INOVFARMER

Better fruit from smart business

CONFERENCE ON TRANSFORMING AGRI-FOOD SUPPLY CHAIN FOR A SUSTAINABLE FUTURE

30 April 2025

Alexandria, Egypt (AASTMT)

Onsite & Online

PRIMA

IN THE MEDITERRANEAN AREA

Grant Agreement number: 1733

RESILINK

ACICT: Arab Company for Information and Communication Technology — Egypt

ARC: Agricultural Research Center — Egypt

INRA: National Institute of Agronomic Research — Morocco

Orange — France

UMCM: University Mohammed-Chérif Messaadia Souk-Ahras — Algeria

USMS: University Sultan Moulay Slimane — Morocco

UPPA: University of Pau & Adour Country — coordinator — France

WAZIUP eV: WAZIUP association — associated partner — Germany

SMALLHOLDER'S READINESS TO ADOPT PLATFORMS LINKING LOCAL RESOURCE-SHARING IN EGYPT

Agricultural Research Center (ARC), Egypt

Seham Mohamed Abd El Hameed El-Gamal1, Tamer Mansour2, Hayat Lionboui3, Zakaria Fouad Fawzy2, Souad A. Shairra1, Nahla A. Awad1,and Congduc Pham4

1 Agricultural Research Centre (ARC), Egypt; 2 National Research Centre (NRC), Egypt; 3 National Institute of Agricultural Research, Morocco; 4 University of Pau (UPPA), France

INOVFARMER
Better fruit from smart business

PRIMA
IN THE MEDITERRANEAN AREA

InovFarmer.MED is part of the PRIMA Programme, supported by the European Union.

Egyptian Case Study

- Beni Suef Governorate, is one of the leading governorates in medicinal and aromatic plants cultivation and the governorate targeted by PRIMA's project to increase smallholder resilience through multiple platforms linking local resource sharing in upper Egypt.
- So, we chose Tawa village, Biba, Beni Suef Governorate, to be our case study. It includes 128 farmers, representing about 10% of the total number of holders in the village

InovFarmer.MED is part of the PRIMA Programme, supported by the European Union.

RESILINK

Table 1. Distribution of respondents according to their independent variables studied (N = 128): 68.8% of small farmers are 20-50 years old, 65.6% of them have an intermediate education, Males up to 68.8%, 70% of them has a farm area less than 1 acre, 50% of our small farmers had over 20 years experience and the majority of them (53%) owned the farm land, also, the majority of the small farmers (65.6%) earn 33%-66% of their income from agricultural operations, including seasonal labor

socio-economic variables	No.	%	Mean	SD	socio-economic variables	No.	%
Age (Years)					**Educational level**		
35-20	40	31.3	44.9	12.46	Illiterate	12	9.38
50 -35	48	37.5			Reads and writes	16	12.50
above 50	40	31.3			Secondary	84	65.62
					Tertiary	16	12.50
Number of family members working in agriculture					**Land size (feddan)**		
one person	68	53.1			<1	60	46.9
two persons	32	25.0			1-2	36	28.1
more than two persons	28	21.9			> 2	32	25
Sex					**Social status**		
Male	88	68.8			married	124	96.9
Female	40	31.3			Divorced	4	3.1
Nature of agricultural work					**cultivation type**		
Seasonal	48	37.5			traditional		93.8
Permanent	80	62.5			Organic farming		6.2
Agricultural experience (years)					**Ownership of agricultural land**		
Less than 10 years	32	25	23	13.8	Owner	68	53.1
10-20	32	25			tenant	40	31.3
More than 20 years	64	50			Owner and tenant	24	15.6
Attitude towards agricultural extension:					**Income outside the farm**		
Negative less than 17 degrees	60	46.9	14.8	6.81	Yes	52	40.6
Neutral 17 - 22 degrees	44	34.4			No	76	59.4
positive (22 degree or more)	24	18.8					
Attitude towards digital applications					**Farm Income**		
Negative (less than 13degree)	19	14.84	17.7	5.8	5000- 20,000	36	28.13
Neutral (13-18 degree	45	35.16			20,000 - 35,000	72	56.25
Positive (19 degree or more)	64	50.00			35,000 -50,000	20	62 . 15
Agricultural production cost out of total income					**Family income from agricultural activity**		
less than 33%	36	28.12	41.5	24	less than 33%	24	18.8
From 33 - 66%	40	31.25			From 33 - 66%	84	65.6
more than 66%	52	40.63			more than 66%	20	15.6

Source: filed study 2023

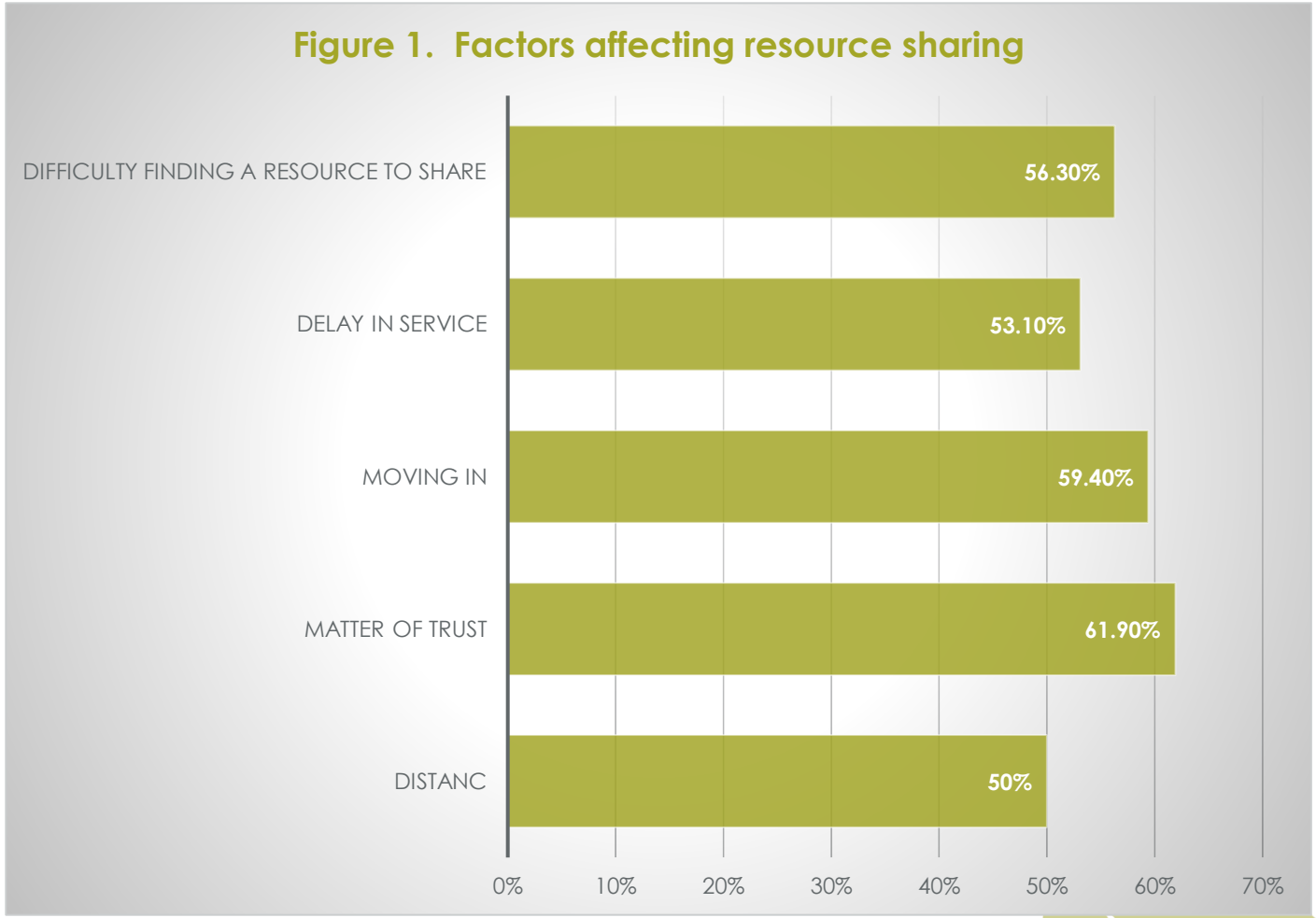
INOVFARMER
Better fruit from smart business

PRIMA
IN THE MEDITERRANEAN AREA

InovFarmer.MED is part of the PRIMA Programme, supported by the European Union.

RESILINK

Figure 1. Factors affecting resource sharing: the Fig. shows that, trust issues was the main barrier (61.9%) for resource sharing, Followed by moving (59.4%), while 56.3% of farmers do not share their resources because they cannot find a suitable resource to share. Delay of services, makes 53.1% of farmers reluctant to share resources.



INOVFARMER
Better fruit from smart business

PRIMA
IN THE MEDITERRANEAN AREA

InovFarmer.MED is part of the PRIMA Programme, supported by the European Union.

Figure 2. results indicates that, the majority of small farmers like to replace their traditional method with a digital platforms (mobile app.) to share resources and services (59.4%), which reflects that, RESILINK can have an active role contributes sharing resources and marketing information.

Figure 2. Readiness to replace the traditional method of participation with a digital platform (phone application) to share resources and services

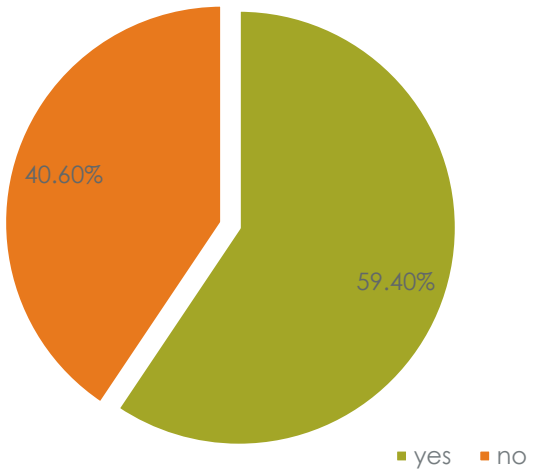
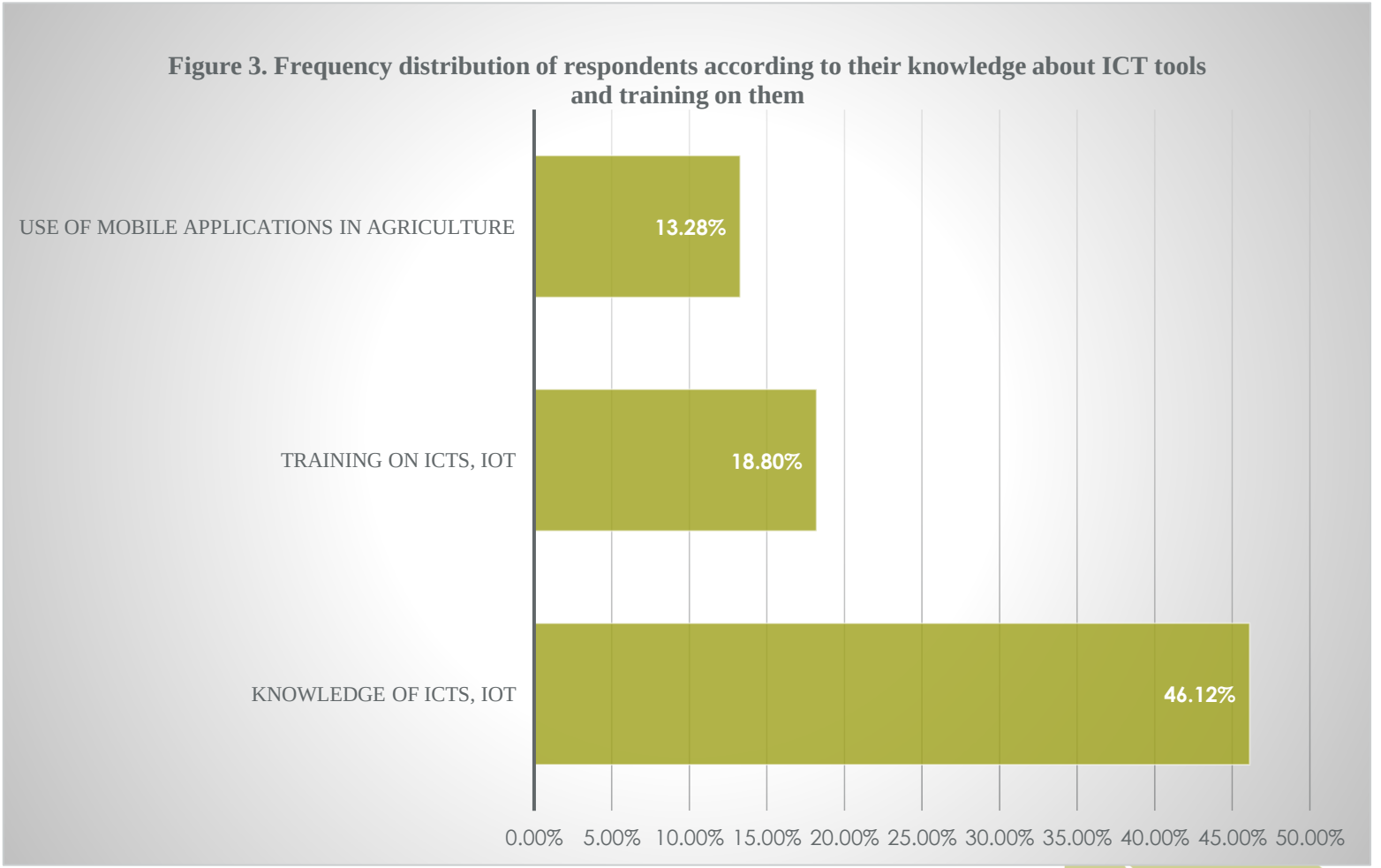


Figure 3. Information and communication technology (ICT) tools may enhance information delivery, but their adoption is still low. Fig. 3. findings shows that, only 46.12% of respondents have knowledge

about concepts like ICTs, the Internet of Things (IoT), and its agricultural applications, whereas 18.8% had

ICT training. At the same time, their use of these applications was very limited in the field of agriculture (13.28%)



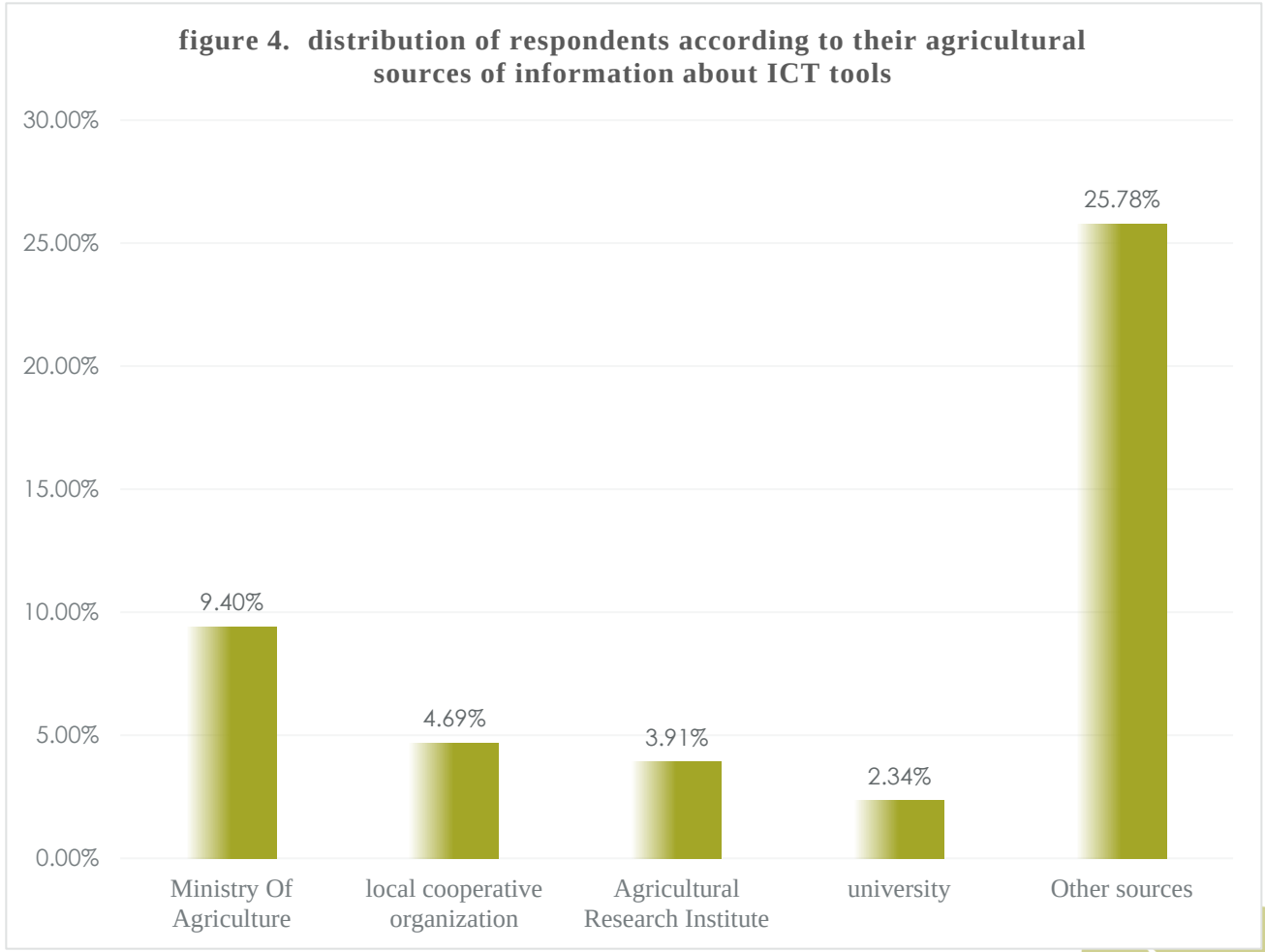


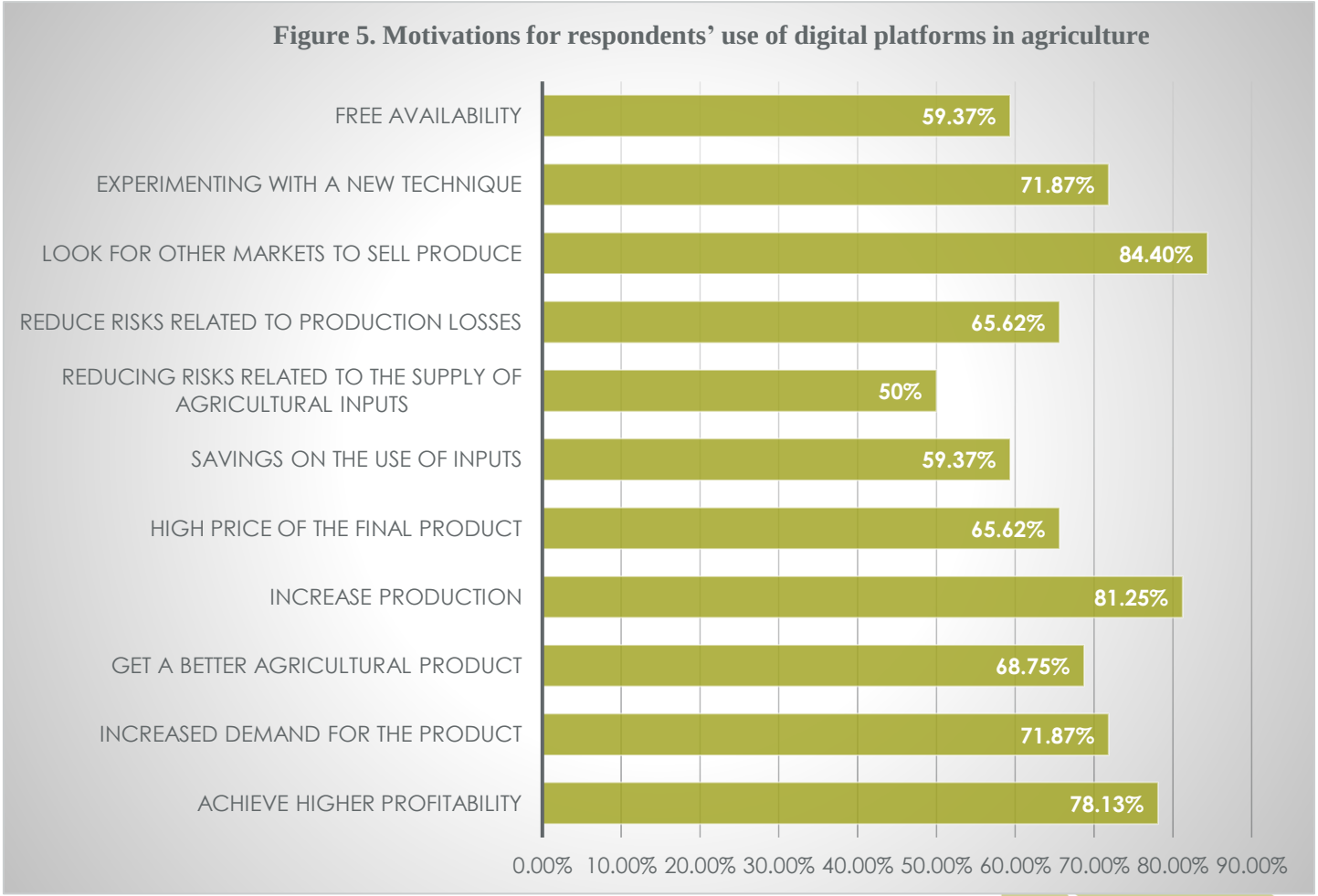
Figure 4.

Shows the farmers information sources for ICT and IoT tools, the Ministry of Agriculture, Agricultural Research Center, and the different Universities play a limited role in training farmers and raising their awareness of these modern tools (9.4, 3.91 and 2.34%). Therefore, we have to emphasize the need to provide farmers with the hidden benefits of ICT, which may alert farmers to weather changes, natural disasters, price changes and other of their concerns

Figure 5. Respondents' motives for adaptation digital platforms in agriculture

The results indicate that, the most common for farmers utilize information digital platforms in agriculture are to find new markets, boost productivity, and increase profitability (84.4%, 81.25%, 78.13%). While 50% of them wanted to eliminate agricultural input supply risks. One of options is to empower the agricultural community by providing fast, reliable, and locally relevant agricultural information,

by integrating interactive platforms to spread information and connect farmers to conventional markets, especially in emergencies where personal networks are unavailable



InovFarmer.MED is part of the PRIMA Programme, supported by the European Union.

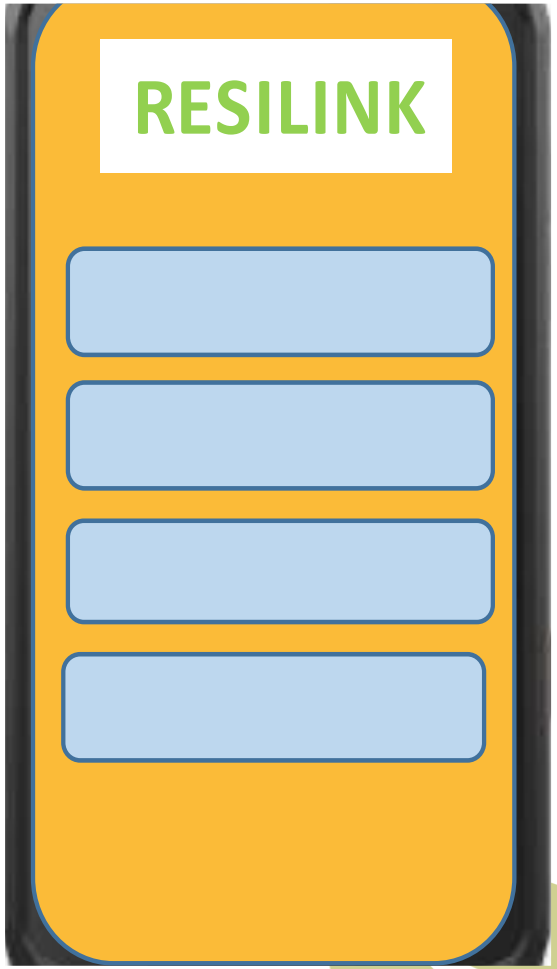
RESILINK's mobile application

The mobile application will be the main interface to simply, quickly and intuitively interact with the RESILINK digital resource management platform

The user interface will be adapted to the smallholder communities and simple interaction methods can also be supported such as SMS, voice attachment, pictures, etc.

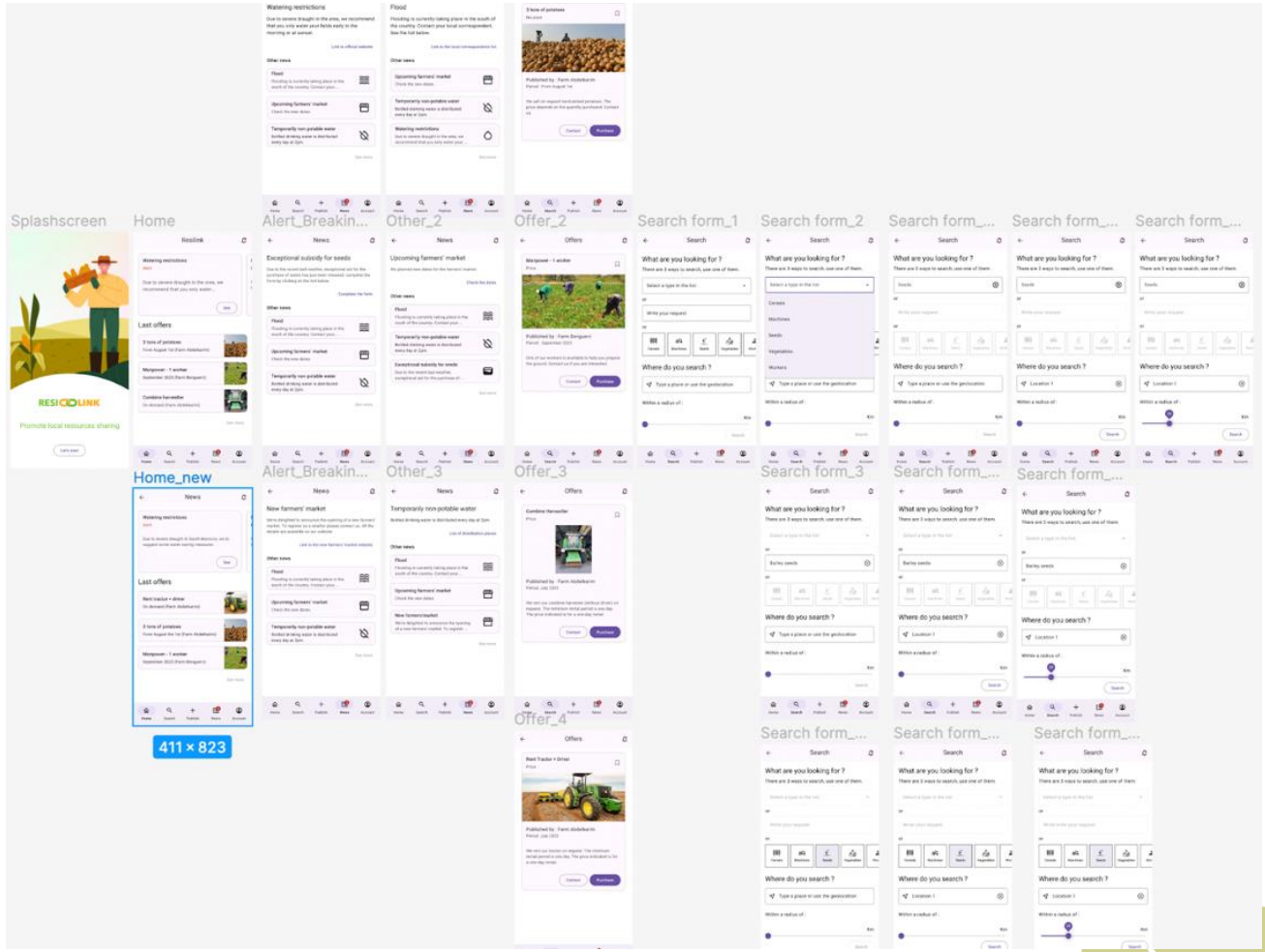
Will provide subscription service to real-time information channels from agri-food actors

Reception of notifications for correlated local resources can be enabled, in addition to resources matching explicit requests



Mobile app mockup:

Interviews results will be realized with a Figma mockup that can be interactively demonstrated on a smartphone to get feedback on the application functionalities, user experience and user interface



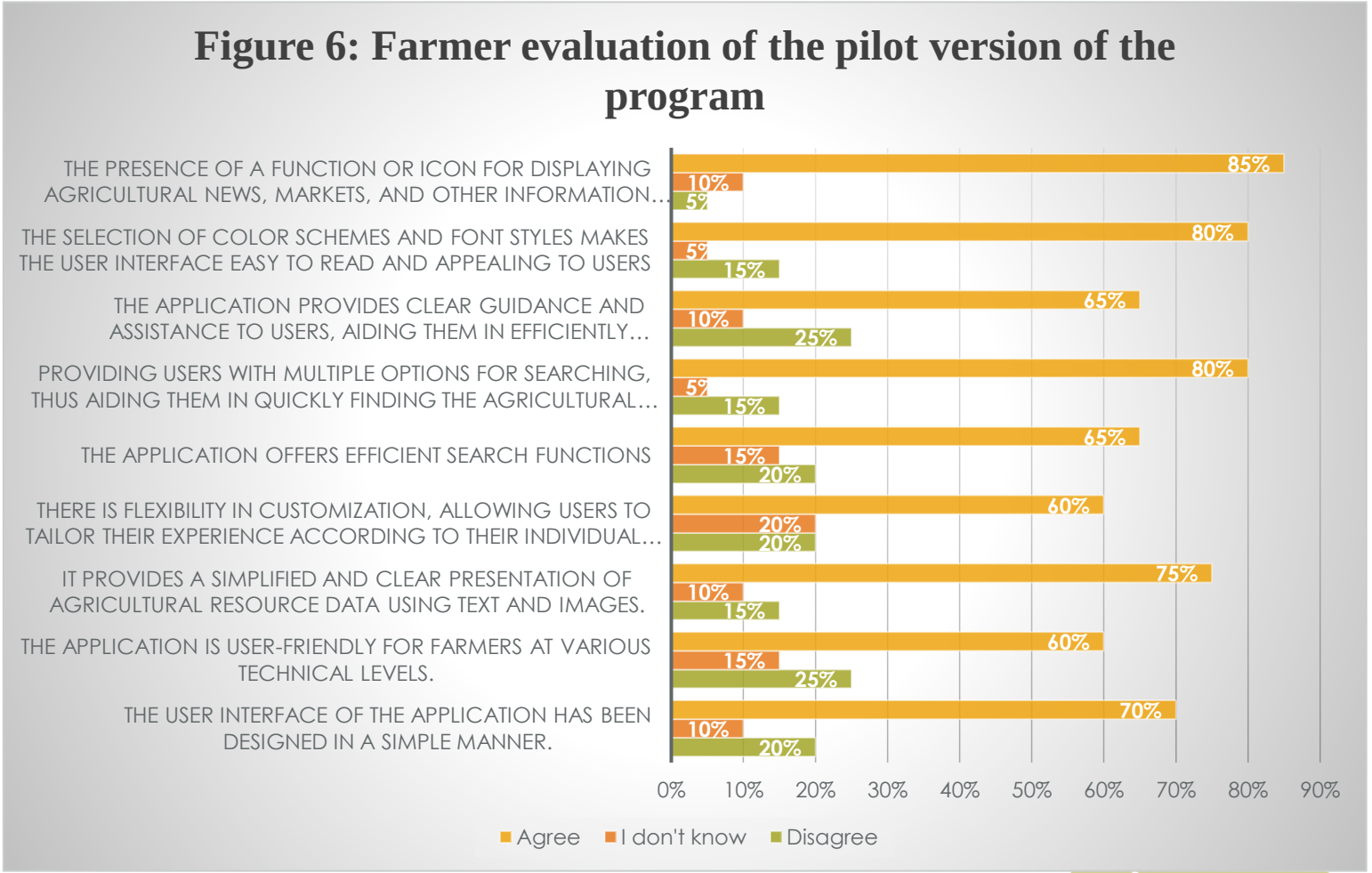
RESILINK's mockup small farmers feedback results (2024)

FIG. 6.

indicates that, the user interface design for the Resilink application was simple and easy to use. The application provides a simplified and clear display of agricultural resource data.

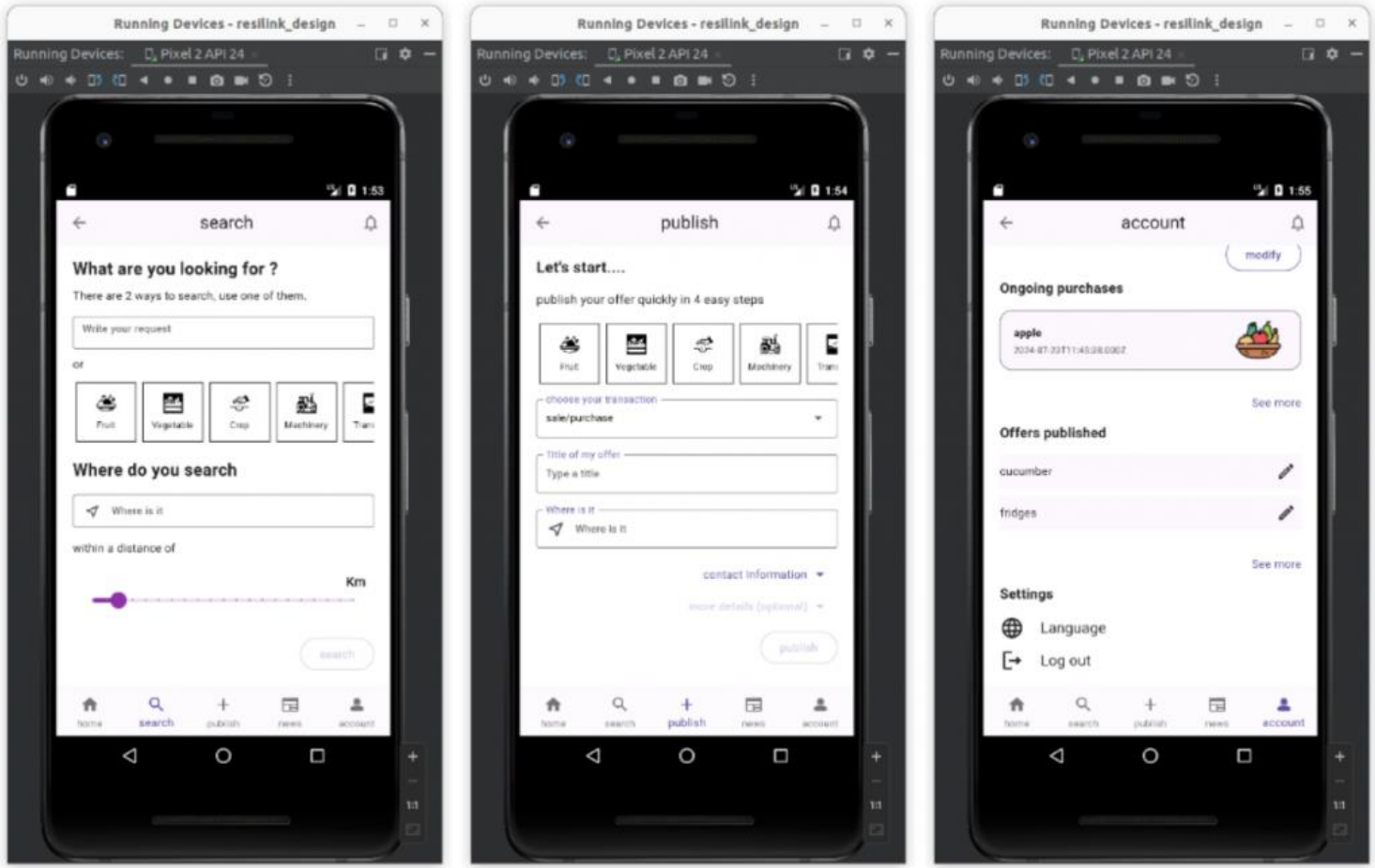
Additionally, users can customize their experience according to their individual needs, including language selection and data display customization.

The results also indicate that the application offers efficient and easy-to-use search functions, helping users quickly find the agricultural resources they need. Moreover, the application provides clear guidance and assistance to users throughout various operations, making the user interface easy to read and attractive



RESILINK mobile application new version

The new version of the RESILINK mobile application was released, which will be utilized in the large-scale evaluation program of the RESILINK mobile application, in preparation for trials in the Living Lab setting!
Support for multiple languages was identified as a critical issue for providing a framework for the Arabic version, and this has been implemented to deliver a version in Arabic!



The new version of the RESILINK mobile application was utilized in the large-scale evaluation and feedback providing

RESILINK

https://resilink.eu

Increasing Resilience of Smallholders with Multi-Platforms Linking Localized Resource Sharing

PRIMA

FEEDBACK FORM

Participant Consent

I, the undersigned, ……, farmer at ……, hereby agree to participate in the testing of the mobile application for resource sharing in agriculture, developed by RESILINK project.

Purpose of the Test:

The purpose of this test is to evaluate the functionalities and effectiveness of the mobile application in the context of managing and sharing agricultural resources.

Confidentiality and Data Protection:

I understand that all data collected during this test will be treated confidentially and used solely for the purpose of evaluating the application. My personal information will not be shared with third parties without my prior consent.

Participant Rights and Freedoms:

I acknowledge that my participation in this test is voluntary and that I may choose to withdraw from the test at any time without any consequences.

Date and Signature of the Participant……

إقرار موافقة المشاركين

أنا الموقع أدناه ……، مزارع/مزارعة في ……،

أقر بموجب هذا بموافقتي على المشاركة في اختبار تطبيق الهاتف المحمول لمشاركة الموارد في الزراعة، الذي تم تطويره من قبل مشروع RESILINK

هدف الاختبار

هدف هذا الاختبار هو تقييم وظائف وفعالية تطبيق الهاتف المحمول في إطار إدارة ومشاركة الموارد الزراعية

الخصوصية وحماية البيانات

أفهم أن جميع البيانات التي يتم جمعها خلال هذا الاختبار سيتم التعامل معها بسرية وستُستخدم فقط في إطار تقييم التطبيق. لن يتم مشاركة معلوماتي الشخصية مع أطراف ثالثة دون موافقتي المسبقة.

حقوق وحريات المشارك

أقر بأن مشاركتي في هذا الاختبار هي طوعية ويمكنني في أي وقت أن أقرر الانسحاب من الاختبار دون أي عواقب

تاريخ وتوقيع المشارك

1

A. Personal Information

1. Firstname: Name:
2. Age category?

17 or younger	❒
18-20	❒
21-29	❒
30-39	❒
40-49	❒
50-59	❒
60 or older	❒

3. Do you use mobile applications?

Always	❒
Frequently	❒
Sometimes	❒
Never	❒

4. Professional activities:……
5. **If you are a farmer**: What are the main activities of your farm?

Agriculture	❒
Livestock	❒
Other	❒

if Other, please specify

……

……

6. **If you are a farmer**: Size of farm

Less than 1ha	❒
2-5 ha	❒
6-10 ha	❒
More than 10 ha	❒

7. **If you are a farmer**: How many years have you been involved in agriculture?

Less than 5 years	❒
6-10 years	❒
11-15 years	❒
16-20 years	❒
More than 20 years	❒

2

INOVFARMER
Better fruit from smart business

PRIMA IN THE MEDITERRANEAN AREA

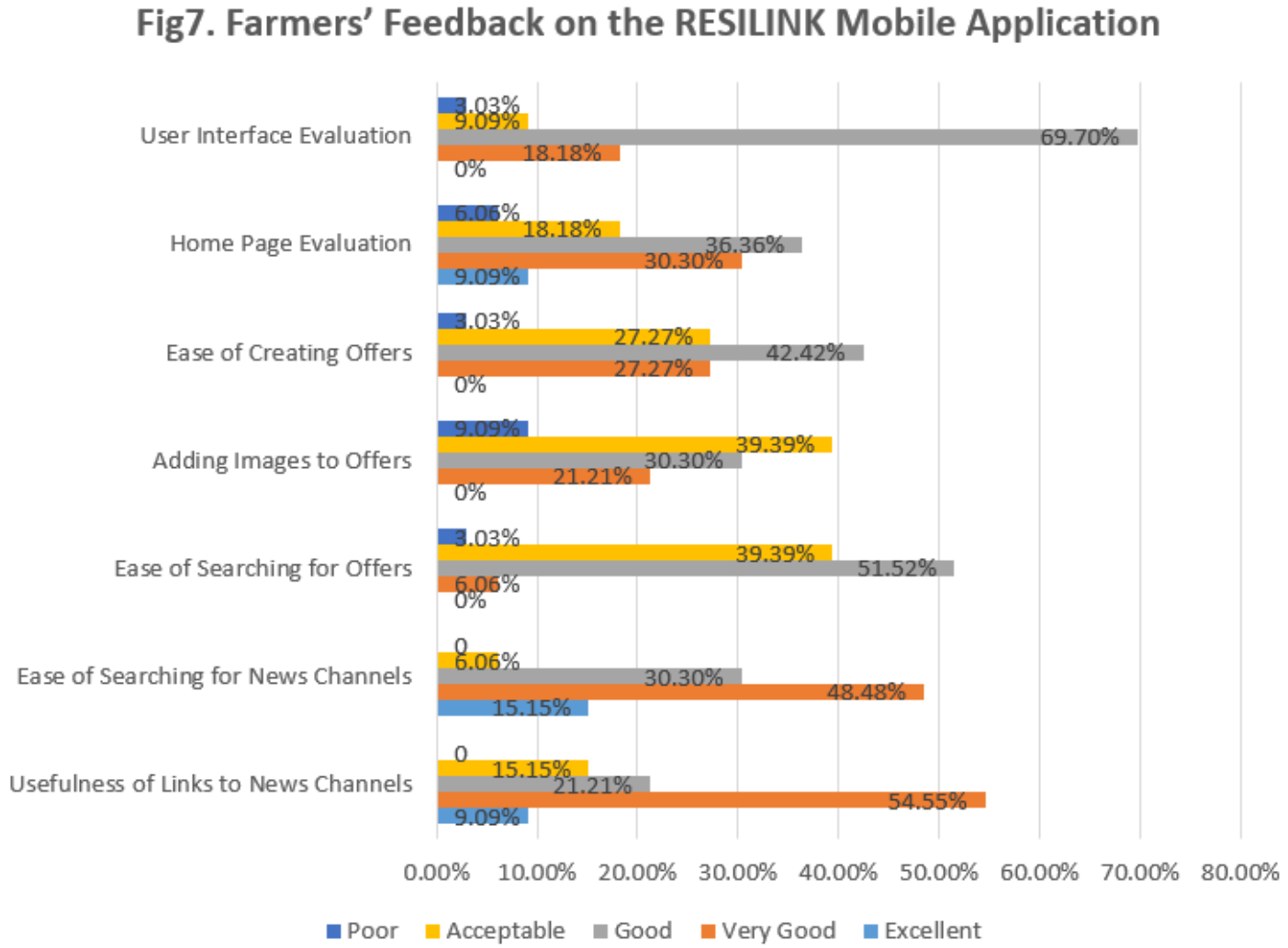
InovFarmer.MED is part of the PRIMA Programme, supported by the European Union.

inovfarmer-med.org

Small farmers 's feedback on RESILINK new version results (Jan 2025)

FIG. 7. results

Indicate that, there is a high overall satisfaction from farmers, with the user interface receiving the highest rate of (69.7%), reflecting the quality of design and ease of use. More than half of small farmers were also satisfied with the ease of searching for offers (51.52%) and adding images to offers has (39.39%) percent. The usefulness and ease of searching for news links were also highly rated to be (54.55%).

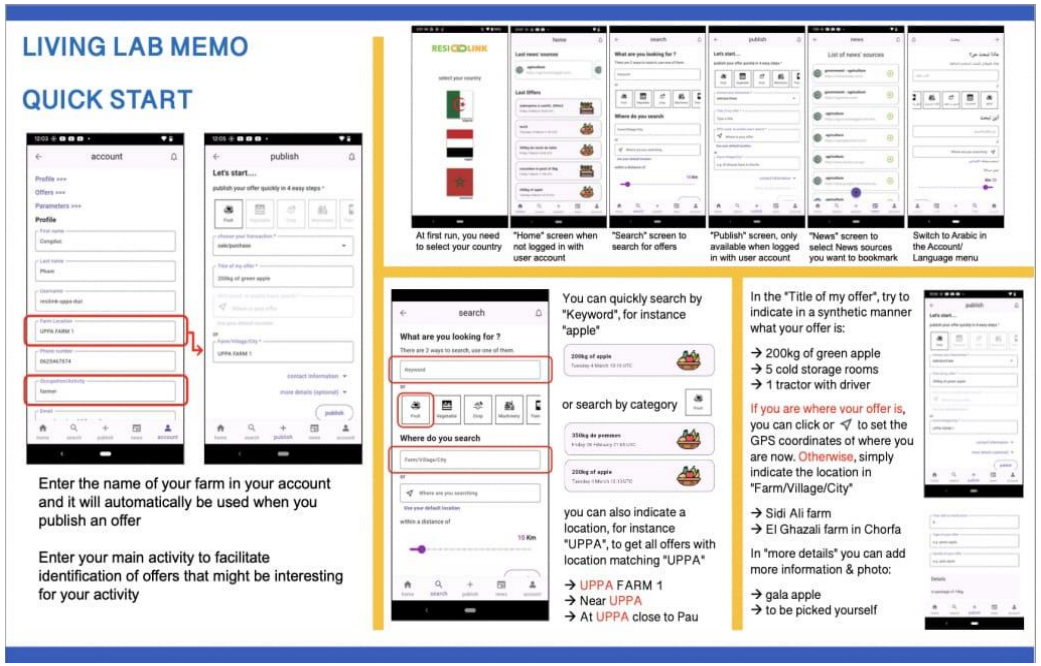


InovFarmer.MED is part of the PRIMA Programme, supported by the European Union.

The updated new version of the RESILINK mobile application was utilized in the small -scale evaluation and feedback providing

Finally, we are ready to enroll some participants for the Living-Lab phase. The RESILINK mobile app is using the new lightweight server that we also tested

A new Living Lab Memo has been produced, which is, more clear to identify the main point to explain to testers



Small farmers 's feedback on updated RESILINK new version results (March 2025)

Key Findings

- **Demographics and Agricultural Experience**

Most small farmers (50%) have between 16 to 20 years of farming experience.

All participants regularly use mobile applications for agricultural purposes.

- **Positive Evaluations of the User Interface**

The user interface and home page received high satisfaction ratings, with 66.7% and 100% of small farmers rating them as excellent, respectively.

The ease of creating listings and uploading images was rated as excellent or very good by the majority.

- **Search and News Channel Accessibility**

The majority small farmers found it very easy to search for news channels with different links, that found to be highly useful, with 83.3% as excellent.

RESILINK

Thank you

Seham El Gamal

s.elgamal99@gmail.com

INOVFARMER
Better fruit from smart business

PRIMA
IN THE MEDITERRANEAN AREA

InovFarmer.MED is part of the PRIMA Programme, supported by the European Union.