# EIP-AGRI Seminar
## New skills for digital farming

5-6 February 2020 – Aranjuez, Spain
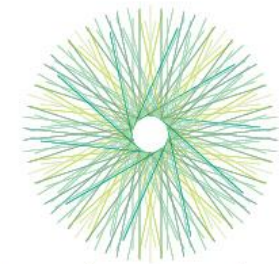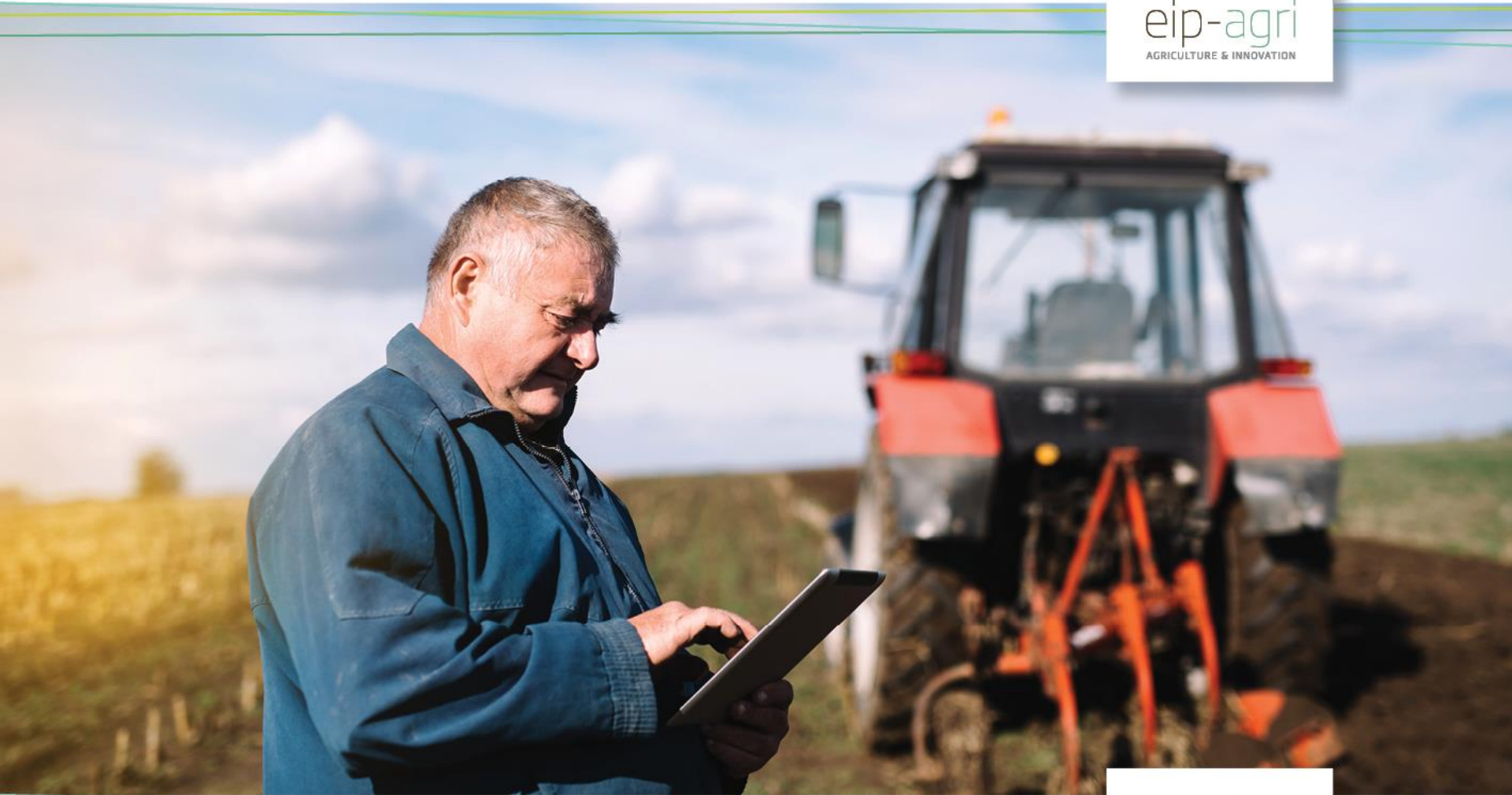
# Programme

## WEDNESDAY 5 FEBRUARY 2020

12:00 – 13:30     Registration and buffet lunch

13:30 – 13:55     Welcome

- *Luis Planas Puchades, Spanish Minister of Agriculture, Fisheries and Food*

- *María Ángeles Benitez Salas, European Commission, DG AGRI*

- Introduction to the programme – *Esther Koopmanschap, EIP-AGRI Service Point*

## Session 1: Where do we stand?

**13:55 – 14:25**

**New skills in the face of digitalisation**

- *Emily Gray, OECD*

- **Ethan Cleary, Irish Farmers Association**

eip-agri
AGRICULTURE & INNOVATION

# Programme

## WEDNESDAY 5 FEBRUARY 2020

| | |
|---|---|
| 14:25 – 15:25 | Working with digital technologies: the farmer experience |
| 15:25 – 15:55 | Coffee break |
| 15:55 – 17:30 | What skills for digital farming? Breakout session |
| 17:30 – 18:15 | Wrap up and introduction to day 2 |
| 20:00 | Networking dinner |

eip-agri
AGRICULTURE & INNOVATION

# IFA Digital

## Adoption & Attitudes Report

**Ethan Cleary**
Product Dev & Tech Policy

@ethancleary
ethancleary@ifa.ie

**IFA.ie/Digital**

# Irish Farmers' Association

**The IFA is Ireland's largest farming representative organisation. We have protected and defended the interests of Irish farmers in all sectors for more than 60 years.**

**We represent Irish farmers at home and in Europe, lobbying and campaigning for improved conditions and incomes for farm families.**

**We also provide representation, support and advice to members on an individual basis.**

**IFA.ie/Digital**

**Farm Business Skillnet**

**Access for every farmer to the digital skills and technologies they need to participate in the digital economy**

**Farm Business Skillnet** undertook a research project with **Amárach Research** to survey farmers and relevant stakeholders in Ireland**.**
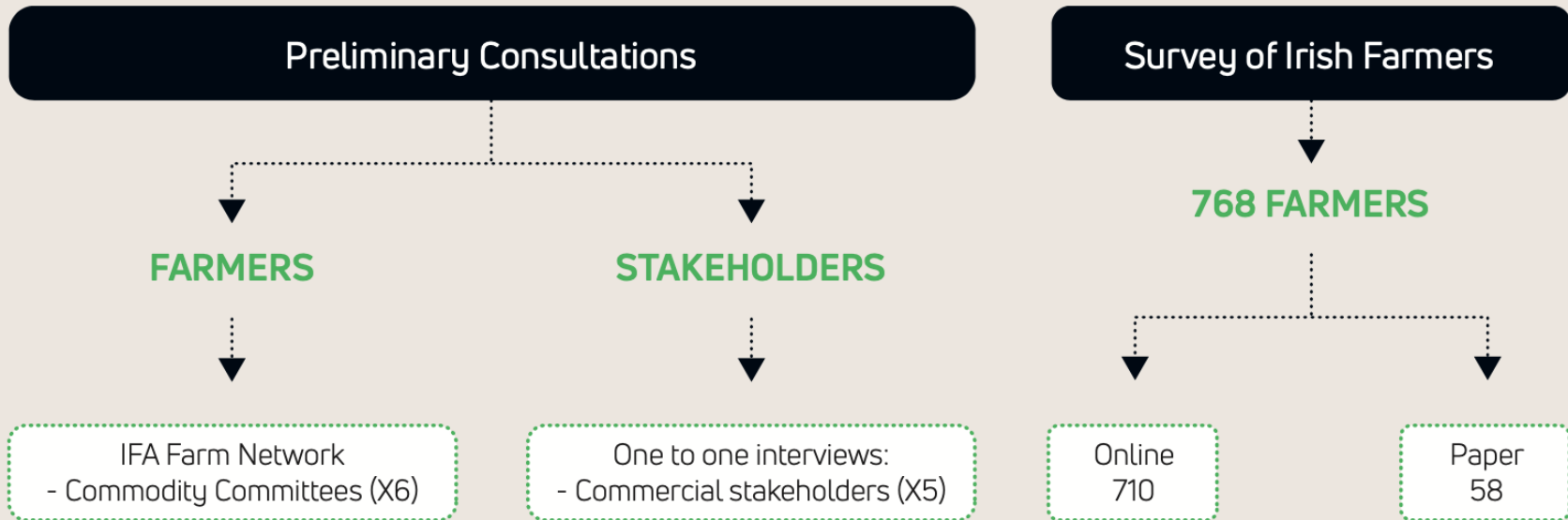
- **Current awareness** and usage of farm technology.

- **Barriers** and **positives** to using farm technology.

- **Training** and **education**.

**IFA.ie/Digital**

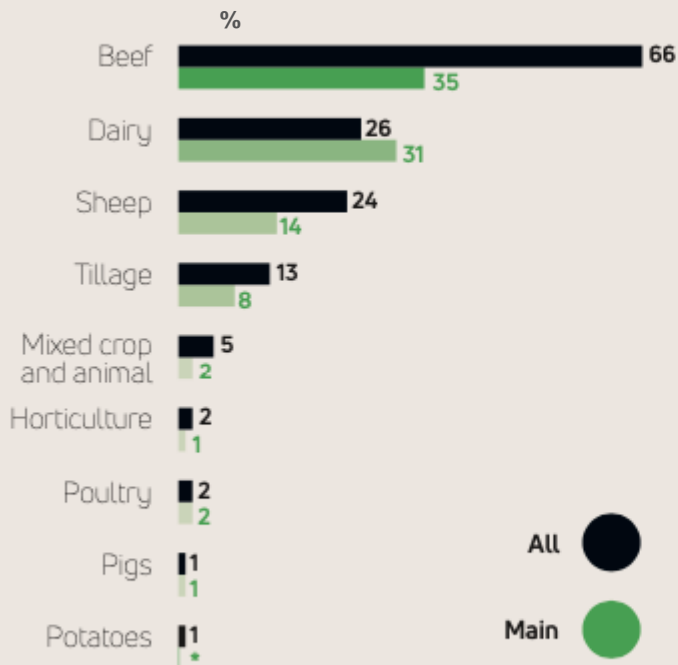66 Those working in the industry are of the view that advocacy and communication will be paramount in developing and maintaining technological adoption on farms. 99

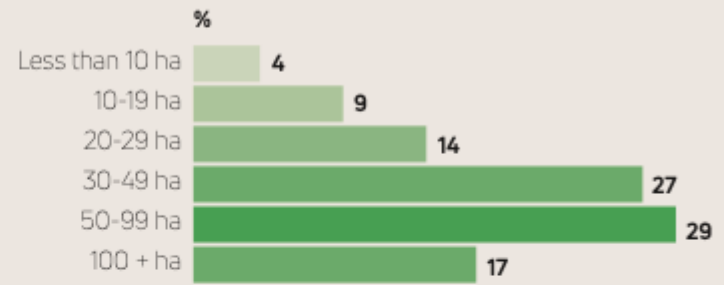# Research Methodology

**Preliminary Consultations**

**FARMERS**

IFA Farm Network
- Commodity Committees (X6)

**STAKEHOLDERS**

One to one interviews:
- Commercial stakeholders (X5)

**Survey of Irish Farmers**

**768 FARMERS**

Online
710

Paper
58

# Overall Profile

## FARM ENTREPRISE

%

| | All | Main |
|---|---|---|
| Beef | 66 | 35 |
| Dairy | 26 | 31 |
| Sheep | 24 | 14 |
| Tillage | 13 | 8 |
| Mixed crop and animal | 5 | 2 |
| Horticulture | 2 | 1 |
| Poultry | 2 | 2 |
| Pigs | 1 | 1 |
| Potatoes | 1 | * |

All ●
Main ●

## FARM SIZE

%

| | |
|---|---|
| Less than 10 ha | 4 |
| 10-19 ha | 9 |
| 20-29 ha | 14 |
| 30-49 ha | 27 |
| 50-99 ha | 29 |
| 100 + ha | 17 |

## REGION

Conn/Ulster 27%

Leinster 32%

Dublin 2%

Munster 38%

# Overall Profile

## AGE

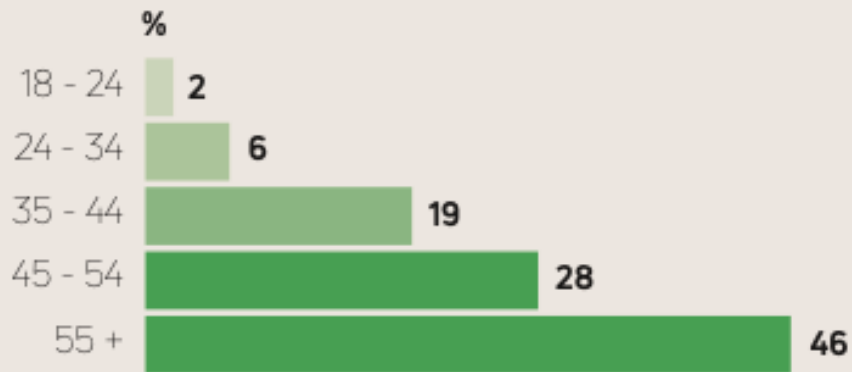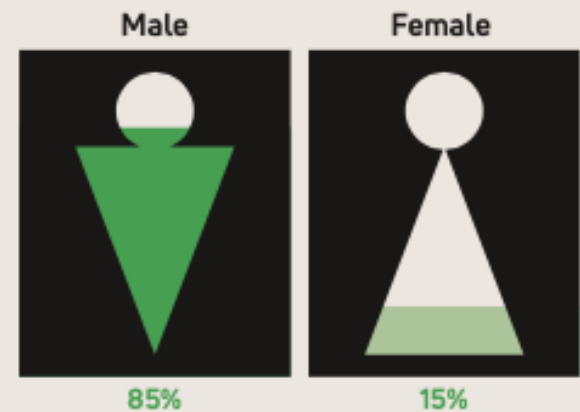| Age | % |
|-----|-----|
| 18 - 24 | 2 |
| 24 - 34 | 6 |
| 35 - 44 | 19 |
| 45 - 54 | 28 |
| 55 + | 46 |

## GENDER

Male — 85%

Female — 15%
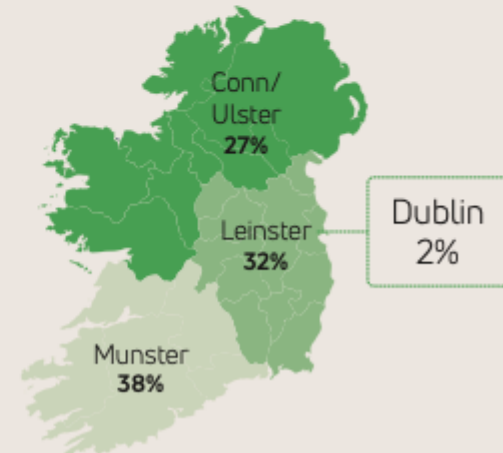
# Key Takeaways

# Technology Confidence

There is a strong use of **technology** among a widespread group of those surveyed.

The **majority** have a **smartphone (84%)** and a **laptop (69%).**

**70%** use farming related apps with **dairy** and **tillage** farmers most likely to use **farming apps**.

Unsurprisingly **younger cohorts** are more **confident** in tech.

**Confidence** in everyday tech and **likelihood to invest** in tech go hand in hand.

**IFA.ie/Digital**

There is a **positive attitude** towards tech:

- **46%** of farmers claim to be **already using** tech on-farm
- **40% plan** to embrace in the future

**BUT** lots of work to do!

Only **two systems** have **over 75%** adoption in a relevant sector:

- **Calf registration system** in **Dairy** with **86%**
- **GPS** machine guidance in **Tillage** with **77%**

**IFA.ie/Digital**

**Current Technology Usage**

# Barriers to Adoption

**IFA.ie/Digital**

"Aside from broadband, increased support on training would have one of the most positive effects."

**55%** identify the lack of, or quality of, **broadband** as the **main barrier.**

This is followed by the **cost of the initial investment** and the **support** and **maintenance costs** of **technology.**

**60%** included access to **support** and **training** in their top **three barriers.**

**Confidence** in usage is key for many – those who are **not confident** in everyday technology are more likely to **see access to support** and **training** as a **barrier.**

# Barriers to Adoption

| Barrier | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Availability or quality of internet connection | 55 | 14 | 11 | 9 | 6 | 5 |
| Cost of purchasing and maintaining or servicing technology | 23 | 27 | 20 | 14 | 11 | 4 |
| Lack of confidence in using it | 9 | 15 | 16 | 21 | 24 | 13 |
| Access to support and training | 8 | 26 | 26 | 21 | 11 | 6 |
| Concerns about data privacy and security | 3 | 9 | 16 | 17 | 18 | 34 |
| Unable to see its benefits | 2 | 8 | 10 | 16 | 27 | 35 |

Legend: ● 1  ● 2  ● 3  ● 4  ● 5  ● 6
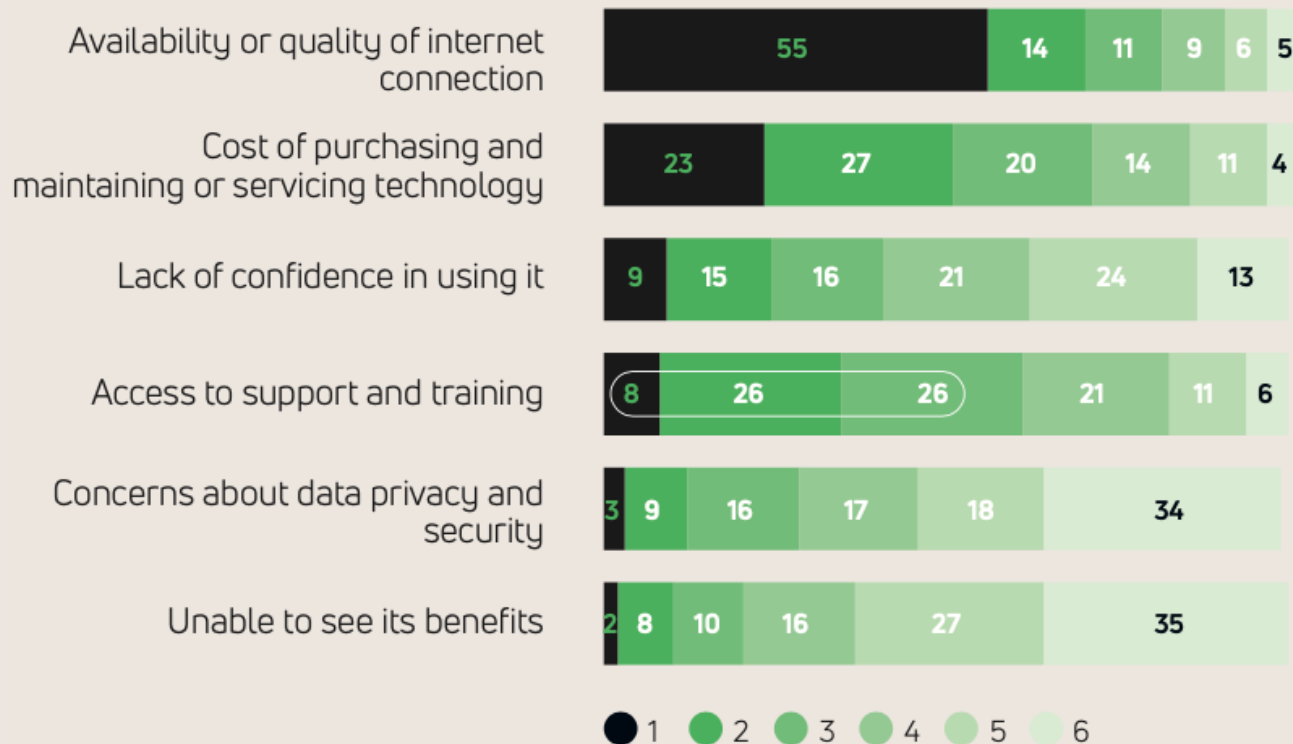
**Agricultural media** has a strong influence on farmers' ag tech adoption **(42%)**

- This rose to **52%** for the **under 35s**

**Close collaboration** and buy-in from **farm advisors** is important – a key channel to increase adoption.

**Social relationships** should be leveraged where farmers get the opportunity to see how **peers** are using tech and **learn** from **one another**.
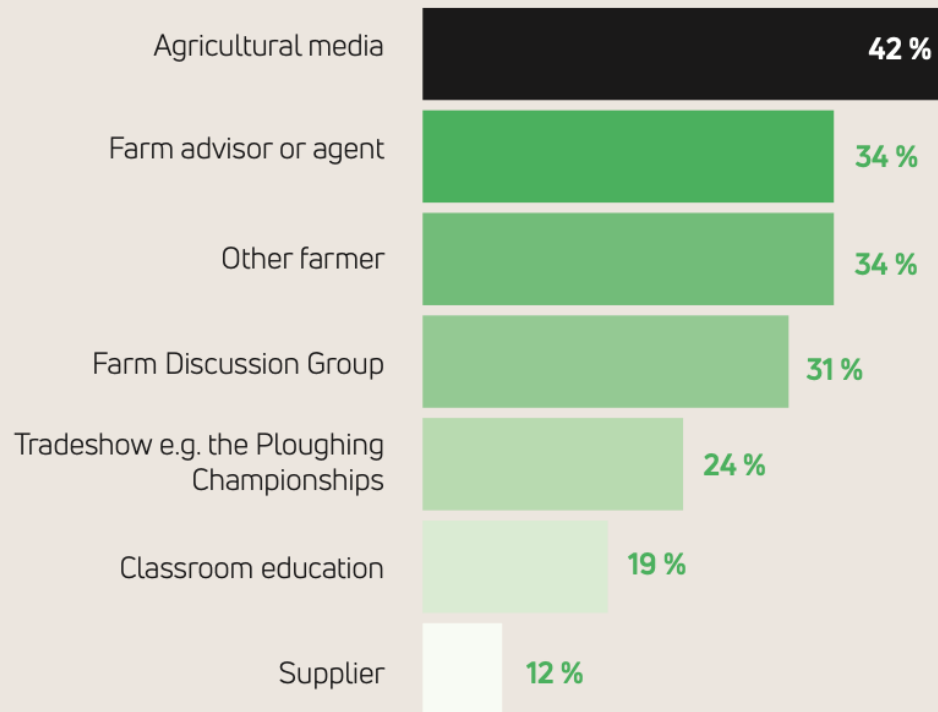
# Leveraging Current Farmer Experiences

## IFA.ie/Digital

❝ There is an acceptance that farmers will need to see first-hand evidence of technology working and of claims made by software providers. ❞

# Leveraging Current Farmer Experiences

*What or who influenced your decision to use farming technologies?*

| Category | Percentage |
|---|---|
| Agricultural media | 42 % |
| Farm advisor or agent | 34 % |
| Other farmer | 34 % |
| Farm Discussion Group | 31 % |
| Tradeshow e.g. the Ploughing Championships | 24 % |
| Classroom education | 19 % |
| Supplier | 12 % |

Base: All that have or are using some - 581

# Leveraging Current Farmer Experiences

## How does using technology help you in your daily work on the farm?

| Category | Percentage |
|---|---|
| Save time | 66 % |
| Reduces the amount of administration | 62 % |
| I know more about my livestock | 58 % |
| Access to data and information helps me to make informed decisions | 54 % |
| Helps reduce input costs and use e.g. fuel, fertiliser | 32 % |
| Reduces manual labour | 32 % |
| Improve outputs and yields | 30 % |
| I know more about my soil and crop conditions | 14 % |
| Other | 1 % |
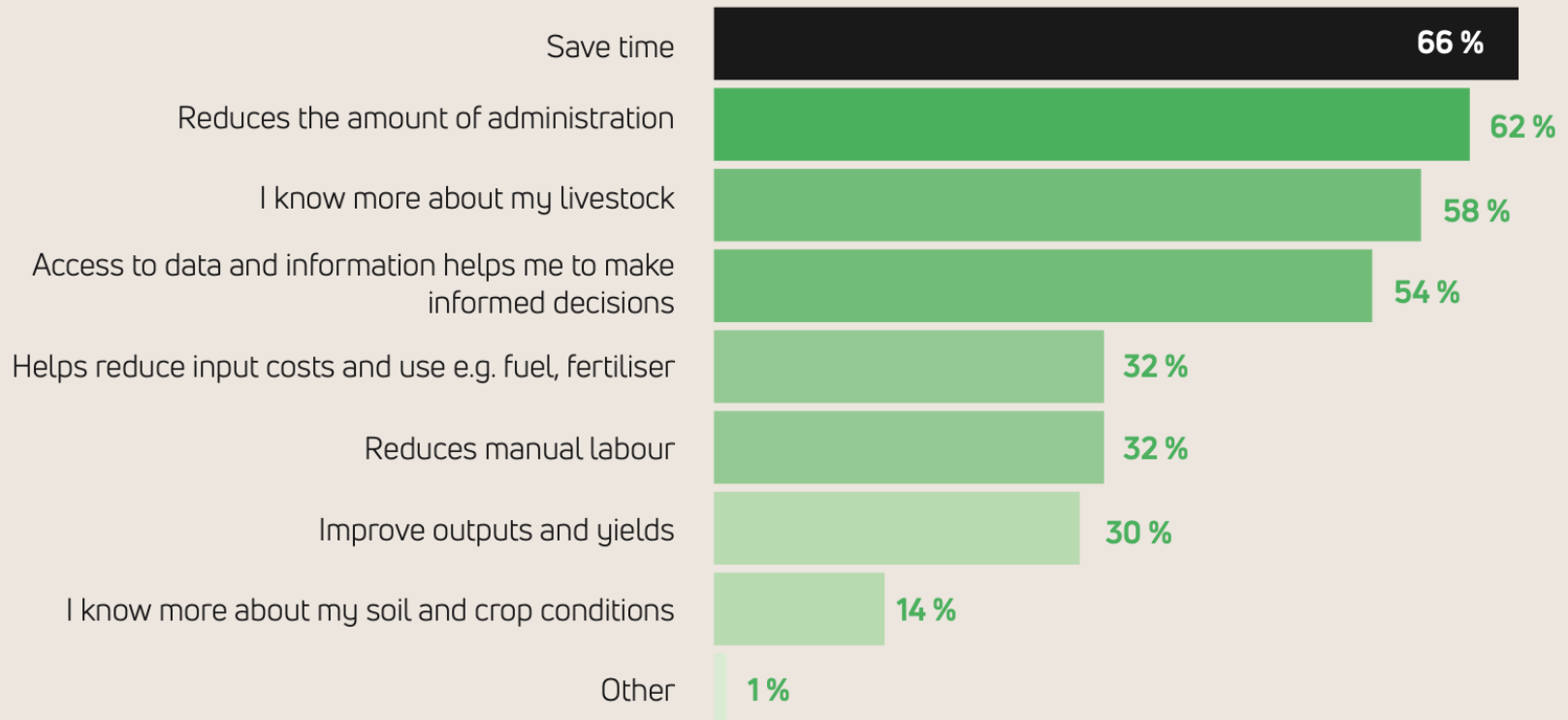
Base: All that have or are using some - 573

# Education & Training

**IFA.ie/Digital**

" One of the core aims of this report is to analyse and define the digital skills gaps and requirements. "

**25%** of those who have completed training, have **completed courses** in **digital farming technology.**
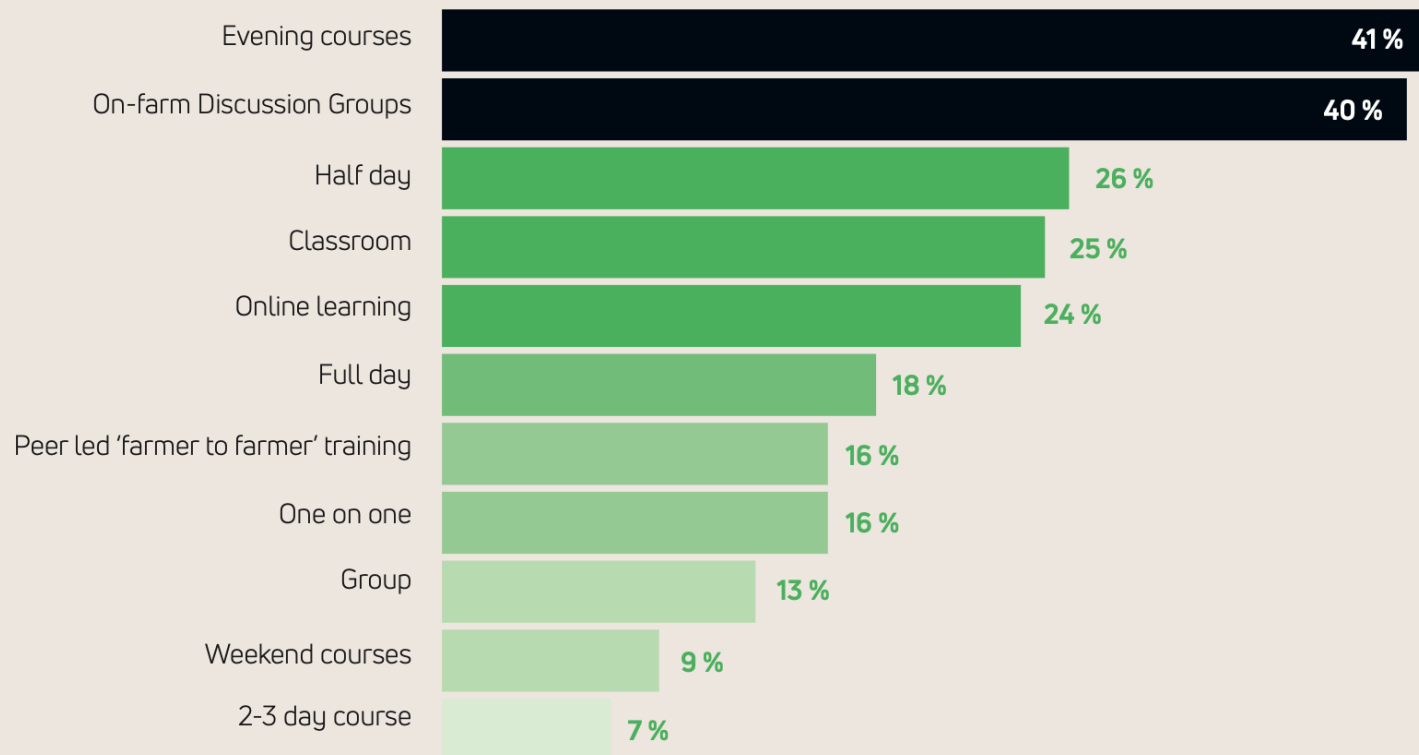
Those who have **completed digital training** courses are more **likely to invest** in **technology** in the future.

In an ideal situation, farmers feel **on-farm Discussion Groups** are a **better learning environment**, with **evening** the most suitable.

**Under 35s** feel most **comfortable** with **online learning** but still are just as likely to value **DG**.

# Education & Training

## *What type of learning environment would work best for you?*

| Learning environment | Percentage |
|---|---|
| Evening courses | 41 % |
| On-farm Discussion Groups | 40 % |
| Half day | 26 % |
| Classroom | 25 % |
| Online learning | 24 % |
| Full day | 18 % |
| Peer led 'farmer to farmer' training | 16 % |
| One on one | 16 % |
| Group | 13 % |
| Weekend courses | 9 % |
| 2-3 day course | 7 % |

Base: All respondents - 759

**Tailored face-to-face** training, **KT groups** and **ag-tech** advisors are the **preferred** forms of **support** to help farmers **adopt tech**.

An openness to **video-based training** is also evident, particularly amongst **tillage farmers**, and those **under 45**, both of whom are also receptive to **online documentation**.

# Supports & Incentives

## IFA.ie/Digital

"Aside from broadband, increased support on training would have one of the most positive effects."

**Financial incentives** would be the most likely factor to **increase use** or **adoption.**

Aside from broadband, **increased support** on **training** would have one of the **most positive effects.**
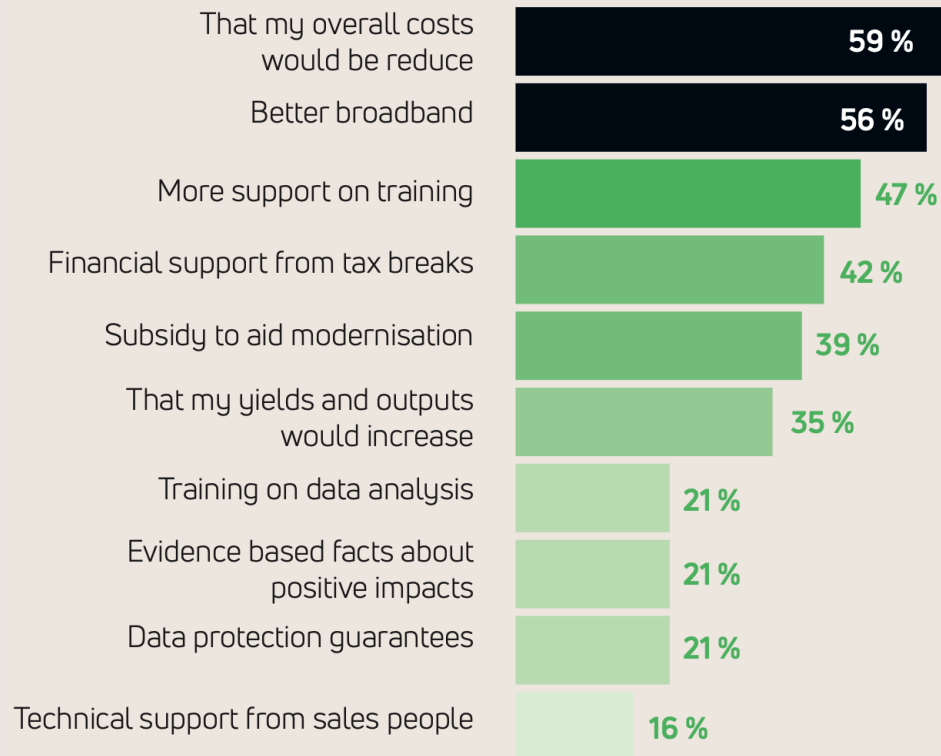
# Supports & Incentives

## IFA.ie/Digital

❝ Aside from broadband, increased support on training would have one of the most positive effects. ❞

# Supports & Incentives

*What incentives would encourage you to use/ increase use of digital?*

| Incentive | Percentage |
|---|---|
| That my overall costs would be reduce | 59 % |
| Better broadband | 56 % |
| More support on training | 47 % |
| Financial support from tax breaks | 42 % |
| Subsidy to aid modernisation | 39 % |
| That my yields and outputs would increase | 35 % |
| Training on data analysis | 21 % |
| Evidence based facts about positive impacts | 21 % |
| Data protection guarantees | 21 % |
| Technical support from sales people | 16 % |

Base: All respondents - 749

# Key Drivers

**IFA.ie/Digital**

" A smartphone is a farmer's office computer - software/apps and other technologies should be designed and managed through the smartphone. "

1 **Increase confidence**

2 **Build appreciation** of **cost vs benefits**

3 Provide **hands-on practical** and **peer-led** approach to **learning** and **support**

4 **Support** through **financial incentives** are **valued**

5 **Support** for **training & development**

6 **Rural broadband** accessibility is **key**

# So, What Next?

**IFA.ie/Digital**

# Ag IoT Pilot Use Cases

- **Soil Moisture**
- **Soil Temperature**
- **Soil Mapping**
- Soil pH
- Soil Aeration
- Soil Fertility
- Soil NPK Level

IFA.ie/Digital

# demeter

## h2020-demeter.eu

| | | | |
|---|---|---|---|
| **60** | **6000** | **38000** | **25** |
| European Partners | Farmers | Devices & sensors | Deployment sites |

**Access for every farmer to the digital skills and technologies they need to participate in the digital economy**

*ethancleary@ifa.ie*

*@ethancleary*

*IFA.ie/Digital*