



Advancing Digital Skills in European Farmer Advisors

D 2.2 Report on the learners' profiles and expectations

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NEW GENERATION



D2.2-Report on the learners' profiles and expectations

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1. Introduction

DigiFarm aims to create an innovative and interactive training programme that enables agricultural advisors to leverage digital tools, Earth Observation data and smart-farming applications to provide high-quality, tailored advice to farmers and support the digital and green transition of European agriculture. The primary target group are farmer advisors (public and private), together with related intermediary profiles (e.g. staff of farmers' organisations and cooperatives, input suppliers, training providers), who need to update their skills in precision/smart agriculture, environmental sustainability, business and entrepreneurship, and key digital competences.

Despite the availability of advanced digital solutions, the adoption of smart farming tools in the agricultural sector remains limited; strengthening advisors' skills is therefore essential to bridge the gap between research, technology providers and farmers, in order to support more sustainable, productive and resilient farming systems.

Within this overall objective, the specific purpose of this deliverable is to prepare the ground for the DigiFarm training by identifying *who* the potential learners are and *what* they need in terms of skills and competences. According to the project plan, the role of Confagricoltura in this activity is to:

- identify and describe the pool of potential learners
- design a common survey methodology to assess training needs across partner countries
- collect and consolidate data provided by partners
- produce a consolidated report summarising learners' profiles and expectations and proposing a preliminary formulation of learning groups.

2. Pool of potential learners and target profiles

The target audience to create the pool of learners is categorised into the following groups:

- Farmer advisors and agricultural consultants
- Staff from farmers' organisations, cooperatives and producer groups who provide technical or advisory support
- Advisors from public extension services or regional advisory bodies
- Professionals from innovation support services or digital agriculture hubs involved in advisory work with farmers.

To ensure a coherent and comparable pool across partner countries, Confagricoltura proposes the following eligibility criteria:

- Direct involvement in advisory or support activities for farmers and agri-food enterprises
- Interest in digitalisation, smart farming and sustainability
- Availability to participate in training activities of the project
- Basic capacity to use digital tools (e.g. email, online platforms) to access the training

Drawing on previous initiatives and internal expert consultations, Confagricoltura proposes three preliminary target profiles. These are working categories that will be validated and refined by the survey:

Traditional advisors

- Strong experience in traditional advisory services
- Limited exposure to digital tools, EO data and smart farming applications
- Main needs: basic digital and data literacy; introduction to remote sensing indicators; orientation in simple, user-friendly tools

Smart Farming Implementers

- Already using digital tools (farm management software, GPS, sensors, etc.)
- Interested in optimising and integrating state-of-the-art EO technologies
- Main needs: data analysis for decision-making; data management and interoperability; data privacy and security

Green Economy Experts

- Focus on sustainability, environmental protection and circular economy
- May not be fully familiar with EO and digital tools
- Main needs: understanding how digital and EO data can support impact measurement (soil, water, carbon); development of circular and green advisory models.

These profiles serve to guide the survey design and the subsequent segmentation of the pool of learners. The final learning groups will be evidence-based and derived from the survey results.

2.1 Data collection tools and partner roles

To collect comparable data across all partners, Confagricoltura will prepare a shared online questionnaire, using a common digital tool (google form).

Roles:

- **Confagricoltura** will:
 - coordinate the design of the questionnaire
 - set up and manage the online form
 - carry out the **cross-country analysis** and prepare this report.
- **Partner organisations** will:
 - disseminate the survey through their **networks of farmer advisors** and relevant stakeholders;
 - support translation/adaptation of the questionnaire where necessary;

- promote participation to reach a meaningful number of responses.

3. Survey design for assessing training needs

The survey designed and coordinated by Confagricoltura pursues three main objectives:

1. To characterise the pool of potential learners, in terms of background, role, organisation, experience and sectors served.
2. To assess their current level of knowledge and use of digital and smart farming tools, including EO data.
3. To identify their training needs, expectations and preferences regarding future training activities in DigiFarm.

These objectives are directly linked to the expected output of Activity 2: a **clear description of the pool of learners and their needs**, which will be used to formulate learning groups.

3.1 Structure of the questionnaire

Confagricoltura proposes a questionnaire with four main sections:

1. Section A – Background and profile

- Country and region
- Type of organisation (farmers' association, cooperative, public extension, private consultancy, tech provider, etc.)
- Current role as advisor
- Years of experience in advisory work
- Main agricultural sectors covered

2. Section B – Experience with digital tools and EO data

- Self-assessment of digital skills (Likert scale)
- Use of farm management systems, sensors, satellite/drone imagery, mobile apps
- Frequency and purposes of use (if any) in advisory work
- Perceived personal barriers to adoption of digital tools and EO data

3. Section C – Training needs and interests

- Interest in specific topics (EO basics, smart farming, data analysis, digital tools for sustainability, circular economy models, etc.)
- Priority areas for upskilling (selection of top priorities)
- Preferred training formats (online, blended, in-person, live vs self-paced)

- Expected impact on advisory practice

4. Section D – Practical aspects and motivation

- Availability for training (periods, time slots, duration)
- Language preferences
- Motivation to participate
- Willingness to engage in further activities (e.g. pilots, community of practice)

3.2 Survey Method

Confagricoltura developed and provided the basic structure of the questionnaire, which was subsequently discussed with all consortium partners. Partners contributed feedback, and the final structure was jointly reviewed and approved.

During these discussions, it was acknowledged that a common barrier to attracting survey participants is the use of English as a foreign language, particularly in Greece, Cyprus, and Italy. To address this challenge and ensure broad and inclusive participation across all participating countries (Cyprus, Greece, Italy, and Ireland), it was agreed that the questionnaire would be made available in three languages: English, Greek, and Italian.

Below, the questionnaire content is presented in English, together with the corresponding Google Form link used for circulation across each country and organisational network.

The questionnaires in Greek and Italian, along with their respective Google Form links, are provided in [Annex I](#).

3.3 Google Form Questionnaire

Google form Survey available [here](https://forms.gle/bxpWRafJConGguMw7): <https://forms.gle/bxpWRafJConGguMw7>

Title: DIGIFARM Learning groups - Survey

Introduction:

DigiFarm is an Erasmus+ project (KA220-VET, Grant Agreement No. 2025-1-CY01-KA220-VET-000363436) that aims to support agricultural advisors in using digital tools and data to promote more sustainable and efficient farming practices. The consortium brings together experts in remote sensing, smart farming, sustainability and business development from Cyprus, Greece and Italy.

This questionnaire is addressed to agricultural advisors and related professionals and aims to identify your interests and training needs in four areas:

- A) Remote Sensing (RS) technologies and applications**
- B) Tools and data for smart farming**
- C) Green and soft skills**
- D) Business development skills**

Your answers will help us design open and free online training courses that are relevant to your daily work and adapted to your level of experience.

The survey is anonymous and your responses will be used only in aggregated form for the purposes of the DigiFarm project and its evaluation, in line with EU data protection rules. Participation is voluntary and you may stop completing the questionnaire at any time. The estimated time to complete it is about 10 minutes.

Thank you very much for your contribution!

-
Questionnaire (Questions marked with an asterisk * are mandatory)

Q1. Please indicate your country*

(Open answer)_____

Q2. DigiFarm is developing open and free online training courses designed to support agricultural advisors in promoting sustainability and efficiency in the agricultural sector. Please indicate which of the following training topics you would be interested in participating in (**you may select more than one**): *

- Introduction to Earth Observation (EO) and satellite imagery
- Practical use of smart farming technologies on farms
- Data analysis and decision support
- Digital tools for climate and environmental performance
- Business and advisory models for the circular economy
- Other (please specify): _____

Q3. Please indicate your age

- Less than 30
- 30-50 years
- 50+

Q4. Please indicate your education level

- non-university education
- bachelor's degree
- master's degree
- doctorate

Q5. Please indicate your current role*

- Farmer advisor
- Technical staff in farmers' association / cooperative
- Public extension officer
- Other (please specify): _____

Q6. Please indicate how many years you have been working in the agricultural sector

- Up to 5 years
- 5-15 years
- 15+ years

Q7. How would you rate your overall digital skills? *

- Low
- Medium
- High
- none

Q8. Which of the following digital tools do you currently use in your work with farmers? *

- Farm management information systems (FMIS)

- GPS / guidance systems
- Sensors (soil, weather, crop)
- Satellite or drone imagery
- Mobile apps for advisory services
- I do not use digital tools yet

Q9. Please indicate your level of knowledge in the following areas: Remote sensing and Earth Observation Basics:

- Very low
- Low
- Medium
- High
- Very high
- none

Q10. Please indicate your level of knowledge in the following areas: Remote sensing and Earth Observation basics: Interpretation of vegetation indices (e.g. NDVI):

- none
- Very low
- Low
- Medium
- High
- Very high

Q11. Please indicate your level of knowledge in the following areas: Variable Rate Technologies (map or sensor based data to efficiently adjust inputs such as water, fertilisers, etc across the field).

- none
- Very low
- Low
- Medium
- High
- Very high

Q12. Please indicate your level of knowledge in the following areas: Digital tools for monitoring environmental impacts (e.g. sensors, weather stations, advisory software, satellite/drone imagery):

- none
- Very low
- Low
- Medium
- High
- Very high

Q13. Please indicate your level of knowledge in the following areas: Circular and green economy models in agriculture

- none
- Very low
- Low
- Medium
- High
- Very high

Q14. What are the main barriers that limit your use of digital tools in advisory services?

- Lack of time
- Lack of training opportunities
- Lack of organisational support
- Cost of technologies
- Lack of infrastructure / connectivity
- Not a priority for my business
- Others

Q15. How would you prefer to attend DigiFarm trainings?

- Online live sessions
- Self-paced online modules
- Other

3.4 Data protection and ethical considerations

Confagricoltura will ensure that:

- Participation in the survey is voluntary and based on informed consent;
- Data are collected and stored in line with GDPR and relevant national regulations;
- Only aggregated and anonymised information is included in the consolidated report;
- Respondents are informed about the purpose of data collection and the use of results for the project.

4. Consolidated report on survey results

The present document describes in advance how Confagricoltura will process and present the results of the survey once data collection is completed.

4.1 Data analysis approach

Confagricoltura will:

- export and merge all national datasets into a single consolidated document;
- cluster respondents into profile groups (e.g. Geo-Tech Novices, Smart Farming Implementers, Green Economy Experts) based on their answers;
- summarise any qualitative inputs from open-ended questions or interviews.

This analytical approach allows the deliverable to provide both quantitative evidence (e.g. percentage of advisors using EO tools) and qualitative insights (e.g. perceived barriers and expectations).

4.2 Learners' profiles and expectations

The consolidated report produced by Confagricoltura will include:

- A description of the overall pool of potential learners,
- An overview of experience levels and agricultural sectors covered;
- A summary of current use of digital and smart farming tools;
- Identification of priority training needs and topics of interest;
- An analysis of expectations regarding training formats, duration and impact.

4.3 Preliminary formulation of learning groups

Using the survey results, Confagricoltura will propose a preliminary formulation of learning groups. For each group, the report will:

- Provide a clear definition and typical profile;
- Indicate the main training needs identified by respondents in that group;
- Report the approximate share of respondents belonging to the group, possibly also by country;
- Highlight implications for training delivery.

The proposed learning groups will be evidence-based and derived from the actual data collected, ensuring that the future training activities can be tailored to the diversity of the pool of learners.

5. Annex I

5.1 The Questionnaire translated in Italian

Google form Survey available [here](#):

Title: DIGIFARM gruppi di apprendimento

Introduction:

DigiFarm è un progetto Erasmus+ (KA220-VET, Accordo di sovvenzione n. 2025-1-CY01-KA220-VET-000363436) che mira a supportare i consulenti agricoli nell'uso di strumenti digitali e dati per promuovere pratiche agricole più sostenibili ed efficienti. Il consorzio riunisce esperti in telerilevamento, agricoltura intelligente, sostenibilità e sviluppo aziendale provenienti da Cipro, Grecia e Italia.

Il presente questionario è rivolto ai consulenti agricoli e ai professionisti del settore e mira a identificare i vostri interessi e le vostre esigenze formative in quattro aree:

A) Tecnologie e applicazioni di telerilevamento (RS)

B) Strumenti e dati per l'agricoltura intelligente

C) Competenze ecologiche e trasversali

D) Competenze di sviluppo aziendale

Le vostre risposte ci aiuteranno a progettare corsi di formazione online gratuiti e aperti, pertinenti al vostro lavoro quotidiano e adeguati al vostro livello di esperienza.

Il sondaggio è anonimo e le vostre risposte saranno utilizzate solo in forma aggregata ai fini del progetto DigiFarm e della sua valutazione, in linea con le norme UE sulla protezione dei dati. La partecipazione è volontaria e potete interrompere la compilazione del questionario in qualsiasi momento. Il tempo stimato per completarlo è di circa 5 minuti.

Grazie mille per il vostro contributo!

Questionario (Le domande contrassegnate con un asterisco * sono obbligatorie)

Q1. Indica il tuo Paese*

Risposta aperta _____

Q2. DigiFarm sta sviluppando corsi di formazione online aperti e gratuiti, progettati per supportare i consulenti agricoli nella promozione della sostenibilità e dell'efficienza nel settore agricolo. Indica a quali dei seguenti temi formativi saresti interessato/a a partecipare (puoi selezionarne più di uno): *

- Introduzione all'Osservazione della Terra (EO) e alle immagini satellitari
- Uso pratico delle tecnologie di smart farming in azienda agricola
- Analisi dei dati e supporto alle decisioni
- Strumenti digitali per le prestazioni climatiche e ambientali
- Modelli di business e di consulenza per l'economia circolare

Altro (specificare): _____

Q3. Indica la tua età

- Meno di 30 anni
- 30-50 anni
- 50+ anni

Q4. Indica il tuo livello di istruzione

- istruzione non universitaria
- laurea triennale
- laurea magistrale

dottorato

Q5. Indica il tuo ruolo attuale*

- Consulente/Advisor per gli agricoltori
- Personale tecnico di associazione/cooperativa di agricoltori
- Funzionario pubblico dei servizi di consulenza/assistenza tecnica (extension)
- Altro (specificare): _____

Q6. Indica da quanti anni lavori nel settore agricolo

- Fino a 5 anni
- 5-15 anni
- 15+ anni

Q7. Come valuteresti le tue competenze digitali complessive? *

- Basse
- Medie
- Alte
- Nessuna

Q8. Quali dei seguenti strumenti digitali utilizzi attualmente nel tuo lavoro con gli agricoltori? *

- Sistemi informativi di gestione aziendale (FMIS)
- Sistemi GPS / di guida
- Sensori (suolo, meteo, colture)
- Immagini satellitari o da drone
- App mobili per servizi di consulenza
- Non utilizzo ancora strumenti digitali

Q9. Indica il tuo livello di conoscenza nelle seguenti aree: Basi di telerilevamento e EO: interpretazione degli indici di vegetazione (es. NDVI) *

- Molto basso
- Basso
- Medio
- Alto
- Molto alto

- Nessun0

Q10. Indica il tuo livello di conoscenza nelle seguenti aree: Tecnologie a dose variabile

- Molto basso
- Basso
- Medio
- Alto
- Molto alto
- Nessun

Q11. Indica il tuo livello di conoscenza nelle seguenti aree: Basi di telerilevamento e EO: interpretazione degli indici di vegetazione (es. NDVI):

- Molto basso
- Basso
- Medio
- Alto
- Molto alto
- Nessuno

Q12. Indica il tuo livello di conoscenza nelle seguenti aree: Strumenti digitali per il monitoraggio degli impatti ambientali:

- Molto basso
- Basso
- Medio
- Alto
- Molto alto
- Nessuno

Q13. Indica il tuo livello di conoscenza nelle seguenti aree: Modelli di economia circolare e green economy in agricoltura

- Molto basso
- Basso
- Medio
- Alto
- Molto alto
- Nessuno

Q14. Quali sono le principali barriere che limitano il tuo utilizzo di strumenti digitali nei servizi di consulenza?

- Mancanza di tempo
- Mancanza di opportunità formative
- Mancanza di supporto organizzativo
- Costo delle tecnologie
- Mancanza di infrastrutture/connettività

- Non è una priorità per la mia attività
- Altro/i

Q15. Come preferiresti seguire le formazioni DigiFarm?

- Sessioni online in diretta
- Moduli online autoformativi (self-paced)
- Altro

5.2 The Questionnaire translated in Greek

Google form Survey available [here](#):

Τίτλος: Ομάδες Μάθησης DigiFarm – Ερωτηματολόγιο

Εισαγωγή:

Το DigiFarm είναι ένα έργο Erasmus+ (KA220-VET, Grant Agreement No: 2025-1-CY01-KA220-VET-000363436) που στοχεύει στην υποστήριξη των γεωργικών συμβούλων στη χρήση ψηφιακών εργαλείων και δεδομένων για την προώθηση πιο βιώσιμων και αποδοτικών γεωργικών πρακτικών. Η κοινοπραξία DigiFarm συγκεντρώνει ειδικούς στην τηλεπισκόπηση, την έξυπνη γεωργία, τη βιωσιμότητα και την επιχειρηματική ανάπτυξη από την Κύπρο, την Ελλάδα και την Ιταλία. Το παρόν ερωτηματολόγιο απευθύνεται σε γεωργικούς συμβούλους, γεωπόνους και συναφείς επαγγελματίες και έχει ως στόχο να εντοπίσει τα ενδιαφέροντα και τις εκπαιδευτικές ανάγκες σε τέσσερις θεματικούς τομείς:

A) Τεχνολογίες και εφαρμογές Τηλεπισκόπησης (Remote Sensing – RS)

B) Εργαλεία και απόκτηση δεδομένων για την έξυπνη γεωργία

Γ) Πράσινες και ήπιες δεξιότητες (επικοινωνία με αγρότες, κριτήρια ESG, πρότυπα βιωσιμότητας EFRAG, αρχές κυκλικής οικονομίας)

Δ) Δεξιότητες επιχειρηματικής ανάπτυξης

Οι απαντήσεις σας θα μας βοηθήσουν να σχεδιάσουμε ανοιχτά και δωρεάν διαδικτυακά εκπαιδευτικά προγράμματα που θα είναι σχετικά με την καθημερινή σας εργασία και προσαρμοσμένα στο επίπεδο εμπειρίας σας.

Η έρευνα είναι ανώνυμη και οι απαντήσεις σας θα χρησιμοποιηθούν μόνο σε συγκεντρωτική μορφή για τους σκοπούς του έργου DigiFarm και την αξιολόγησή του, σύμφωνα με τους κανόνες προστασίας δεδομένων της ΕΕ. Η συμμετοχή είναι εθελοντική και μπορείτε να διακόψετε τη συμπλήρωση του ερωτηματολογίου οποιαδήποτε στιγμή. Ο εκτιμώμενος χρόνος συμπλήρωσης είναι περίπου 5 λεπτά. Σας ευχαριστούμε θερμά για τη συμβολή σας!

Ερωτηματολόγιο (* Υποχρεωτικό πεδίο):

Q1. Παρακαλώ δηλώστε τη χώρα στην οποία δραστηριοποιείστε:

(Ανοιχτή απάντηση) _____

Q2. το έργο DigiFarm αναπτύσσει ανοιχτά και δωρεάν διαδικτυακά εκπαιδευτικά προγράμματα για την υποστήριξη των γεωργικών συμβούλων στη βιωσιμότητα και την αποδοτικότητα της γεωργίας.

Σε ποια από τα παρακάτω θέματα θα σας ενδιέφερε να συμμετάσχετε; (πολλαπλή επιλογή)*

- Εισαγωγή στην Παρατήρηση της Γης (ΕΟ) και στις δορυφορικές εικόνες
- Πρακτική χρήση τεχνολογιών έξυπνης γεωργίας στις γεωργικές εκμεταλλεύσεις
- Ανάλυση δεδομένων και υποστήριξη λήψης αποφάσεων
- Ψηφιακά εργαλεία για την κλιματική και περιβαλλοντική απόδοση
- Επιχειρηματικά / συμβουλευτικά μοντέλα για την κυκλική οικονομία

Q3. Παρακαλώ δηλώστε την ηλικία σας

- Κάτω των 30 ετών
- 30–50 ετών
- 50 ετών και άνω

Q4. Παρακαλώ δηλώστε το επίπεδο εκπαίδευσής σας

- Δευτεροβάθμια εκπαίδευση και/ή επαγγελματική κατάρτιση
- Πτυχίο (Bachelor)
- Μεταπτυχιακό δίπλωμα (Master)
- Διδακτορικό δίπλωμα (PhD)
- Άλλο: _____

Q5. Παρακαλώ δηλώστε τον τρέχοντα επαγγελματικό σας ρόλο *

- Γεωργικός σύμβουλος/Γεωπόνος
- Τεχνικό προσωπικό σε αγροτικό σύλλογο / συνεταιρισμό
- Δημόσιος γεωργικός σύμβουλος / υπάλληλος γεωργικών υπηρεσιών
- Άλλο: _____

Q6. Παρακαλώ δηλώστε πόσα έτη εργάζεστε στον αγροτικό τομέα

- Έως 5 έτη
- 5–15 έτη
- 15+ έτη

Q7. Πώς θα αξιολογούσατε συνολικά τις ψηφιακές σας δεξιότητες; *

- Καθόλου
- Χαμηλό επίπεδο
- Μεσαίο επίπεδο
- Υψηλό επίπεδο

Q8. Ποια από τα παρακάτω ψηφιακά εργαλεία χρησιμοποιείτε σήμερα στη δουλειά σας με τους αγρότες; *

- Συστήματα διαχείρισης γεωργικών εκμεταλλεύσεων (FMIS)
- Συστήματα GPS / καθοδήγησης
- Αισθητήρες (εδάφους, καιρού, καλλιεργειών)
- Δορυφορικές ή εναέριας (drone) εικόνες
- Εφαρμογές κινητών συσκευών για παροχή γεωργικών συμβουλών/εργαλείων

- Δεν χρησιμοποιώ ακόμη ψηφιακά εργαλεία
- Άλλο: _____

Q9. Παρακαλώ δηλώστε το επίπεδο γνώσεών σας στους ακόλουθους τομείς: Βασικές αρχές Τηλεπισκόπησης και Παρατήρησης της Γης (ΕΟ)*

- Καθόλου
- Πολύ χαμηλό
- Χαμηλό
- Μεσαίο
- Υψηλό
- Πολύ υψηλό

Q10. Παρακαλώ δηλώστε το επίπεδο γνώσεών σας στους ακόλουθους τομείς: Τηλεπισκόπηση και βασικές αρχές Παρατήρησης της Γης (ΕΟ): Ερμηνεία δεικτών βλάστησης (π.χ. NDVI)*

- Καθόλου
- Πολύ χαμηλό
- Χαμηλό
- Μεσαίο
- Υψηλό
- Πολύ υψηλό

Q11. Παρακαλώ δηλώστε το επίπεδο γνώσεών σας στους ακόλουθους τομείς: Τεχνολογίες Μεταβλητού Ρυθμού (Variable Rate Technologies – VRT): χρήση δεδομένων από χάρτες ή αισθητήρες για την αποδοτική προσαρμογή εισροών (όπως νερό, λιπάσματα κ.ά.) εντός της γεωργικής εκμετάλλευσης*

- Καθόλου
- Πολύ χαμηλό
- Χαμηλό
- Μεσαίο
- Υψηλό
- Πολύ υψηλό

Q12. Παρακαλώ δηλώστε το επίπεδο γνώσεών σας στους ακόλουθους τομείς: Ψηφιακά εργαλεία για την παρακολούθηση περιβαλλοντικών επιπτώσεων (π.χ. αισθητήρες, μετεωρολογικοί σταθμοί, λογισμικό συμβουλευτικής υποστήριξης, δορυφορικές/εναέριας εικόνες)*

- Καθόλου
- Πολύ χαμηλό
- Χαμηλό
- Μεσαίο
- Υψηλό
- Πολύ υψηλό
-

Q13. Παρακαλώ δηλώστε το επίπεδο γνώσεών σας στους ακόλουθους τομείς: Μοντέλα κυκλικής και πράσινης οικονομίας στη γεωργία*

- Καθόλου
- Πολύ χαμηλό
- Χαμηλό
- Μεσαίο
- Υψηλό
- Πολύ υψηλό

Q14. Ποια είναι τα βασικά εμπόδια που περιορίζουν τη χρήση ψηφιακών εργαλείων στις συμβουλευτικές σας υπηρεσίες; *

- Έλλειψη χρόνου
- Έλλειψη εκπαιδευτικών ευκαιριών
- Έλλειψη οργανωτικής υποστήριξης
- Κόστος τεχνολογιών
- Έλλειψη υποδομών / συνδεσιμότητας
- Δεν αποτελεί προτεραιότητα για την επαγγελματική μου δραστηριότητα
- Άλλο: _____

Q15. Πώς θα προτιμούσατε να παρακολουθήσετε τις εκπαιδεύσεις του DigiFarm; *

- Ζωντανές διαδικτυακές συνεδρίες
- Ασύγχρονα διαδικτυακά μαθήματα (αυτορυθμιζόμενη παρακολούθηση)
- Άλλο: _____

6. Annex II: DIGIFARM Learning groups – Questionnaire Results

6.1 Executive Summary

This report builds on Deliverable D2.2 – *Report on the learners' profiles and expectations* by consolidating questionnaire survey responses across partner countries and translating the WP2, Activity 2.2 framework into actionable insights for learner segmentation and modular training design. The report summarises the outcomes of the DigiFarm needs assessment, conducted to guide the development of an innovative and flexible training programme for agricultural advisors across Europe. In line with DigiFarm's objectives, the analysis examines advisors' skills, expectations, and challenges to support the creation of tailored learning pathways and the design of effective training modules.

The survey collected 121 responses across participating countries and revealed a diverse learner pool with mostly basic-to-intermediate digital and technological competencies. The adoption of smart farming tools remains limited, while interest in practical, application-oriented learning is consistently high. Key barriers reported by advisors include limited access to training opportunities, the cost of technologies, and infrastructure constraints—factors that highlight the importance of accessible, modular, and learner-centred training.

Based on the findings, four learner groups have been identified, reflecting distinct levels of readiness, tool adoption, and knowledge gaps. These groups provide the foundation for targeted learning scenarios and will directly inform the design of DigiFarm's modular curriculum. By aligning training content with documented learner needs, the analysis strengthens the project's capacity to deliver high-quality VET (*Vocational Education and Training*) solutions that support the digital and sustainable transformation of European agriculture.

6.2 Introduction

This report builds on Deliverable D2.2 – *Report on the learners' profiles and expectations* by consolidating questionnaire survey responses across partner countries and translating the WP2, Activity 2.2 framework into actionable insights for learner segmentation and modular training design. It summarises the outcomes of the DigiFarm needs assessment, carried out to guide the development of an innovative and flexible training programme for agricultural advisors across Europe. In line with DigiFarm's objectives, the analysis explores advisors' skills, expectations, and challenges to inform tailored learning pathways and the design of effective training modules.

The survey collected 121 responses across participating countries and revealed a diverse learner pool with mostly basic-to-intermediate digital and technological competencies. The uptake of smart farming tools is still limited, while demand for practical, application-oriented learning is consistently high. Reported barriers include limited access to training opportunities, the cost of technologies, and infrastructure constraints—highlighting the need for accessible, modular, and learner-centred training.

Based on these results, four learner groups have been identified, reflecting different levels of readiness, tool adoption, and knowledge gaps. These profiles will guide the development of targeted learning scenarios and directly inform the structure of DigiFarm's modular curriculum. Overall, the analysis strengthens the project's capacity to deliver high-quality VET (*Vocational Education and Training*) solutions that support the digital and sustainable transformation of European agriculture.

6.3 Purpose of the Report

This document has been developed as part of Work Package 2 – Activity 2, led by Confagricoltura, within the DigiFarm Erasmus+ project. Its purpose is to consolidate the outcomes of the needs assessment and to segment respondents into preliminary learning groups based on their profiles, skills, knowledge, expectations, and barriers. This analysis provides the foundation for the pedagogical design of the DigiFarm training programme and ensures that the curriculum, methods, and learning pathways respond accurately to the real conditions and capabilities of agricultural advisors across partner countries. The report also supports subsequent work packages by offering an evidence-based framework upon which the training modules (WP3) and implementation activities (WP4) will be structured.

6.4 Methodological Approach

The needs assessment was carried out through a structured questionnaire survey distributed across partner countries, collecting 121 responses from agricultural advisors, technical staff, consultants, and related professionals. The questionnaire explored several dimensions: demographic characteristics, educational background, professional roles, digital skills, thematic knowledge, tools currently used, training needs, perceived barriers, and preferred learning formats. The resulting dataset was analysed using descriptive statistics and cluster analysis to segment learners into meaningful groups based on digital readiness, knowledge levels, and tool adoption patterns. These learning groups serve as the basis for designing differentiated and targeted training scenarios in line with the objectives of Work Package 2 and the overall DigiFarm pedagogical strategy.

6.5 Overall Profile of Participants (Q1, Q3–Q6)

The merged survey dataset includes 121 responses. All respondents provided their country information (valid n=121). The number of valid responses is slightly lower for age (valid n=120), education level (valid n=120), and years of experience (valid n=118), due to missing answers in those items. The merged dataset does not contain a consistent variable on specific agricultural sectors (e.g., crops, livestock); therefore, a sector breakdown is not reported.

Country distribution (Figure 1) shows that responses were collected mainly from Greece (64; 52.9%), followed by Italy (22; 18.2%), Ireland (18; 14.9%) and Cyprus (17; 14.0%). Age distribution (Figure 2; valid n=120) includes 58 respondents in the 30–50 group (48.3%), 32 respondents aged 50+ (26.7%), and 30 respondents under 30 (25.0%). Education level (Figure 3; valid n=120) is reported primarily at Master's level

(59; 49.2%) and Bachelor's level (39; 32.5%), followed by Doctoral degree (PhD) (11; 9.2%) and Secondary/VET/non-university education (10; 8.3%), with one respondent selecting "Other" (1; 0.8%).

Regarding professional role (Figure 4; valid n=121), 56 respondents identify as agricultural advisors/agronomists (46.3%). Additional roles reported include consultants/project managers/researchers/IT specialists (11; 9.1%), technical staff in associations/cooperatives (8; 6.6%), and public agricultural advisors/extension officers (5; 4.1%). A further 41 respondents selected "Other/unspecified advisory-related roles" (33.9%). Finally, years of experience (Figure 5; valid n=118) is distributed across up to 5 years (43; 36.4%), 15+ years (42; 35.6%), and 5–15 years (33; 28.0%). Table 1 summarises the participant profile, presenting absolute numbers and relative shares for each category.

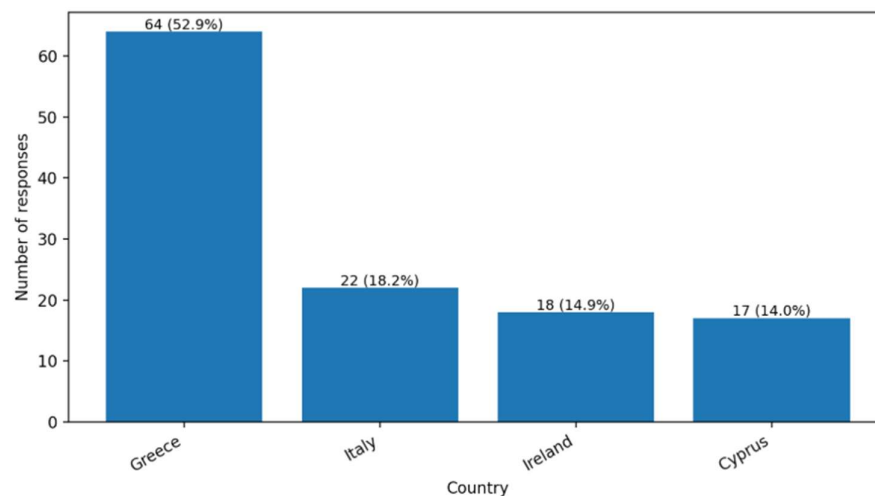


Figure 1. Respondents by country (n=121).

The figure shows the distribution of survey respondents by country. Greece accounts for 64 respondents (52.9%), followed by Italy with 22 (18.2%), Ireland with 18 (14.9%), and Cyprus with 17 (14.0%).

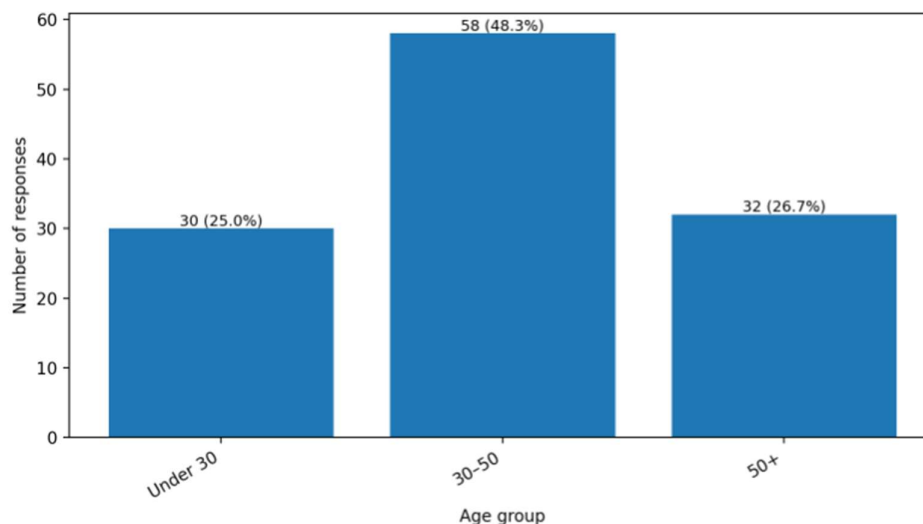


Figure 2. Respondents by age group (valid n=120).

The figure illustrates the age profile of respondents. The largest group is aged 30–50 with 58 respondents (48.3%), followed by 50+ with 32 (26.7%), and 30 with 30 (25.0%).

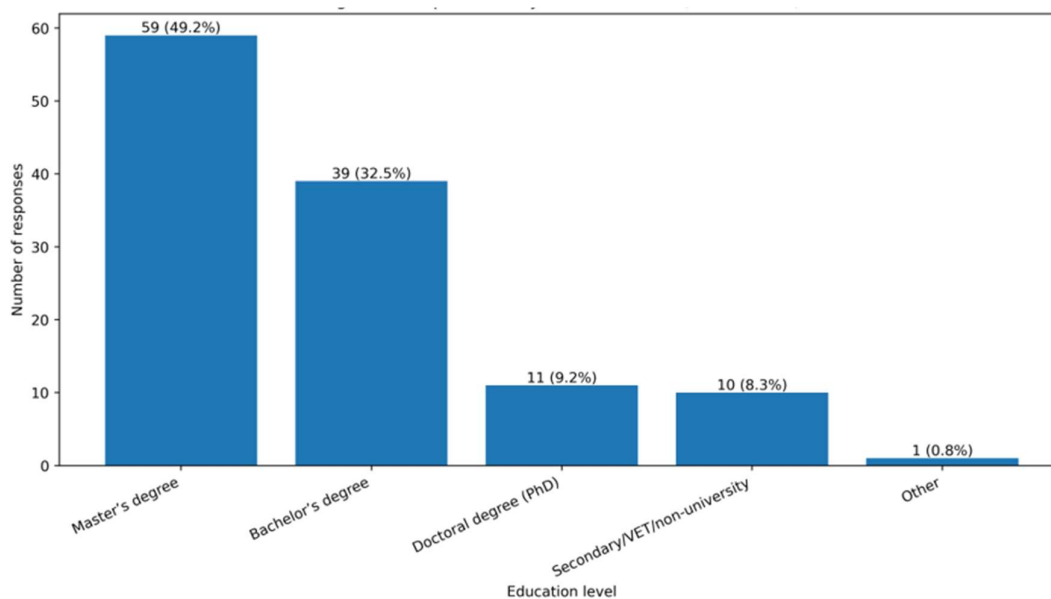


Figure 3. Respondents by education level (valid n=120).

The figure presents respondents' education levels. Master's degree is the most common qualification (59; 49.2%), followed by Bachelor's degree (39; 32.5%). Doctoral degree (PhD) is reported by 11 respondents (9.2%), Secondary/VET/non-university education by 10 (8.3%), and "Other" by 1 respondent (0.8%).

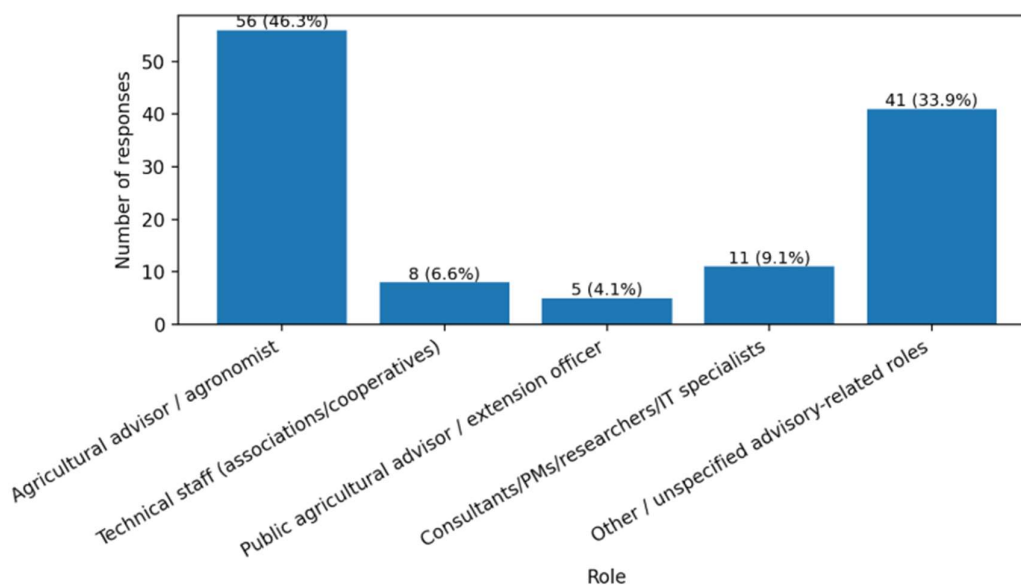


Figure 4. Respondents by professional role (n=121).

The figure describes the professional roles represented in the sample. Agricultural advisors/agronomists account for 56 respondents (46.3%). Other/unspecified advisory-related roles represent 41 (33.9%). Consultants/project managers/researchers/IT specialists account for 11 (9.1%), technical staff in associations/cooperatives for 8 (6.6%), and public agricultural advisors/extension officers for 5 (4.1%).

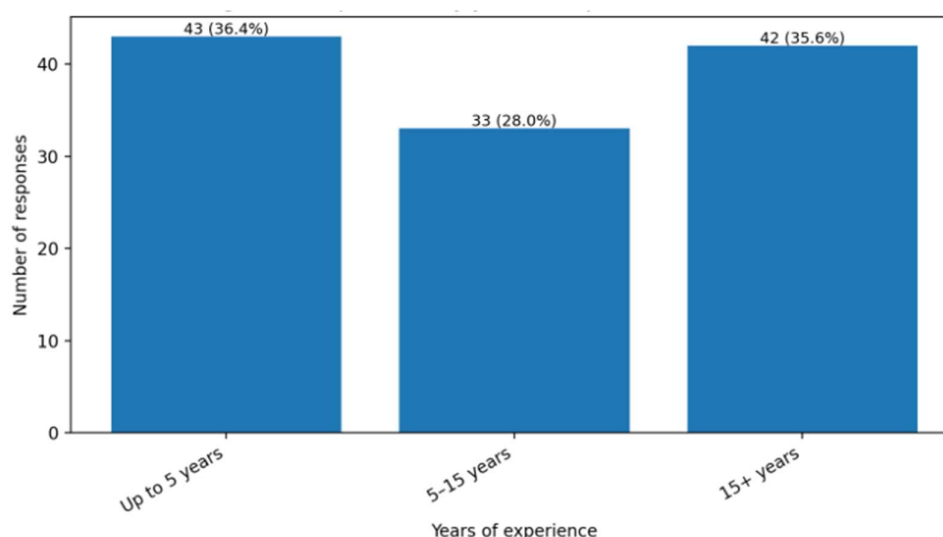


Figure 5. Respondents by years of experience (valid n=118).

The figure summarises respondents' years of experience in the agricultural sector. Up to 5 years is reported by 43 respondents (36.4%), 15+ years by 42 (35.6%), and 5–15 years by 33 (28.0%).

Table 1. Main characteristics of survey participants (absolute numbers and %)

Category	Sub-category	Number of valid responses	Total %
Country	Greece	64	52.9%
Country	Italy	22	18.2%
Country	Ireland	18	14.9%
Country	Cyprus	17	14.0%
Age group (valid n=120)	Under 30	30	25.0%
Age group (valid n=120)	30–50	58	48.3%
Age group (valid n=120)	50+	32	26.7%
Education level (valid n=120)	Master's degree	59	49.2%
Education level (valid n=120)	Bachelor's degree	39	32.5%
Education level (valid n=120)	Doctoral degree (PhD)	11	9.2%
Education level (valid n=120)	Secondary/VET/non-university	10	8.3%
Education level (valid n=120)	Other	1	0.8%
Professional role	Agricultural advisor / agronomist	56	46.3%
Professional role	Other / unspecified advisory-related roles	41	33.9%
Professional role	Consultants/PMs/researchers/IT specialists	11	9.1%
Professional role	Technical staff (associations/cooperatives)	8	6.6%

Professional role	Public agricultural advisor / extension officer	5	4.1%
Years of experience (valid n=118)	Up to 5 years	43	36.4%
Years of experience (valid n=118)	15+ years	42	35.6%
Years of experience (valid n=118)	5–15 years	33	28.0%

6.6 Training interests, digital readiness, knowledge levels, and delivery conditions (Survey Questions Q2, Q7–Q8, Q9–Q13, Q14–Q15)

Training interests are expressed through responses to survey question 2 (Q2), as illustrated in Figure 6a. Responses show a strong and consistent preference for practical, application-oriented content, which directly informs the prioritisation of modules within the DigiFarm curriculum. The most requested topic is **Smart Farming (practical use)**, selected by **78.5%** of respondents. Interest is also high in **Climate/environmental Digital Tools (65.3%)** and **Circular Economy Models (57.0%)**. More than half of participants prioritise **Data analysis and DSS (Decision Support System) (54.5%)**, while **EO (Earth Observation) and satellite images (50.4%)** is selected by approximately half of respondents, confirming EO-related content as relevant for a substantial share of the target group.

The digital readiness and current adoption based on responses of questions Q7 and Q8 are illustrated in Figures 6b and 6c respectively. The responses highlight a learner group with **low-to-medium digital readiness**, reinforcing the need for a modular structure that supports progression from foundational to more advanced content. For Q7, the **average digital skills score is 2.16 on a 0–4 scale**, suggesting that most participants perceive themselves as moderately prepared but not yet fully confident with digital tools. In Q8, reported technology use indicates that adoption is currently more common for **basic solutions**, with **mobile apps used by 47%** of respondents and **GPS by 35%**. The use of more advanced technologies remains limited: **29%** report using **satellite/drone services**, **19%** report using **sensors**, and **15%** report using **FMIS (Farm Management Information Systems)**. This pattern supports a training approach that starts from familiar tools and progressively introduces higher-complexity technologies.

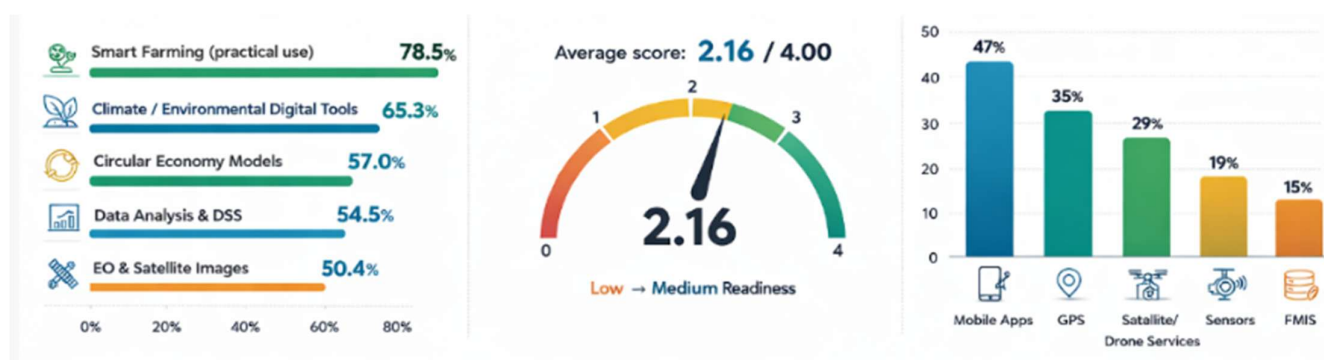


Figure 6. (a) Preferred training topics selected by respondents (Q2; n = 121). (b) Average self-reported digital skills level (Q7; 0–4 scale; mean = 2.16). (c) Technologies currently used in advisory practice (Q8; % of respondents).

Figures 6a–6c summarise training priorities and current digital readiness, providing direct input for the modular structure and progression of the DigiFarm training programme.

Self-assessed knowledge levels are derived from responses to questions Q9–Q13) and are illustrated in Figure 7a. These results, further clarify training needs by showing consistently low baseline knowledge across technical domains (0–4 scale). Reported averages are **1.51 for EO basics**, **1.44 for NDVI**, and **1.47 for VRT**. Knowledge levels are slightly higher for **climate/environmental tools (1.66)** and **circular economy (1.78)**, offering a comparative view across thematic areas. Overall, these results confirm the need for introductory content and structured learning pathways that progressively build confidence and competence across all topics.

Constraints and delivery preferences are shown from responses to questions Q14 and Q15 and are illustrated in Figure 7b and 7c respectively. **These** define the conditions that may influence participation and uptake and help justify delivery choices in the final training design. The main barriers reported (Q14) are **lack of training opportunities (32%)** and the **cost of technologies (22%)**, followed by **not a priority (12%)**, **lack of time (9%)**, **connectivity issues (8%)**, and **limited organisational support (8%)**. These barriers reinforce the importance of designing training that is accessible, flexible, and directly relevant to day-to-day advisory work.

In terms of delivery preferences (Q15), respondents show a strong preference for **self-paced online modules (65%)**, followed by **live online sessions (29%)**. This result clearly supports a blended digital delivery model with a strong self-paced core, complemented by live sessions for interaction, clarification, and applied learning support.



Figure 7. (a) Average self-assessed knowledge levels across key thematic areas (Q9–Q13; 0–4 scale). (b) Main barriers to adopting digital tools and engaging in training (Q14; %). (c) Preferred training delivery formats (Q15; %). Figures 7a–7c highlight baseline knowledge gaps and the main participation conditions, supporting the choice of introductory content and a delivery model centred on self-paced learning complemented by live online sessions.

6.7 Proposed Learning Groups

The proposed learning groups were defined based on consistent patterns observed across the survey responses presented in Section 3.1. The grouping reflects differences in overall digital readiness, depth of technical knowledge (including EO/NDVI/VRT), degree of current tool adoption, and the main constraints

reported by respondents. This approach supports the identification of distinct learner profiles that will inform the design of targeted training pathways under WP3.

Learners fall into four learning groups (ordered from beginner to advanced):

Group A – Traditional Advisors – Entry Digital Level

Low digital skills and very limited technical knowledge, with few or no tools currently used. Training needs focus on fundamentals (EO basics, NDVI, VRT) and basic digital skills. The most frequently reported constraint is lack of training. The preferred delivery format is strongly self-paced learning.

Group B – Emerging Smart Farming Implementers with Knowledge Gaps

Medium digital skills and relatively broad tool use, combined with low theoretical knowledge in key domains (EO/NDVI/VRT). Training needs focus on strengthening conceptual understanding, reducing errors, and improving interpretation through practical labs and guided exercises. The most frequently reported constraint is lack of training. The preferred delivery format is self-paced learning.

Group C – Emerging Smart Farming Implementers with Cost Barriers

Medium digital skills and medium knowledge levels, with some adoption of tools already in place. Training needs focus on scaling adoption, including understanding return on investment and cost–benefit aspects. The most frequently reported constraint is cost of technologies. The preferred delivery format is self-paced learning.

Group D – Smart Farming Implementers – Advanced Level

High digital skills and high technical knowledge, with broad use of multiple digital and smart farming tools. Training needs focus on advanced, practice-oriented content, including multi-crop applications and data integration. The most frequently reported constraint for this group is cost of technologies. The preferred delivery format is self-paced learning.

Table 2. The four learning groups identified through the survey (ordered from beginner to advanced).

Learning Group	Skills Level	Knowledge Level	Tool Adoption	Key Training Needs	Main Barriers	Preferred Format	Country Mix
Group A – Traditional Advisors – Entry Digital Level	Low digital skills	Very low technical knowledge	Very low (few or no tools used)	Fundamentals (EO basics, NDVI, VRT), basic digital skills	Lack of training	Strongly self-paced	Greece (62%), Cyprus (16%), Italy (15%), Ireland (6%)

Group B – Emerging Smart Farming Implementers with Knowledge Gaps	Medium digital skills	Low theoretical knowledge in key domains (EO/NDVI/VRT)	Relatively broad tool use	Strengthen conceptual understanding, improve interpretation, practical labs and guided exercises	Lack of training	Self- paced	<i>[insert % by country if available]</i>
Group C – Emerging Smart Farming Implementers with Cost Barriers	Medium digital skills	Medium technical knowledge	Moderate (some tools in use)	Scaling adoption, ROI and cost– benefit aspects	Cost of technologies	Self- paced	Greece (44%), Italy (28%), Cyprus (19%), Ireland (9%)
Group D – Smart Farming Implementers – Advanced Level	High digital skills	High technical knowledge	High (multiple tools in use)	Advanced practical applications, multi-crop use cases, data integration	Cost of technologies	Self- paced	Mainly Greece (82%), Italy (9%), other (9%)

The identification of learning groups is a core requirement of Work Package 2, as it links the needs assessment with the definition of learning objectives, methodological choices, and the overall curriculum structure. By classifying participants into four groups reflecting different levels of experience, knowledge, and tool adoption, the report ensures that the DigiFarm training programme can be customised to accommodate diverse learner profiles. This segmentation supports the development of tailored learning pathways, enabling the training to be both pedagogically coherent and practically relevant for a heterogeneous audience of agricultural advisors.