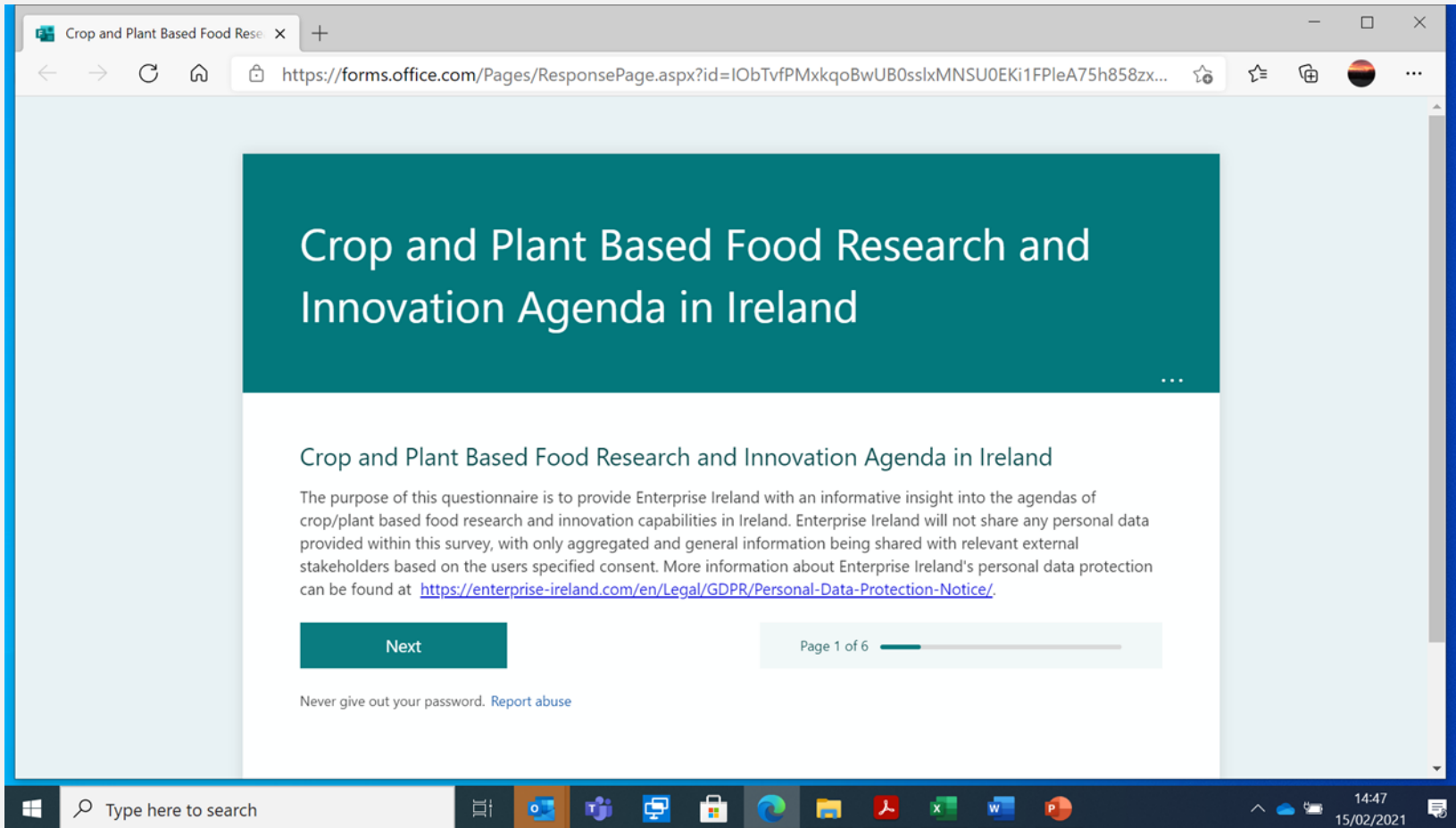


# Innovation pathways for the Irish plant-based food sector using sustainable & locally sourced ingredients

Martin Fleming | April 7<sup>th</sup> 2022



# Client plant/crop questionnaire was live in 2020/21



The screenshot shows a web browser window displaying a Microsoft Forms questionnaire. The browser's address bar shows the URL: <https://forms.office.com/Pages/ResponsePage.aspx?id=IObTvfPMxkqoBwUB0sslxMNSU0EKi1FPleA75h858zx...>. The questionnaire title is "Crop and Plant Based Food Research and Innovation Agenda in Ireland". Below the title, the purpose of the questionnaire is explained: "The purpose of this questionnaire is to provide Enterprise Ireland with an informative insight into the agendas of crop/plant based food research and innovation capabilities in Ireland. Enterprise Ireland will not share any personal data provided within this survey, with only aggregated and general information being shared with relevant external stakeholders based on the users specified consent. More information about Enterprise Ireland's personal data protection can be found at <https://enterprise-ireland.com/en/Legal/GDPR/Personal-Data-Protection-Notice/>." A "Next" button is visible, along with a progress indicator showing "Page 1 of 6". At the bottom of the form, there is a footer that says "Never give out your password. Report abuse". The Windows taskbar is visible at the bottom of the screen, showing the time as 14:47 on 15/02/2021.

Crop and Plant Based Food Research and Innovation Agenda in Ireland

Crop and Plant Based Food Research and Innovation Agenda in Ireland

The purpose of this questionnaire is to provide Enterprise Ireland with an informative insight into the agendas of crop/plant based food research and innovation capabilities in Ireland. Enterprise Ireland will not share any personal data provided within this survey, with only aggregated and general information being shared with relevant external stakeholders based on the users specified consent. More information about Enterprise Ireland's personal data protection can be found at <https://enterprise-ireland.com/en/Legal/GDPR/Personal-Data-Protection-Notice/>.

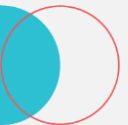
Next

Page 1 of 6

Never give out your password. [Report abuse](#)

# 25 survey questions were asked across 3 areas:

- **Market, Trends and Supply Chains.**
  - **Research Agenda and Infrastructure in Ireland.**
  - **Innovations and Potential Disruptions (a worldview).**
- 
- **Over 20 responses from clients.**
  - **Good balance of client response from Large MNCs – SMEs – Start-ups/HPSUs**
    - **EI confidentiality critical for certain large/PLC clients – cannot be shared.**
    - **Other respondents OK for feedback to be shared anonymously.**
    - **Some detailed and high quality perspectives received from clients – which has kicked off new plant-based ingredient research conversations.**



# Some Responses

## •Would Irish sourced raw materials be a market advantage ?

- It would be a key quality and marketing advantage
- Possibly is sustainable
- It would be for production sites in Ireland
- Yes as it would be import for consumers who are concerned about GHG and footprint
- Yes, but range of crops possible to grow is narrow
- There is interest from some farmers in alternative crops

## •Where do you see major gaps in plant based research in Ireland ?

- In niche/high protein crop development
- Gap in measuring the carbon footprint of alternative proteins
- **Lack of contract processing facilities for plant protein extraction**
- In the need to show full sustainable differentiation
- Apply innovation to achieve the same levels of knowledge as dairy ingredients

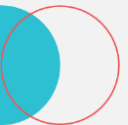
# Some Responses

## •What are the potential technology disruptors to the sector ?

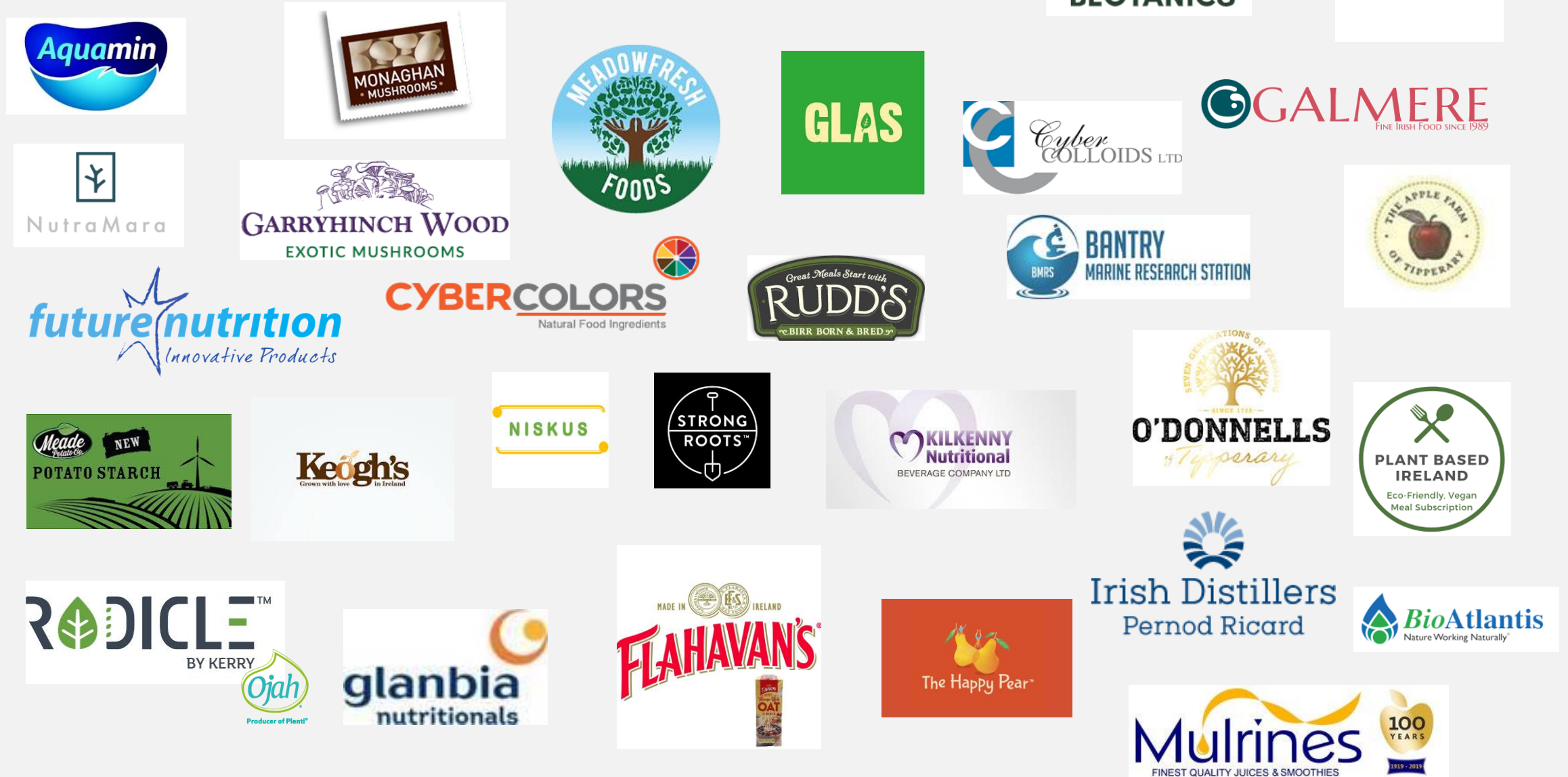
- **Processing technology, modern extraction and data driven analytics**
- Crop management, optimisation, species of crops
- Lab grown meat and dairy, new bio-purified inputs
- Ingredient assessment technologies
- Separation, isolation, drying technologies
- Sustainability and traceability chains being easier to document

## •Where can Ireland use technology and innovation to achieve sector potential ?

- Development of sustainable technologies for processing & drying (freeze drying, Enwave, VOMM drying)
- Collaboration with companies who have global research and extensive knowledge
- Significant long term R&D investment in order to raise capability
- Projects will lead to commercialisation of highly functional ingredients
- Opportunity exists as can be seen from the commercial market, to be a player on a global scale



# Some EI & IDA clients in the plant based space





# Some products on the Irish market or about to be launched.....



*All are aware of.....*





<https://marketresearch.enterprise-ireland.com/plant-based-foods-market-reports/>



<https://foodworksireland.ie/>



***Approximately 50% of 2021 applications to join the Food Works Programme had a plant based ingredient or product interest at their proposal centre – highlighting the potential opportunities in the area.***





# Top line comments on survey content.

- We have received some new **high quality information** from clients from the survey.
- All respondents recognise **the massive opportunities and growth rate potential**.
- **Lots of activity is happening** in the background, some was under our radar in EI.
- Sector dependence **on internationally traded plant based ingredient commodities is striking** - what quality are we getting and what are the sustainability impacts in the long term
- Feedback points to **missed domestic agronomy and potential supply opportunities** – what crops can we grow and exploit sustainably and economically?
- Repeated mention of the **lack of suitable Process Pilot facilities for crop/plant** - dairy for e.g. is well served at MTL, expected that IBF's REDF funded facility will come on line later this year to fill some gaps.
- The questionnaire has led to new plant-based conversations with clients – scope being examined for new **in-company research projects (Agile R&D support) and Innovation Partnerships**.
- Potential to look at **individual** and **multi-partner Innovation Partner Project** in plant based arena.
- **Thinking bigger** – what is needed to deliver plant ingredient and processing infrastructure to grow and scale the sector...?



# EI - Supporting Client led projects



- The questionnaire has led to new plant-based conversations with clients – scope being examined for new **in-company research projects (Agile/R&D support) and Innovation Partnerships.**
- Potential to look at a **multi-partner Innovation Partner Project** in plant based arena – building on successful multi-partner projects such as:
  - **SAFE UCD (€1.7M); DairyTech UCD-Lyons (€1M)** and relatively recently approved **Teagasc/MTL - SuperDry** and **UCD - Seaweed ingredients for Animal Nutrition** multi-partner Innovation Partnership projects.
- **High Potential Start Up Funding – Equity Support** for business plans with growth ambition
- **Thinking bigger** – using the funding landscape, how can we drive plant R&D and ingredient/processing agendas and develop the infrastructure, to grow and scale this sector.

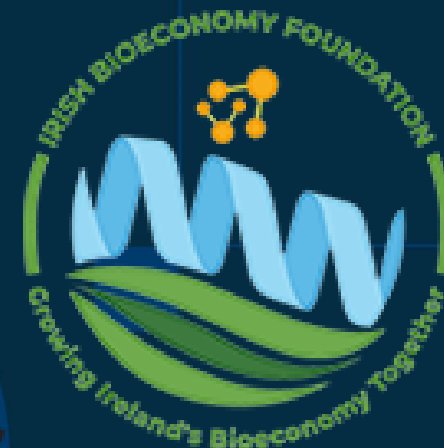




Martin Fleming | April 7<sup>th</sup> 2022



U-PROTEIN



**Shannon ABC**  
applied biotechnology centre

**Protein-I : UCD to lead a €3.1M project to diversify plant-protein production across island of Ireland – DAFM & DAERA NI funded**



**FOOD FOR  
HEALTH  
IRELAND**



The Future of Food Innovation

