



AI4Agri

Developing green and digital skills towards AI use in agriculture

Erasmus+

KA220-VET - Cooperation partnerships in vocational education and training

WP2: Connecting AI with Agricultural sector: current status and needs assessment

A.2.2. Needs Assessment Survey Analysis

Developed by

OMNIA

May 2024



Table of Contents

INTRODUCTION	3
ANALYSES OF RESULTS	5
CONCLUSIONS	12



INTRODUCTION

This report is the Needs assessment survey analysis for Cyprus of the A.2.2: Needs assessment survey targeting agricultural workers and existing/potential entrepreneurs in order to identify (1) current skills need on AI applications and tools and (2) potential ways for workforce engagement on the agricultural sector.

The initial objective was to collect 100 responses per each country (Poland, Sweden, Greece and Cyprus). At the end of data collection, Cyprus has received 102 responses.

The survey involved 4 main sections with 19 total questions. The first section of the survey included demographic questions, the second section involved specific information questions concerning the education level, the field and type of work, the access of information. The third section involved the digitalisation and AI use and the fourth section a summary.

- The demographic section included the following questions:
 - 1- Gender
 - 2- Age
 - 3- Town population

- The Specific Information section included the following:
 - 4- Education level
 - 5- Field of work
 - 6- Type of agricultural activities are you currently involved in or interested in pursuing as a potential entrepreneur?
 - 7- How do you access information and resources related to agriculture and entrepreneurship in your region?
 - 8- Would you say you stay updated on market trends, technological advancements, and best practices in agriculture?

- The Digitalisation and AI use section included the questions below:
 - 9- How familiar are you with the concept of artificial intelligence (AI) and its applications in agriculture.
 - 10- Have you personally used any AI-powered tools or technologies in your agricultural activities

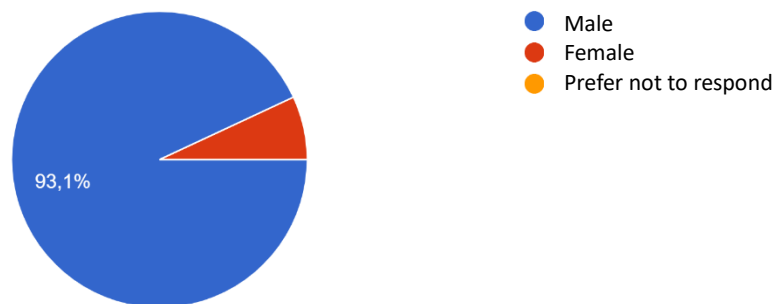
- 11- AI use
 - 12- What are the main challenges you face in adopting digital technologies, including AI, in your agricultural operations?
 - 13- Are you aware of any government initiatives or programs aimed at promoting digitalization and AI adoption in agriculture?
 - 14- Do you believe that AI has the potential to improve efficiency and productivity in agricultural practices?
 - 15- Do you think AI can help in addressing environmental challenges, such as climate change and resource depletion, in agriculture?
- The Summary section included the following questions:
 - 16- Are there any challenges you face as an agricultural worker or aspiring entrepreneur in the agricultural sector?
 - 17- Do you think there is enough support available, such as funding and technical assistance, to help farmers and agricultural businesses adopt AI and digital technologies?
 - 18- Would you be interested in participating in training programs or workshops focused on AI and digital technologies in agriculture?
 - 19- Are there any additional comments or concerns you would like to share?

ANALYSES OF RESULTS

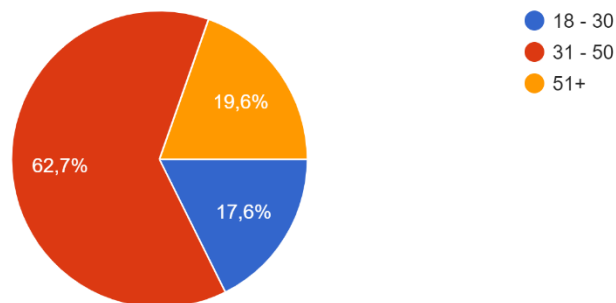
Demographics:

The first part of the survey was only aimed at collecting information on participants' profiles. Here are the statistical data collected.

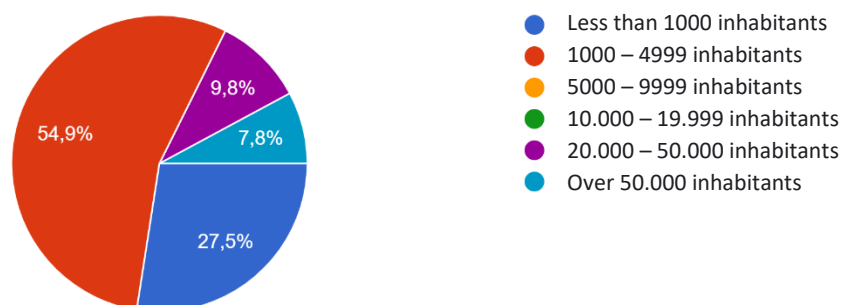
1- Gender



2- Age



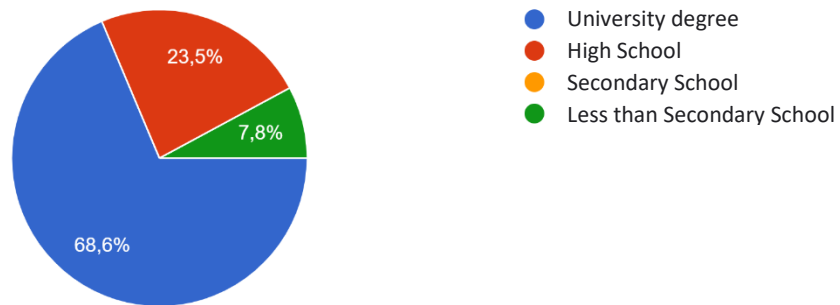
3- Population of your town



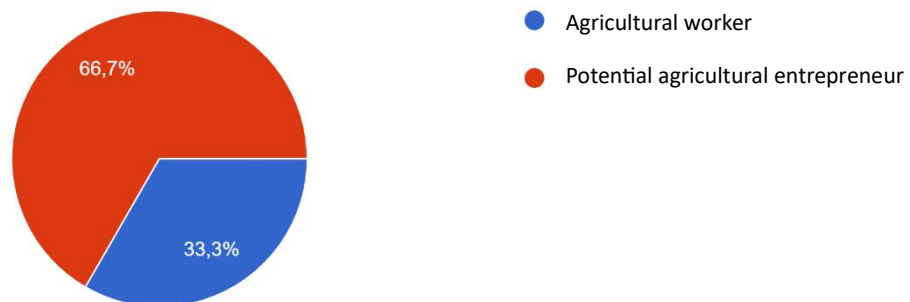
Specific Information

The second part of the survey was aimed at gaining insight on the agriculture representatives. Here is a graphical presentation of questions and answers received:

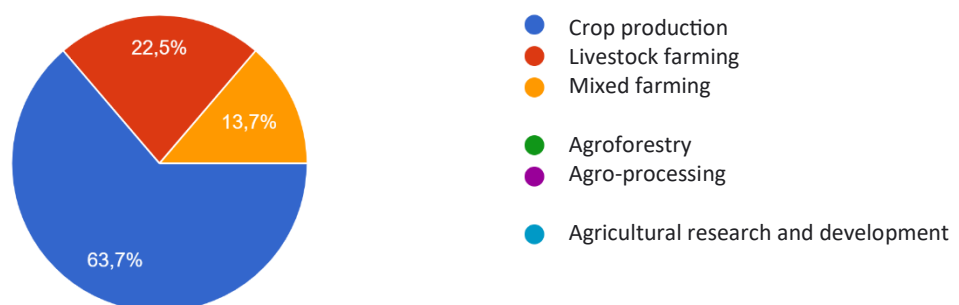
4- Education level



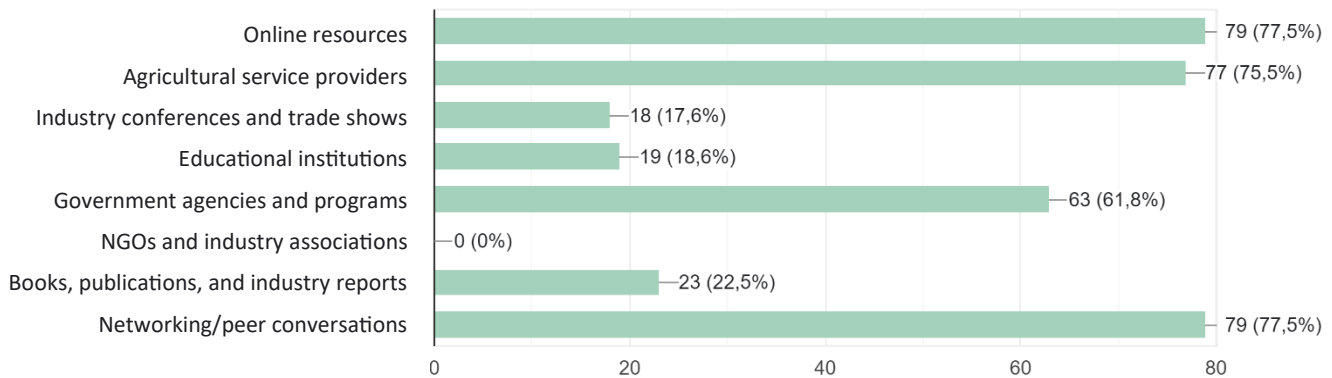
5- Field of work



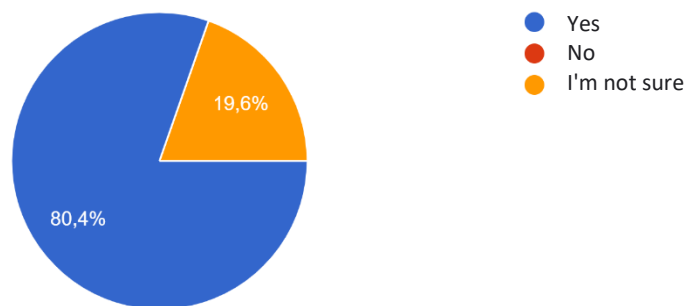
6- What type of agricultural activities are you currently involved in or interested in pursuing as a potential entrepreneur?



7- How do you access information and resources related to agriculture and entrepreneurship in your region?



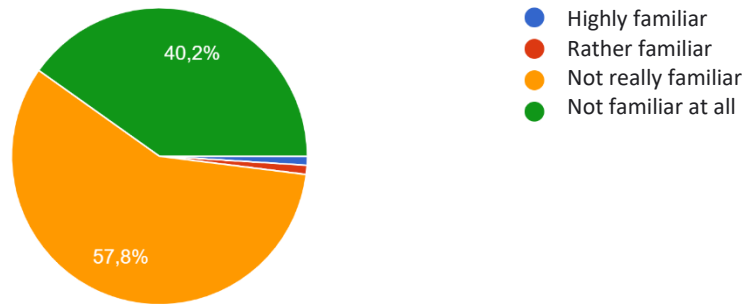
8- Would you say you stay updated on market trends, technological advancements, and best practices in agriculture?



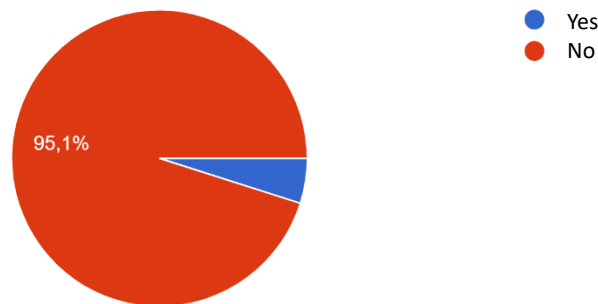
Digitalisation and AI use

The third part of the survey was aimed to access the knowledge of digitalisation and AI use in agriculture. Here is a graphical presentation of questions and answers received:

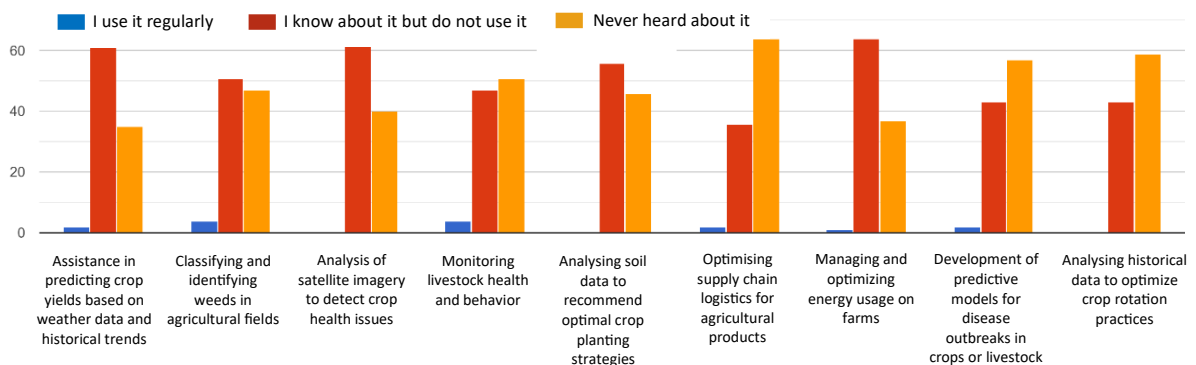
9- How familiar are you with the concept of artificial intelligence (AI) and its applications in agriculture.



10- Have you personally used any AI-powered tools or technologies in your agricultural activities?



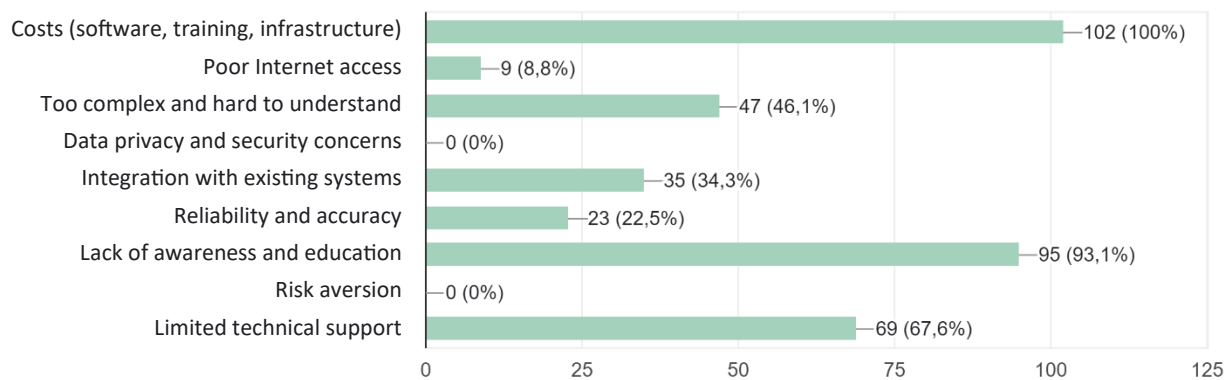
11- AI use



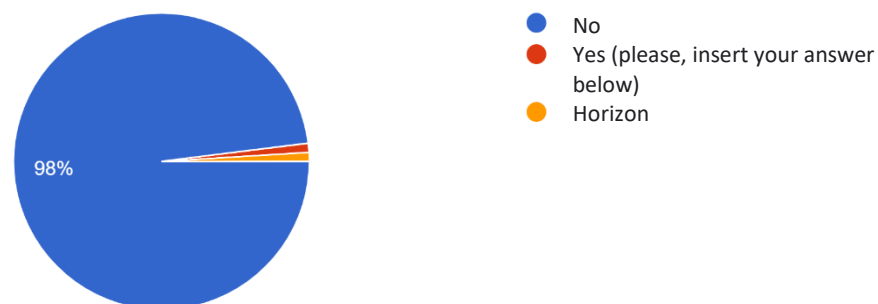
Regarding the use of AI, most of the participants responded with “I know about it but do not use it” or “Never heard about it”. Although in the previous question only 5 (4,9%) participants answered that they have used AI tools in their activities, in this question we had more answers in the “I use it regularly”.

Assistance in predicting crop yields based on weather data and historical trends is used by 2 participants, 65 of them know it but do not use, and 35 do not know it at all. *Classifying and identifying weeds in agricultural fields* is used by 5 of our participants, 50 of them know it but do not use, and 47 do not know it at all. *Analysis of satellite imagery to detect crop health issues* is not used at all, 62 of them know it but do not use, and 40 do not know it at all. *Monitoring livestock health and behavior* is used by 4 participants, 47 of them know it but do not use, and 51 do not know it at all. *Analysing soil data to recommend optimal crop planting strategies* is not used by any participant, 56 of them know it but do not use, and 46 do not know it at all. *Optimising supply chain logistics for agricultural products* is used by 2 participants, 36 of them know it but do not use, and 64 do not know it at all. *Managing and optimizing energy usage on farms* is used only by 1 participant, 64 of them know it but do not use, and 37 do not know it at all. *Development of predictive models for disease outbreaks in crops or livestock* is used by 2 participants, 43 of them know it but do not use, and 57 do not know it at all. *Analysing historical data to optimize crop rotation practice* is not used by any participant, 43 of them know it but do not use, and 59 do not know it at all.

12- What are the main challenges you face in adopting digital technologies, including AI, in your agricultural operations?

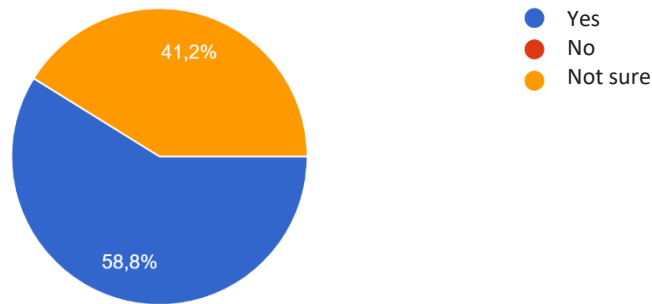


13- Are you aware of any government initiatives or programs aimed at promoting digitalization and AI adoption in agriculture?

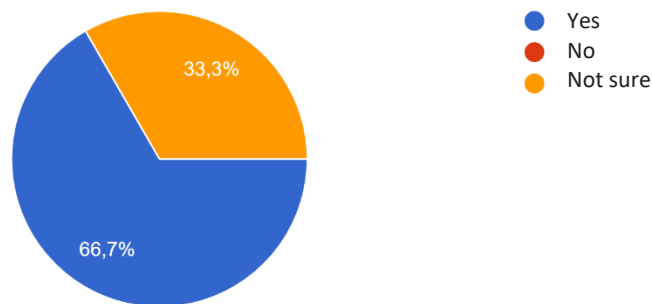


Only 2 people answer that they do know government initiatives or programs that promotes digitalization and AI adoption, one did not further elaborate, and the other one mentioned the Horizon funding program.

14- Do you believe that AI has the potential to improve efficiency and productivity in agricultural practices?



15- Do you think AI can help in addressing environmental challenges, such as climate change and resource depletion, in agriculture?



Summary

Last part was a summary of questions. Here are the statistical data collected.

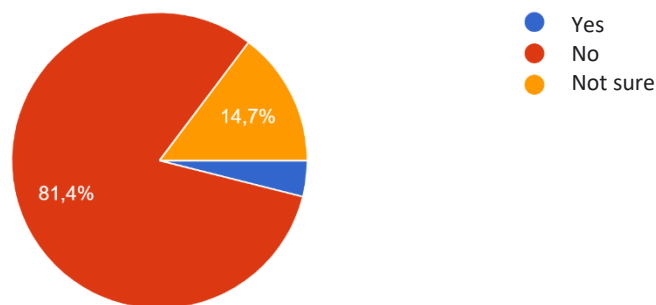
16- Are there any challenges you face as an agricultural worker or aspiring entrepreneur in the agricultural sector?



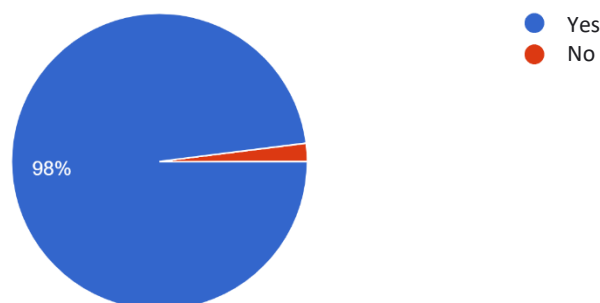
There wasn't a no for an answer, all the answers were yes with few comments which are:

- All the problems a farmer can have, has them and will have them.
- Feed costs, drought, increase of fuel.
- The high cost of feed. Food needs to be imported. Also, the high price of fuel. Reduced rainfall.
- High cost of feed, high price of fuels, water shortage
- All the problems that a farmer has.
- Many.
- Drought, lack of resources due to high production costs

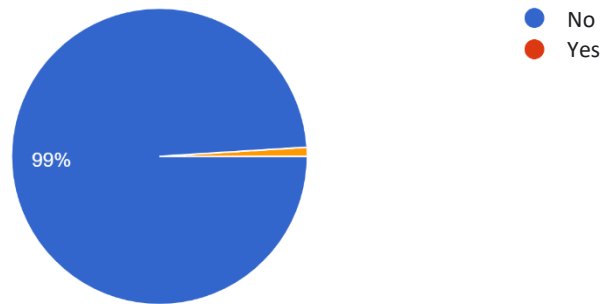
17- Do you think there is enough support available, such as funding and technical assistance, to help farmers and agricultural businesses adopt AI and digital technologies?



18- Would you be interested in participating in training programs or workshops focused on AI and digital technologies in agriculture?



19- Are there any additional comments or concerns you would like to share?



There was only one comment:

- In Cyprus we have not developed the tools yet, data-based, for decision making. Therefore, we should do this first and then use the artificial intelligence.

CONCLUSIONS

The survey reveals a very low level of knowledge and implementation of AI use in agriculture in Cyprus. Although almost all the participants replied that they are not really familiar or not at all familiar with the AI and have not use AI technologies, more than half seems to know different uses of AI in agriculture. It also reveals an interest from participants to increase knowledge in these field and are willing to participate in training programs. Agriculture workers and entrepreneurs face a number of barriers of integration of AI technologies, among which are the costs and a lack of awareness and education, and there is not enough support (funding and technical assistance) available.