefits and knock-on benefits for society are key: water quality and biodiversity will ring true for much of society (less for soil health, he thinks, as this concept is harder to understand/not as visible to the public).

As a concept, RA is like organic, but it is more straightforward to explain…and this is positive.

6. Is there any likelihood of more farmers taking up RA?

Yes, once the definition and indicators are established.

For example, if we were to take a typical beef farm in the west of Ireland and look at it through a RA lens….what does it look like? How do you compare it to a beef farm in the states or italy? These are unknowns.

For example, someone in the US may rave about mob grazing, when Irish farms already do this practice in most cases. In the states, they are more worried about drought and biodiversity, in Ireland, it's much more about productivity and growing more grass for grazing systems.

There are key differences in the features of RA from different locations and farm systems.

Bord Bia takes part in a sustainable agriculture initiative platform (SAIP) which is a collaboration with other government bodies, farming groups, and companies. Here, they have a RA working group that was established in 2022. This working group is trying to devise a common framework that can be adopted globally, but adapted locally. They are questioning: what is the desired outcome of RA and how can it be measured? Devising a list of RA indicators for farms.

SAIP was established 20 years ago by Nestle, Danone, etc. Bord Bia are involved in the SAIP RA project.

Q7. answered through discussion already.

8. Is your organisation willing to support the wider uptake of RA by farmers? Do you have a policy about RA and related farming methods?

Yes, Bord Bia is willing to support the wider uptake of RA by farmers, once RA is defined in an Irish context. They have no policy on RA yet.

They hope to support RA through the work they already do with farmers. Incorporating RA into the Bord Bia on-farm assessment piece would be ideal as then they can monitor and report on what farmers are doing around regenerative.

Bord Bia monitors farms from all sectors except tillage (usually farms with animal products). They have a number of schemes that are on a voluntary basis, but in many cases, farmers don't have the option, they must take part in the scheme. For example, all milk producers in Ireland must abide by the Bord Bia dairy scheme, and all dairy processors require their dairy supplied to be a part of this scheme.

- Customer quality assurance
- Farmers may get bonuses from their processes if they are on these schemes
- Pretty much every dairy farmer in ireland is on the Bord Bia dairy scheme

- Very high participation rates in the pig, poultry and egg systems.

9. How can your organisation support RA, if you think it is important?

Already answered in the discussion.

10. Do you expect any financial support from government for farmers to take up RA?

The Irish government is pushing more farmers to convert to organic at the moment.

Mick believes that the Irish government will follow suit from what targets are being driven at an EU level**. If the EU pushes for RA, the Irish government will respond.**

There is no absolute definition or EU legislation around RA, and there is no driver from an EU level for the Irish government to take RA on- in the short term.

However, there is funding already available to farmers that contribute to RA- for example one scheme to fund multispecies swords. **Mick thinks that it is more likely that the government will fund individual projects rather than RA as a whole. (this may be a good thing as it will allow more farmers to take part).**

11. Would your organisation be willing to provide training to farmers on RA, in

cooperation with experts?

Bord Bia currently offers online training through an e-learning platform which was launched in 2021. These are created at the request of the processors.

4,000 farmers are on this platform, and Bord Bia provides modules on climate, emission, water quality, animal welfare, etc. Mick believes that there is a potential for RA to be added to this online hub.

Bord Bia works with industry and co-ops to create relevant courses for their supplier farmers. In some cases, this involves training through the standards and good practices schemes. Bord Bia provides certifications and has requirements around training. For example, with the Bord Bia Pig Quality Certification- the farm must complete the training on antimicrobial resistance.

RA will probably be a theme that they would like to create an online course for- and showed interest in the REGINA project online learning platform, Mick was eager to learn from us or see if there is any potential for collaboration in this space, further into the regina project.

- We should invite Bord Bia to the regina 2024 webinar

13. Overall, how do you assess the prospects of spreading RA among farmers in this Country?

It comes back to how it gets defined and measured and how it fits with the current farming systems.

If farmers do not perceive RA as a 'big step', it will be manageable.

Farmers do not need to be sold on the benefits of RA as it is naturally appealing for them.

Ideally, RA will be less structured than organic.

14. Do you believe that RA is an issue that this country should decide about its encouragement and promotion (or not) or is it an issue that concerns all the EU and there should be a European policy and measures for it.

Mick believes that Ireland should have a national position on RA- we could get a head start in this way.

He worries that if the EU were to create laws around RA, it could become overly prescriptive- and therefore may be hard to make RA work for many farmers.

Or, the EU could be incredibly loose in their definition of RA, and each country may interpret RA differently, which could also be a bad thing!

Finding the balance legislatively for RA will be important.

Ireland must think it out thoroughly- what is RA for Ireland nationally? So then we can be ready to fight our stance when the EU comes to discuss it.

Overall, this was a fantastic interview with very positive feedback from Bord Bia.

Bord Bia are clearly very industry-focused, but their progressive values ring true.

The REGINA Project: Stakeholder Interviews

Brigid from 'Farming for Nature': Farming for Nature seeks to acknowledge and support farmers who farm, or wish to farm, in a way that will improve the natural values of the countryside. They share 'good news stories' on farmers who are doing good things for the environment, and have yearly 'Farming for nature' awards.
https://www.farmingfornature.ie/about/

REGINA stands for 'Regenerative agriculture. An innovative approach towards mitigation of climate change through multi-tier learning'. This is an Erasmus plus project focused on creating an educational learning platform on Regenerative Agriculture.

1. Are you familiar with the term Regenerative Agriculture (RA)? Yes

2. Are you aware of any members of your association or of any farmers more generally who practice RA in Ireland? Yes

3. What is your opinion about the feasibility of RA at present? It's the only way forward.

4. Are there any significant obstacles for taking up RA? I think the resources and support/advice out there is limited. I think the understanding of what is RA and what are its benefits aren't clearly explained. Especially potential for financial benefits.

5. Are there any substantial benefits
    - for farmers, - a better place to work, live. Less input costs.
    - society – supports biodiversity in the local community.
    - the environment? Has the ability to capture carbon, increase biodiversity both above and below the ground.

6. Is there any likelihood of more farmers taking up RA? Yes

    Please explain your answer (Yes of No) I think farmers are becoming more aware of the need to move away from chemical inputs – the financial strains and overall need to look after the diminishing environment.

7. On what conditions do you believe farmers would take up or even try RA farming? There could be paid trial runs to see how it benefits their farm.

8. Is your organisation willing to support the wider uptake of RA by farmers? Do you have a policy about RA and related farming methods? Yes. We don't have a policy as such but we are all about promoting farming holistically for biodiversity.

9. How can your organisation support RA, if you think it is important? Help spread the message, provide training.

10. Do you expect any financial support from government for farmers to take up RA? It needs to be encouraged on a wide spread manner in order for there to be real change. So fortunately probably yes.

11. Would your organisation be willing to provide training to farmers on RA, in cooperation with experts? Yes

12. If your organisation cannot or does not wish to provide training, who would you expect to provide RA training to farmers? NOTS, Teasgasc

13. Overall, how do you assess the prospects of spreading RA among farmers in this country? I think there is a need and want for this but it has be to clearly laid out, the benefits and the positive outcomes for the farmers, the farm and the environment.

14. Do you believe that RA is an issue that this country should decide about its encouragement and promotion (or not) or is it an issue that concerns all the EU and there should be a European policy and measures for it. It should be both.

Regenerative Agriculture Stakeholders - Interview Questions

Interview with Janine Kennedy, Agriculture Sustainability Journalist from the Farmer's Journal
Monday 5th December 12-12:45

Tell me a bit about yourself; your background and where you are working at the moment?

- **Grew up on a regenerative cattle farm**
- Went bankrupt on regen ag
- People were not ready to support this type of agriculture in the 90's
- A beautiful way of growing up
- Married a conventional dairy farmer- shock to the system
- Trained as a chef and background in political system
- Strong opinions on our food system
- Eye opening to see conventional farming in practise
- Hopes to convert to organic

1. Are you familiar with the term Regenerative Agriculture (RA)?

- RA could benefit from a firmer definition
- Many farmers saying they are regen ag and they are not
- Taking nature and soil health into perspective
- The baseline for regenerative should be certified organic

2. Are you aware of any members of your association or of any farmers more generally who practise RA in Ireland?

- Freelancing for fj for many years and full time staff 2020
- Huge lack of regen ag stories not being told in mainstream media
- Janine has interviewed many farmers
- Many staff more interested in regen for making more money
- Younger generations being taught to communicate more effectively

- Hopeful with the younger generation taking over the family farm
-

3. What is your opinion about the feasibility of RA at present?

- Spoken to many ucd lecturers
- They are supportive of regen and organic
- You will not get the yield but it can be profitable
- Lack of investment into regen and organic in ireland
- Youstill see chief economists at Teagasc saying there is no market but the research is diff
- Only 2% of land formed organically
- Cautiously hopeful

4. Are there any significant obstacles for taking up RA?

- Lack of reporting positive regen ag stories in the media
- We must change the definition of progress for us
- She is an advocate for degrowth
- There has been huge fear mongering among farming associations
- She says there is nothing to be afraid of for regen ag
- Up to the media, policy makers and environmental groups to highlight these changes as being positive and nothing of being afraid
- She thinks she is reaching the right audience of farmers
- Extremes on both sides of the RA spectrum- must take a balanced approach- be diplomatic

5. Are there any substantial benefits

- for farmers,
    - They all say the same; farmers would never look back, seeing the benefits tenfold to nature, mental health, no loss or indeed gain to income
    - She has never spoken to regen ag farmer who regrets their decision
    - Some organic farmers are not able for organic
    - What makes someone to be regen; a certain mindset needed to take it on
    - Need to do the paperwork for RA; it's a diff type of land management
    - What will the neighbours thin- holds many people back
    - Need to take a serious look at succession- it's holding back a lot of progressive change
- society
    - Yes
    - RA could be key for rural development in ireland, revitalising our communities
    - Most RA are very into their communities
    - Selling to and being active in communities
    - Talk in schools
    - Kylie Magner comes to the school

- Change in the whole food system
- Regen ag is grassroots
- Huge potential because of this
- Usually not an financial incentive

● the environment?

- Yes there's no doubt
- Soil health

Increasing microbiome of the soil

Allowing nature its space to thrive

So many benefits

Makingthe steps to avoid run off water

Issues must be overcome- emissions wise- Organic and RA still no better off than conventional

Regen is not completely in the clear when it comes to environment

Making room for nature

Farmers will do farm walks more often when they see the changes from regen agri

Mental health is key

6. Is there any likelihood of more farmers taking up RA?

Please explain your answer (Yes or No)

- Yes
- Our climate is very well suited to it
- Our farms are good sized for this land managing
- Approaching it in a non threatening way
- As more farmers are exposed to it they will want to make that progression
-

7. On what conditions do you believe farmers would take up, or even try, RA farming?

- A lot of regen ag already in the risk/environmentalist mindset
- Or farmers who needed a drastic change
- Farmers coming from a place of education/privilege, not worried about risk/losing money
- Support lead- not necessarily finance
- But having people there to help reduce the risk
- Environmental groups could make a positive impact by reaching out to farmers; reaching
- Not a one size fits all
- Each farm is completely different

- Grassroots approaches supported by policy
- Policies can be very restrictive
- Especially with increased input prices
- Eg organic premium lower than conventional atm- this must be safeguarded
- Policies for RA must be free- not a one safe
- Huge attitude change in IF
- Regen or sustainability no longer a bad word
- Huge investment into environmental and sustainability expert

8. Is your organisation willing to support the wider uptake of RA by farmers? Do you have a policy about RA and related farming methods?

- Natural progression
- Agriculture is a naturally adaptable and changeable industry
- Farmers will adapt- once they go through this natural grieving process
- Grieving their way of life

  Must ask the had questions

- RA is not perfect- it is diff
- We need to be honest with each other

9. How can your organisation support RA, if you think it is important?

- They publish regenerative agriculture articles
- Publish everything she has written
- She gets scrutinised a bit before publishing- they want to make sure she isnt making any

  crazy claims

- RA may not solve all your problems
- Discredits the savoury institute for gatekeeping holistic training

10. Do you expect any financial support from the government for farmers to take up RA?

- Yes but she is jaded about it
- Eg she questions certain decisions and policies that are being written up
- Eg gov planting trees

- Professor from ulster uni last year
    - The troubles would never be solved by policy, but the people
    - Allowing people to solve the problems
    - Challenging conventional vs organics farmer mindsets
        - They'll find a common ground
        - Coming together in a safe environment- changes your perspective
        - Absolutely
        - She thinks they would support this
        - They would happily put together groups
        - They are dependant on sponsorship
        - They need environmental sponsors
        - Shed be happy to monitor this
        - Siobhan walsh is environmental specialist
        - Country Living - telling the stories of regen farmer

11. Would your organisation be willing to provide training to farmers on RA, in cooperation with experts?
    - yes

12. If your organisation cannot or does not wish to provide training, who would you expect to provide RA training to farmers?

    - Teagasc would be the front line
    - They are already the farm advisor
    - Huge lack of support coming from the frontline at Teagasc
    - They didn't have the right training
    - This is changing
    - Very little support or actively discouraged to make the changes
    - She thinks Teagasc are changing
    - Teasgac ran organic dairy group last year
    - Talamh beo- has some great information

    - Extreme level of regen ag
- The firsts tep is often the hardest for conventional farmers

13. Overall, how do you assess the prospects of spreading RA among farmers in this country?

- She thinks its positive
- Farmers can be very business oriented
    - Less inputs
    - Financial benefits
    - Their ear prick up
- She did some farm walks last year - conventional farmers interested and listening

14. Do you believe that RA is an issue that this country should decide about its encouragement and promotion (or not) or is it an issue that concerns all the EU and there should be a European policy and measures for it.

- Regen ag should be a grassroots approach
- Ireland should be working with farmers on the ground
- Irish produce are premium products
- We need to make sure we should about that
- Premium-singing through regen practices
- Must be supported by policy at eu level
- You must have bottom up approach and support from the top

She has been very well supported by the if to tell regn ag stories

She thinks that this will lead for more technical pieces

She is key here

Opening up the conversation

- Important to challenge the norm
- Importance of diversity in rural ireland
- Many regen agri farmers are from away or have travelled

Example: https://www.farmersjournal.ie/this-co-sligo-farmer-practises-planned-holistic-grazing-but-what-is-it-710457

Regenerative Agriculture Stakeholders - Interview Questions

Interview with Peter McCann, Agriculture Sustainability Journalist from the Farmer's Journal, Ireland's national weekly farming newspaper.
Monday 5th December 11-11:40
He is okay with his name being used.

Tell me a bit about yourself; your background and where you are working at the moment?

- Farmer and part time journalist
- His view comes from his own farming experience

1. Are you familiar with the term Regenerative Agriculture (RA)?

- Tell me what you know about the term?
- Diff people have diff views
- Moving back to a farms natural state
- Step back to more natural
-

2. Are you aware of any members of your association or of any farmers more generally who practice RA in Ireland?

- Yes
- Some people who think they are practicing RA, but they're not.
- The term can be misused
- Reg ag is not anything new.

3. What is your opinion about the feasibility of RA at present?

- All farmers could benefit from having more nature in their farms
- No one has anything to fer

- Not all farmers will want to go down the full reg ag route
- Farmers are looking to cut back on inputs- smaller paddocks could help
- For most farmers RA isn't feasible
- Nature farming may be seeing “n

4. Are there any significant obstacles for taking up RA?

- Income huge
- Farmers not having a good understanding of their financial performance
- Ex of farmer going from 500 to 300 ewes and making more money
- Not understanding your finances is a barrier
- Eg if you were to cut out chemical fertilizer in a year
- Another obstacle; what will the neighbor
- Social problem
- Seen as a failure if you cut back numbers
- Some farmers who are not viable don't care- they have off farm income
- Farming could be hobby- harder convince them

5. Are there any substantial benefits

- for farmers,
    - More hedges etc can help grass growth
    - Its remarkable how bare some of the landscape is
    - This is hardly beneficial
    - For some farmers it will not be beneficial- eg farmer on a high input system eg dairy
- society
    - Natural capital
    - Will society care?
    - He is worried that people don't appreciate the work that farmers do
- the environment?
    - Of course, but it is not black and white
    - In more cases- more land in agricultural with less output
    - Could be an argument that is not - economical viability of land

-

6. Is there any likelihood of more farmers taking up RA?

Please explain your answer (Yes or No)

- There probably is
- Especially if fertiliser stays at 1000€ tonne- even less sprayed this year
- Farmer support schemes

- Post brexit agri policy in the north

7. On what conditions do you believe farmers would take up, or even try, RA farming?

- Fertiliser prices stay high
- Gov schemes
- Discussion groups and case studies
- Not just an academic enterprise
- Real life farmer example-probably the greeted thing
- If more farmers can see it in person
- Not all nature friendly farmers are nature friendly- challenging this
- Raising Knowledge and awareness- eg farm full of weeds isn't nature friendly

8. Is your organisation willing to support the wider uptake of RA by farmers? Do you have a policy about RA and related farming methods?

- Mission statement- supporting farmers and families in the competitive landscape
- Support it for the farmer ra is suitable for
- Can't do a blanket statement
- They already do a lot around sustainability
- Farm sustainability insight page
- Farmer footprints programme
- He has noticed since 2015- environment has been mentioned every week about climate change, biodiversity
- People well qualified in the team
- Another thing they do'
- New sustainability programme- waiting for new NI agri policy to see the new advice
    - Similar to better farm programme
    - Derrylink
    - 10 farmers with full time farming progress covered every week

9. How can your organisation support RA, if you think it is important?

- Continue with coverage & farmer features

10. Do you expect any financial support from the government for farmers to take up RA?

- Eu green deal and farm to fork

- In the north of ireland, the talk is here

- Stormont have control over agri policy
- You have to be doing stuff for the environment to keep it going
- This new farming nature scheme will be key- he hears this
- The british gov- the environment should become a profit centre- the gov are supporting it
- In the north;
    - New soil nutrient health schemes
    - Soil test for every farm
    - P,K , PH, MAPPING- to see how much carbon on farmer
        - Replacement to the basic payment scheme
        - 92% uptake for this in the north
        - Long Term- increase soil organic matter
            - Every farmer

11. Would your organisation be willing to provide training to farmers on RA, in cooperation with experts?

- He'd say so for future programmes
- You have to have experts

12. If your organisation cannot or does not wish to provide training, who would you expect to provide RA training to farmers?

- Nature friendly farming network in NI
- Farm walks
- Agri policy- Teagasc, cap, departments north and south will come to realise it and share with farmer

13. Overall, how do you assess the prospects of spreading RA among farmers in this country?

- Strong prospects
- Fertiliser prices will play a huge role in this transition
- This has caused a huge mindset change amongst farmer
- Back down to the bottom line
- Is it financially feasible, there will be a strong uptake

14. **Do you believe that RA is an issue that this country should decide about its encouragement and promotion (or not) or is it an issue that concerns all the EU and there should be a European policy and measures for it.**

- Maybe not the full iron cast doctrine
- It wont suit everyone
- Every farm is different
    - Soil, geographical
    - Social issues
    - Labour availability
    - Large full time farming - hugely busy
    - Smaller farmers with part time- not being there most of the time
- Key; each farm is diff
- RA must be FLEXIBLE to encourage wide uptake
- Allowing nature friendly
- Prompting it in a way that that's easy for farmers to listen to
- Acknowledge that farmers are nature friendly
- Not giving to farmers

Look up the soil health scheme and sustainability on the farmers journal website

Debates on twitter can be toxic.. Talk to actual farmers.

Debate online goes nowhere

Read James Rebanks books too-

- Rachel carson book - spring
- Wrote book in the 70s

Has some opinions on how farmers may be reluctant to implement natural methods on farms as new schemes dont rewards past behaviour

Examples of articles:

https://www.farmersjournal.ie/grazing-is-a-crucial-part-of-nature-730664

https://www.farmersjournal.ie/fewer-rushes-and-more-nature-733888

The REGINA Project: Stakeholder Interviews

REGINA stands for 'Regenerative agriculture. An innovative approach towards mitigation of climate change through multi-tier learning'. This is an Erasmus plus project focused on creating educational learning platforms on Regenerative Agriculture for farmers and university students.

Organisation: Teagasc (Irish for 'Instruction' or 'Teaching')
Description: Teagasc is the Irish state agency providing research, advisory and education in agriculture, horticulture, food and rural development in Ireland.
Respondent: Tillage Specialist

1. Are you familiar with the term Regenerative Agriculture (RA)?

   Yes, I am familiar with the term and indeed the implicit positive intentions of those who have interest in RA.

   However I am concerned about how those who adopt the term and promote the system, present the components as new and often regard those who do not embrace the 'new' terminology as not farming sustainably. This is not the case. There is a risk that it have a polarising influence which is not helpful in the pursuit of sustainable production systems.

2. Are you aware of any members of Teagasc or of any farmers more generally who practice RA in Ireland?

   Yes, I believe that there is a huge emphasis on sustainable production with a focus on soil management in the crops section of Teagasc, as there is an awareness of the challenges of the continuous annual crop production. In grassland production systems, the abundance of soil carbon results in a lesser emphasis. In both crop and animal systems, among research and advisory staff, there is awareness of the need for other soil ecosystem services, such as avoidance of excess nutrients getting to ground water.

   Among farmers, there are many who practice the components of RA without using the RA brand. Within the crops sector, there are a proportion of growers who indeed practice many of the components of RA and enthusiastically highlight the brand. In many situations however the enthusiastic adoption may not always be correct

in our climate; the value of components is often not known as climate, soils and production systems will impact on their effect.

3. What is your opinion about the feasibility of RA at present?

   Very broad question. The objectives are good, but it is wrong to consider that these are new. The feasibility depends on the adaptation of RA production systems for our climate. We should never consider that systems imported from different climates to be suitable without proper evaluation. For example the benefits of potential components of an RA system need to be determined. E.g.

   Crop establishment:

   The benefits from reductions in tillage intensity both in terms of C loss and NOX emissions differ in our climate compared to drier climate.

   The negative impact of direct drilling on our yield potential may be greater in our climate.

   The suitability of direct drilling for spring established cereals may be quite poor.

   The need to establish winter crops a little earlier (to avoid wet conditions) adds to the weed, disease and virus vector challenges

   Soil inversion but with reduced tillage intensity (depth and cultivation intensity) for example may be well suited to our climate

   Cover cropping

   The role of post-harvest growth, either cover crops or (less reliable) enhanced natural regeneration in nutrient capture is acknowledged.

   Larger cover crops can add something to the challenging C balance situation, but the influence of this in conjunction with crop establishment system on soil C levels is frequently hugely exaggerated/misinterpreted.

   The benefits of species mixtures despite the 'logical' rhetoric, needs to be determined and balanced against the disadvantages in terms of rotational challenges etc. (e.g. brassicas etc)

   Etc

   Etc

4. Are there any significant obstacles for taking up RA?

   There are obstacles to the take up of unsuitable RA practices in that they may not achieve what they are intended to achieve, they may prove less profitable and in a worst

case scenario they may result in future challenges if for example vertain weed types get out of control.

The main obstacle as stated above is the lack of information about the best 'version' of RA that is appropriate for Ireland. It is a nonsense to imply that there is an RA system out there that is just not being adopted. We have always strived to be regenerative; its simply that there are now more challenges (e.g. continuous annual cropping) and more realisation of the need for additional actions (e.g. soil C retention) than previously, so we need to act on that.

The other challenge though is to ensure that farmers are rewarded, but only for actions which result in genuinely positive impacts to the soil / environment etc. This goes beyond just making assumptions, or adopting commonly held views (which may be wrong!) about the benefits of a certain practice. They need to be proven!

5. Are there any substantial benefits

    - for farmers,

    Yes of course in terms of sustainability of the production resource, but only if we know the correct actions to adopt for Ireland and for specific farming situations.

    - society

    Again yes as it may contribute to long term production capacity retention, and possibly to C effiency. But it must be Irish-developed Irish-adapted practices.

    - the environment?

    Potentially yes if climate adapted practices are at the centre, then water quality and soil C retention may be improved.

6. Is there any likelihood of more farmers taking up RA?

    Again I do not agree with RA being considered a single practice that you adopt or not and that farmers do not already use a myriad of practices that are central to an RA approach. So the answer is YES but they always have adopted RA practices to a certain extent. More needs to be encouraged but based on systems and components proven in Irish agriculture.

    Please explain your answer (Yes of No)

7. On what conditions do you believe farmers would take up or even try RA farming?

    The majority of farmers will take up technologies that are proven to have a positive effect. In this case that positive effect includes long term sustainability which we also need to value along with impact on current production. 'Proven' means that they have been rigorously tested in controlled conditions in single and multi factor trials

8. Is your organisation (Teagasc) willing to support the wider uptake of RA by farmers?

   YES provided the technologies are known to be beneficial and appropriate for the situation that they are being applied to.

   Does Teagasc have a policy about RA and related farming methods?

   Teagasc will always seek to encourage farmers to have sustainable production systems and in that context will support the principles behind RA and similar. However, (as you will see from every answer above), the components of RA to be adapted and promoted in Ireland need to be proven for our conditions.

   There would also be concern about the simplistic polarisation that can occur when a level of 'branding' is attached to a technology or bunch of technologies. For sure this will gain attention, but equally it can be divisive and counter productive from an adoption perspective.

9. How can Teagasc support RA, if you think it is important?

   In research: by trying to evaluate the impact of the components of RA. This is extremely challenging however as the longer term impacts are difficult, time consuming and expensive to measure. Then if we want to evaluate these components in combination in a system, its even more challenging. So we need to pick and choose carefully how we use our resources in this area. We have on-going work on crop establishment and cover crops which is contributing in this space, but we need to choose carefully. We are aware that more circular production systems as practiced up to the 1970s where annual cropping was predominantly in rotation with grass, is advantageous from a soil quality perspective, but could that be adopted on commercial farms today?

   From an advisory perspective, suitable components can be promoted, but there will need to be consideration of a long-term perspective in addition to a single season plan.

10. Do you expect any financial support from government for farmers to take up RA?

    I don't know but I would hope that support should only be directed to components of an RA system that are proven to work in situations where they are being deployed. Existing and new RA practices should be encouraged, I think that defining an all embracing single RA system for financial support is probably not appropriate.

11. Would Teagasc be willing to provide training to farmers on RA, in cooperation with experts?

    Training in RA actions: YES.

    In co-operation with experts? : it depends on what is meant by co-operation and experts!! No problem if researchers are the experts and suggesting new ideas, but would be concerned about practitioners from other climates, not familiar with our soils, climate and

production systems and 'selling' an inappropriate system. So if were invited to an event to train, we would almost alway be open to that and would do so alongside others. If we were organising the training event, under a TEAGASC banner, we would be open to inviting in other experts as always, but we would ensure that they would have something to contribute that would be worth considering in an Irish context.

12. If Teagasc cannot or does not wish to provide training, who would you expect to provide RA training to farmers?

    I think we would provide as outlined in earlier answer (and would work with others)

13. Overall, how do you assess the prospects of spreading RA among farmers in this country?

    As answered earlier,

    RA is not completely new so many of the concepts have always been 'spread', but RA simply brands a package that includes much more emphasis on soil protection, ecosystem services and climate change.

    Prospects will be improved if we tone down the potentially divisive 'RA or not RA' approach that could potentially develop.

    These systems require all to value a long-term view

    Most Importantly, the benefits of the components of RA (and as a system) must be proven in our production system and climate. The appropriate RA for our farmers is not known and is almost certainly NOT and 'off the shelf' adoption of a 'product' from other regions/climates.

14. Do you believe that RA is an issue that this country should decide about its encouragement and promotion (or not) or is it an issue that concerns all the EU and there should be a European policy and measures for it?

    The issues addressed by RA are of concern to all, so an EU Approach would be helpful. But this is really just a strengthening of the policy in this area that is already occurring, and has been evolving for decades. It's debatable whether the 'branding' of this package as RA is helpful or not as discussed earlier. There is concern that those in politics will want to be seen to be adopting something which captures the public imagination which RA can do. But there is a serious downside to this too, as by being overly simplistic, it can disenfranchise all previous work in this area in the public mind i.e. that there is a new solution and that is RA. That is not the case!

    What is important is that the components of these systems are developed/evaluated for our conditions. So for sure there is need for EU wide development/evaluation, but

also for similar at a regional level; with Ireland being one of those regions. So I believe we should certainly promote the elements of long-term sustainable production that are appropriate in Ireland, but I am less sure about an all inclusive RA banner as there are negatives to that approach, but for sure the regenerative concepts are valid and the lexicon will include 'regenerative' for some time!

Interview 6: Dr. Oliver Moore, Academic & Board Member of Cloughjordan Community Farm

The REGINA Project: Stakeholder Interviews

Interview with Dr. Oliver Moore, academic and Board member of the Cloughjordan Community Farm, County Tipperary.

REGINA stands for 'Regenerative agriculture. An innovative approach towards mitigation of climate change through multi-tier learning'. This is an Erasmus plus project focused on creating educational learning platforms on Regenerative Agriculture for farmers and university students.

Interview schedule

1. Are you familiar with the term Regenerative Agriculture?

   Yes

2. Are you aware of any members of your association or of any farmers more generally who practice RA in the country?

Yes

3. What is your opinion about the feasibility of RA at present?

   The terms isn't fully established, consistent or coherent yet, but, in general aspects of RA could grow, with the right incentives.

4. Are there any significant obstacles for taking up RA?

It isn't fully defined; it was attractive when fertilizer prices were high, less so now. True cost accounting would make it more viable – ie costing 'external' pollutions.

5. Are there any substantial benefits

   - for farmers,

     soil and costs.

- society

  mixed – it is business-as-usual maintenance as regards some GHGs. Has the potential to be more holistic (but also that depends on the farming category – cereals ,horticulture, livestock)

- the environment?

  Mixed, see above.

6. Is there any likelihood of more farmers taking up RA?

Yes, depending on pricing an available schemes. Currently just EIPs.

Please explain your answer (Yes of No)

7. On what conditions do you believe farmers would take up or even try RA farming?

8. Available reasonably funded schemes and corollary supports. Built from an EIP base (similar to cooperation projects emerging from Burren EIP)

9. Is your organisation willing to support the wider uptake of RA by farmers? Do you have a policy about RA and related farming methods?

We use RA techniques on our farm. We do tours, meals and social media outreach.

10. How can your organisation support RA, if you think it is important?

See previous answer.

11. Do you expect any financial support from government for farmers to take up RA?

The whole basis of extensive livestock farming and cereal farming is per hectare payments and other payments for additional activities; so the starting point is government support. Otherwise you are at an automatic guaranteed disadvantage. A scheme should be offered for CAP 2027 based on the RA EIPs (e.g. DANU)

12. Would your organisation be willing to provide training to farmers on RA, in cooperation with experts?

Yes, provided the farmers themselves on our farm were compensated adequately and had the time. (we already do this for interns)

13. If your organisation cannot or does not wish to provide training, who would you expect to provide RA training to farmers?

NOTS already does a good job on this; farmer led EIPs should be encouraged; Teagasc need a broader remit.

14. Overall, how do you assess the prospects of spreading RA among farmers in this country?

Reasonable ,a sit cuts down on fertilizer costs.

15. Do you believe that RA is an issue that this country should decide about its encouragement and promotion (or not) or is it an issue that concerns all the EU and there should be a European policy and measures for it.

Difficult to answer as the term would need to be fully agreed sector by sector. Its more likely that certain practices could be scored in a results-based approach. This would have both Irish and EU dimensions: e.g. as an Ecoscheme option or a Pillar 2 option.