Background

Digital innovations have the potential to address bottlenecks in Agricultural Value chains, including:

- Access to extension services,
- marketing systems,
- suitable financial products,

For the benefits to be realized, the innovations must be adopted at scale.

However, the reach of digital innovations is limited by challenges, such as a lack of awareness
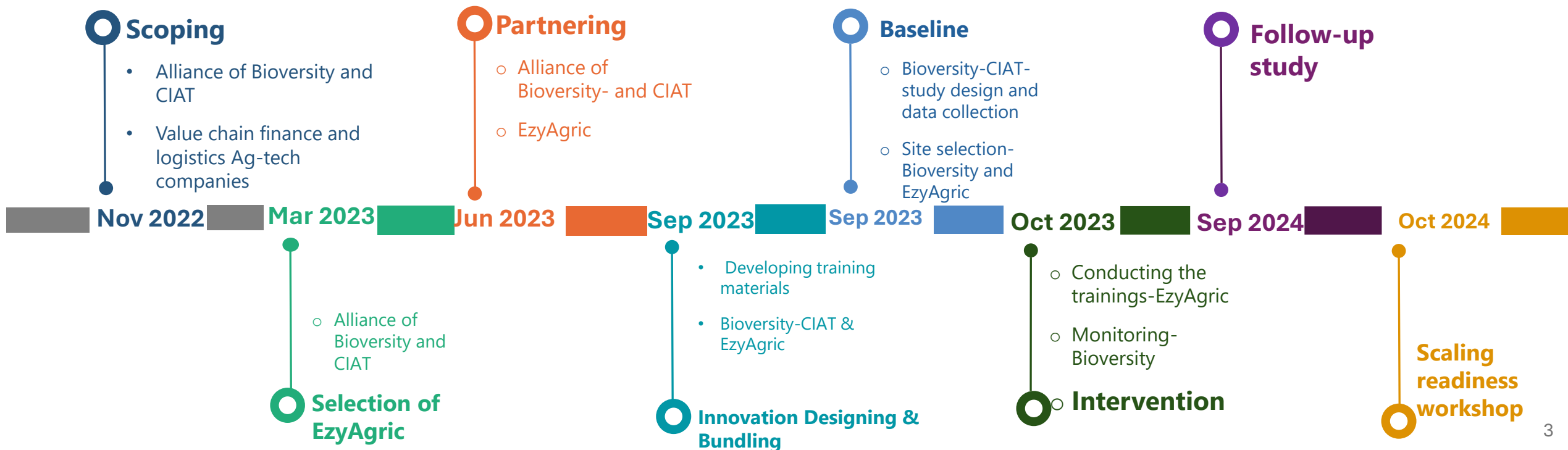
Partnered with **EzyAgric,** to implement awareness creation measures for farmers.
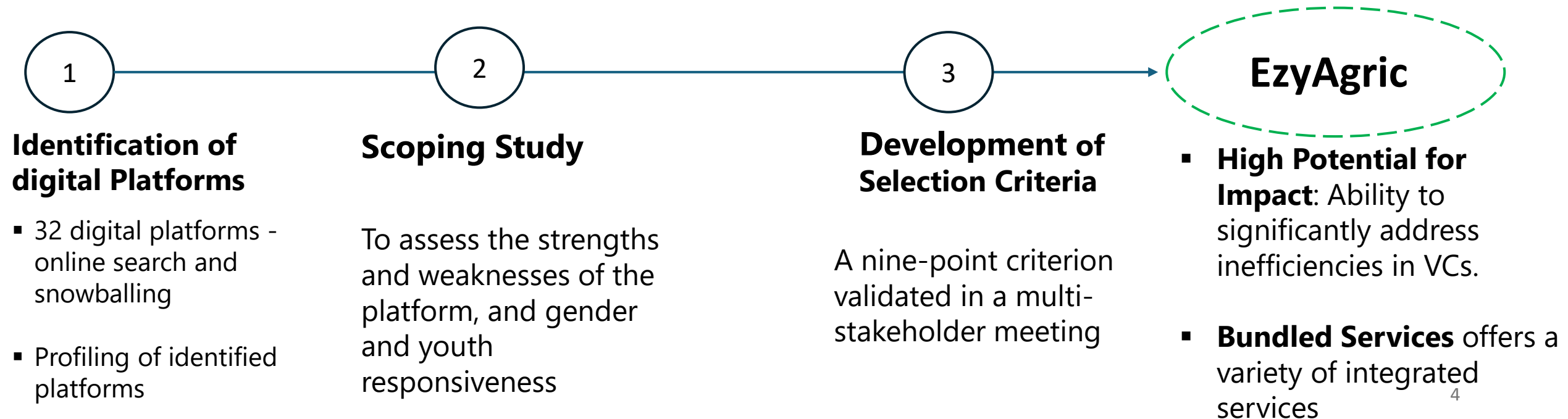
Intervention process

1. Scoping study involving various value chain finance and logistics digital innovations
2. Selection of most promising innovation (EzyAgric)
3. Partnering with EzyAgric
4. Innovation designing
5. Baseline
6. Intervention
7. Follow-up study

Timeline

Scoping
- Alliance of Bioversity and CIAT
- Value chain finance and logistics Ag-tech companies

Nov 2022

Mar 2023

Selection of EzyAgric
- o Alliance of Bioversity and CIAT

Partnering
- o Alliance of Bioversity- and CIAT
- o EzyAgric

Jun 2023

Sep 2023

Innovation Designing & Bundling
- • Developing training materials
- • Bioversity-CIAT & EzyAgric

Baseline
- o Bioversity-CIAT- study design and data collection
- o Site selection- Bioversity and EzyAgric

Sep 2023

Oct 2023

Intervention
- o Conducting the trainings-EzyAgric
- o Monitoring- Bioversity

Follow-up study

Sep 2024

Oct 2024

Scaling readiness workshop

3

Selection process of EzyAgric

(1) ——— **(2)** ——— **(3)** ———→ **EzyAgric**

Identification of digital Platforms

- 32 digital platforms - online search and snowballing

- Profiling of identified platforms

Scoping Study

To assess the strengths and weaknesses of the platform, and gender and youth responsiveness

Development of Selection Criteria

A nine-point criterion validated in a multi-stakeholder meeting

- **High Potential for Impact**: Ability to significantly address inefficiencies in VCs.

- **Bundled Services** offers a variety of integrated services

4

EzyAgric Attributes

- A web platform, at a massive scale, guiding and connecting farmers and agribusinesses to services
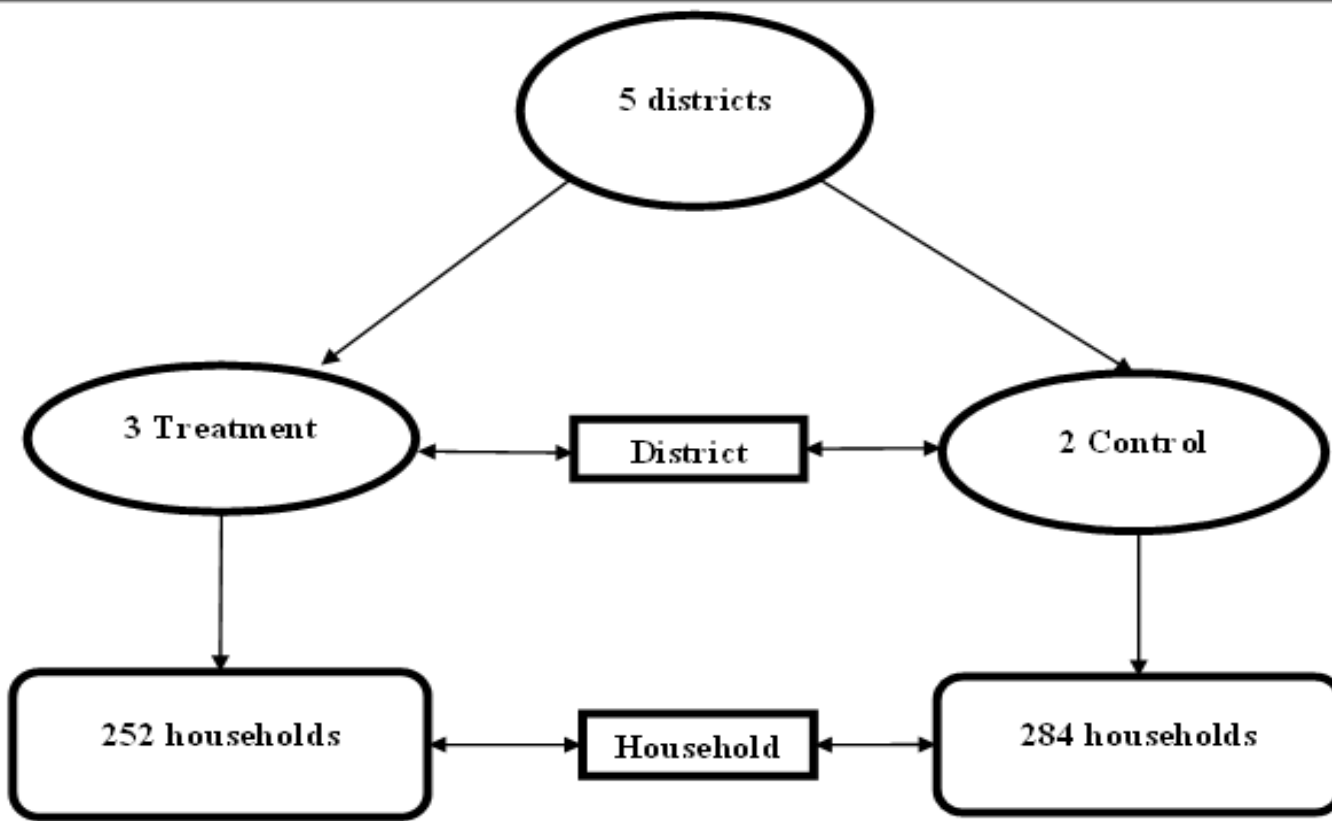 - **400,000 registered farmers**

- How to order for inputs

Intervention Aim

- To Increase farmer's awareness of the EzyAgric digital platform and its bundled innovative services.
  1. Digital literacy training focused on e-access to genuine, traceable agro-inputs
  2. Agronomic training with a focus on the safe use and handling of agrochemicals
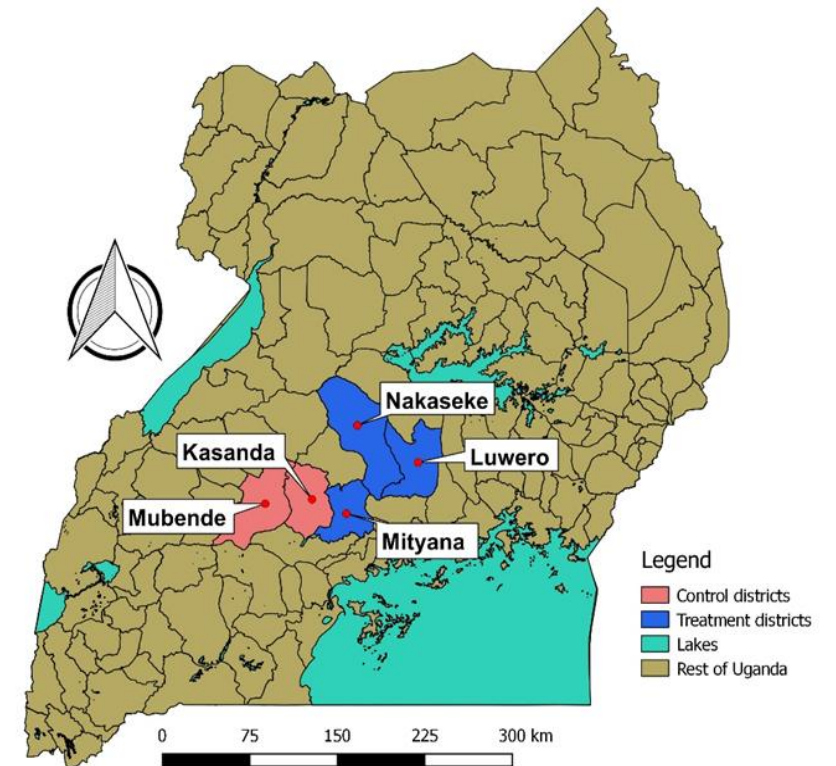
The Intervention Bundle

- The App

- A user guide

- Agronomy (CSA)

- Proper identification and handling of agro-chemicals

Data collection

At two levels:

- **Population level** based on the EzyAgric database capturing the results emerging from the interventions

  - **Data captured before and within the intervention periods.**

- **Sample level**: using RCT, data was collected from a sample of farmers in both intervention and control sites.
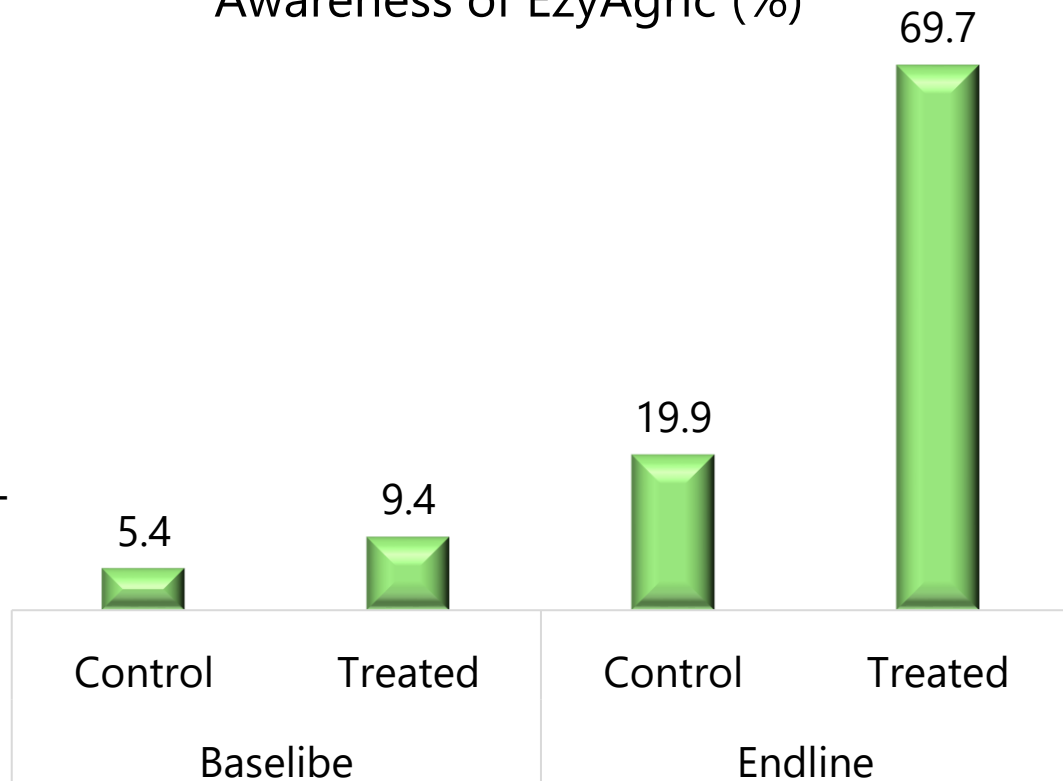
  - **Base-line and follow-up surveys**

FINDINGS

Awareness, and use of EzyAgric platform and innovations

- Awareness of the EzyAgric platform increased **fivefold** in intervention districts compared to control districts.

- Significant rise in awareness did not translate into proportional usage of the platform.
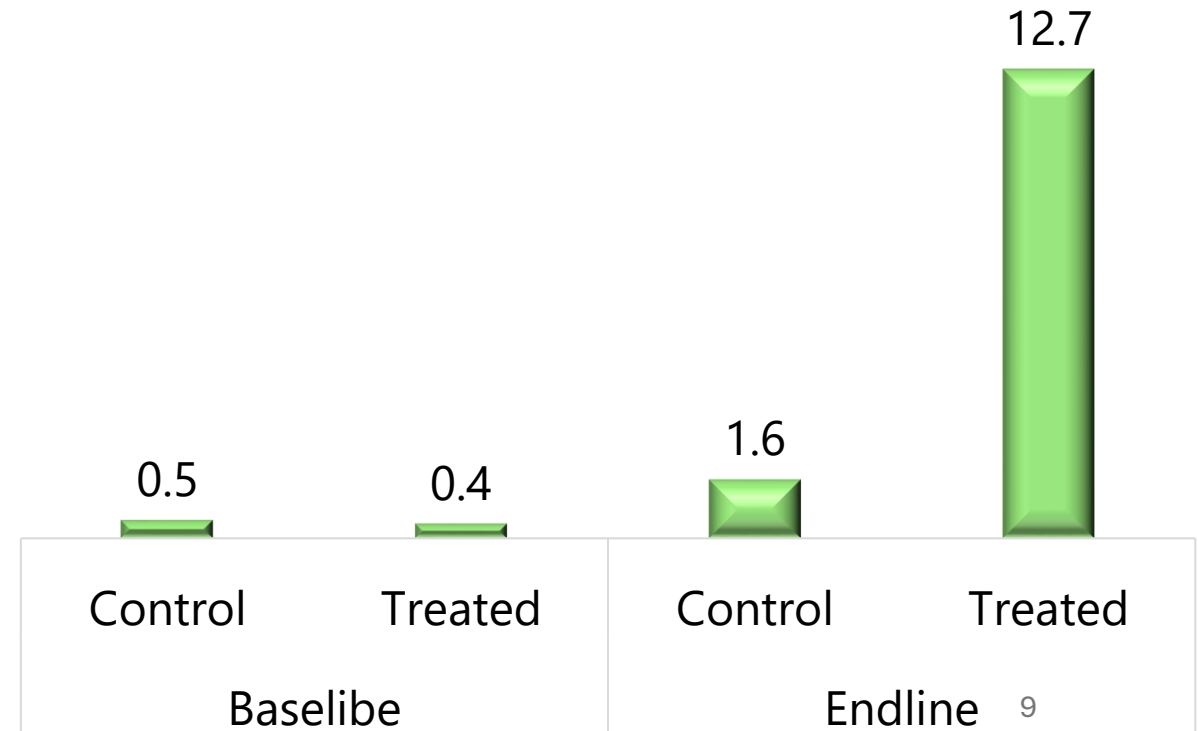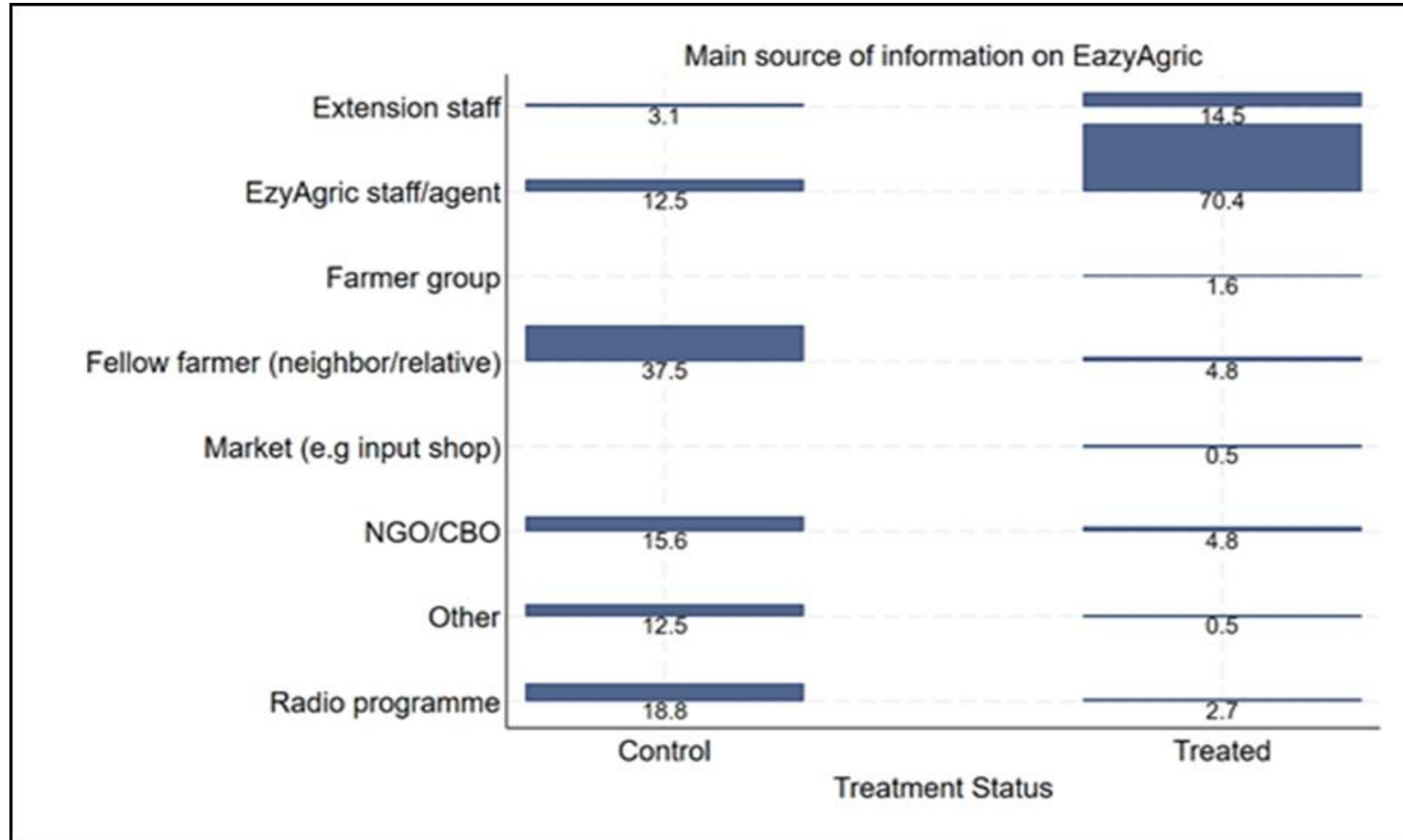

Awareness of EzyAgric (%)

Use of EzyAgric (%)

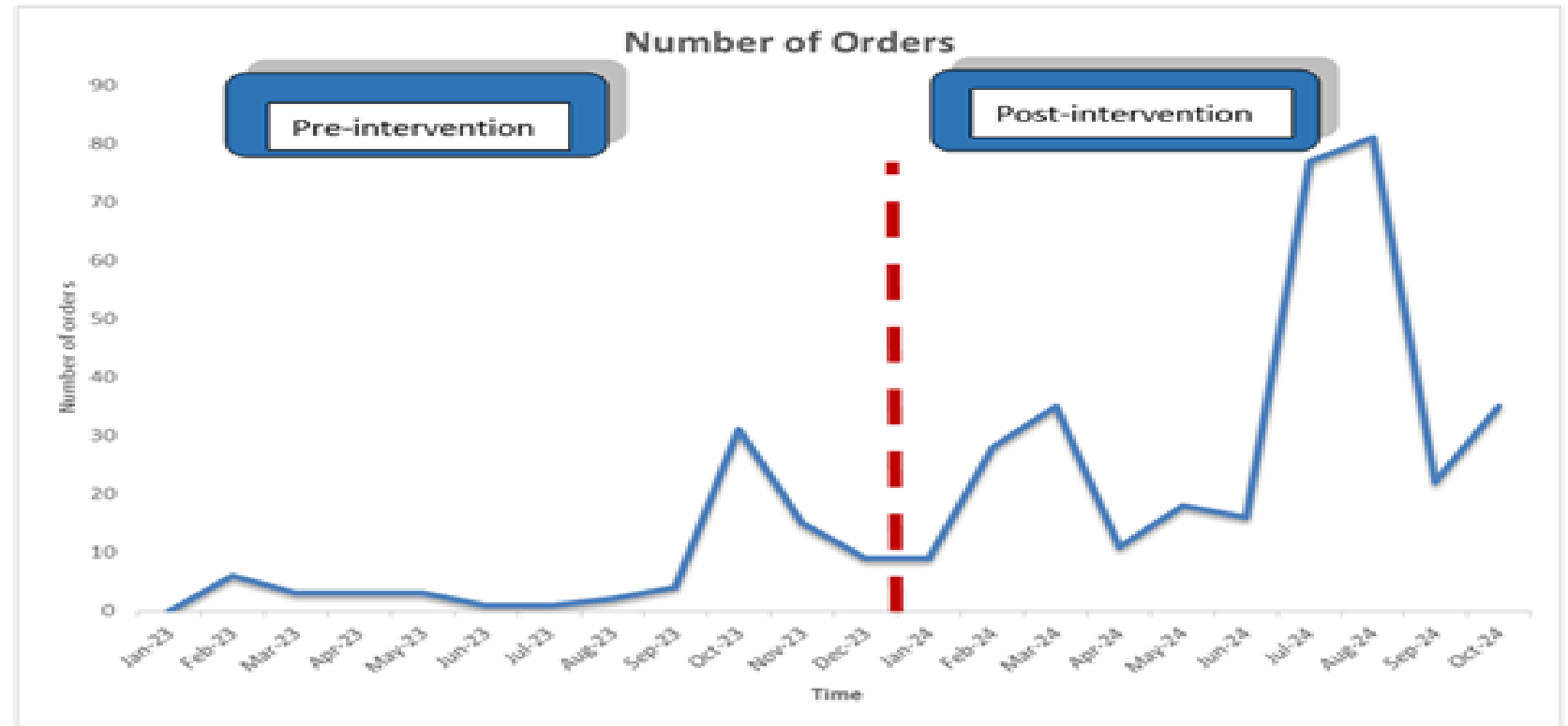# Information sources on EzyAgric platform and innovations

- EzyAgric staff are the primary sources of information.

- Farmer-to-farmer interactions are key in spreading awareness.

Main source of information on EazyAgric

|	Control	Treated
Extension staff	3.1	14.5
EzyAgric staff/agent	12.5	70.4
Farmer group		1.6
Fellow farmer (neighbor/relative)	37.5	4.8
Market (e.g input shop)		0.5
NGO/CBO	15.6	4.8
Other	12.5	0.5
Radio programme	18.8	2.7

Treatment Status

Services and information accessed via the EzyAgric platform following intervention

A notable increase in the number of Agro-input orders made on the platform.
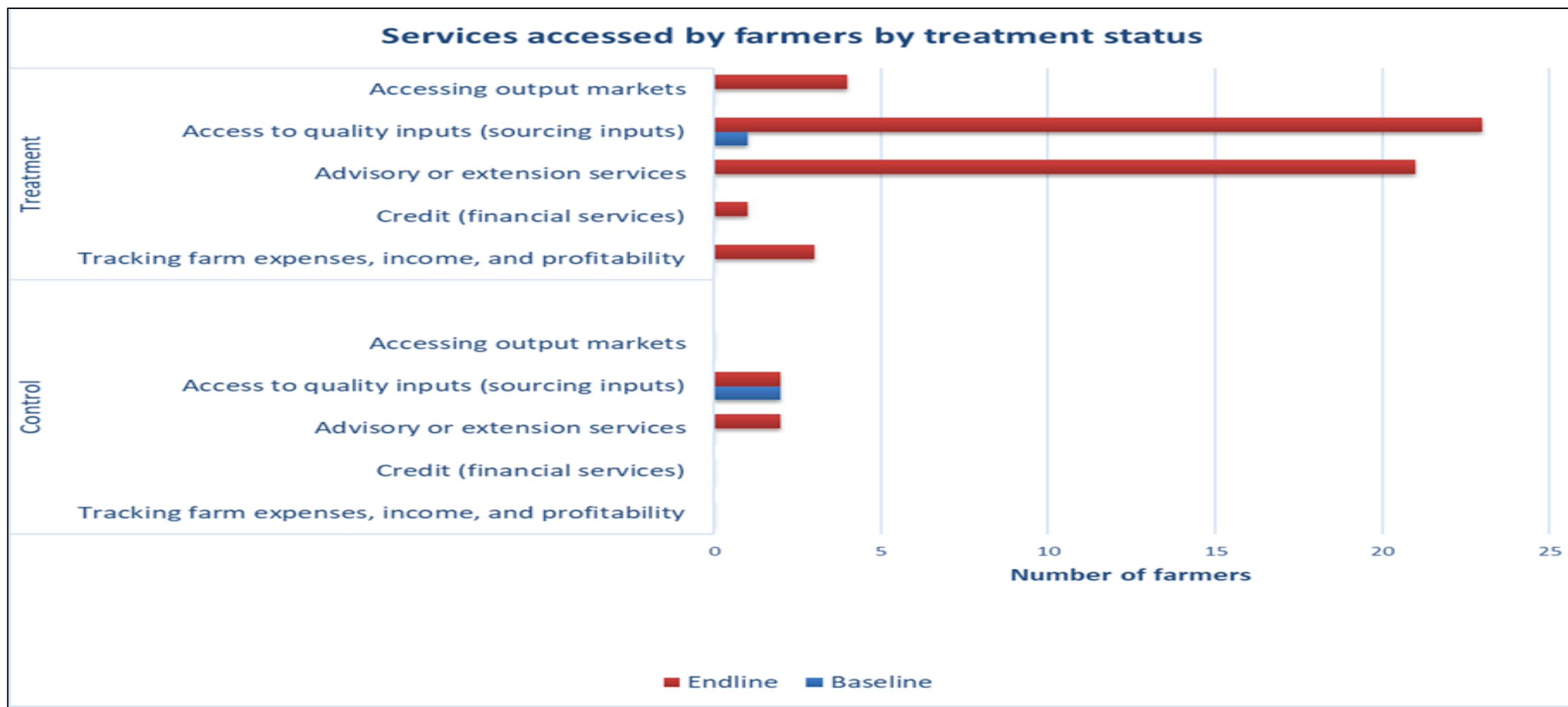

Number of Orders

Increase in the number of farmers accessing agronomic information, and the volumes ordered on the EzyAgric platform following the intervention.
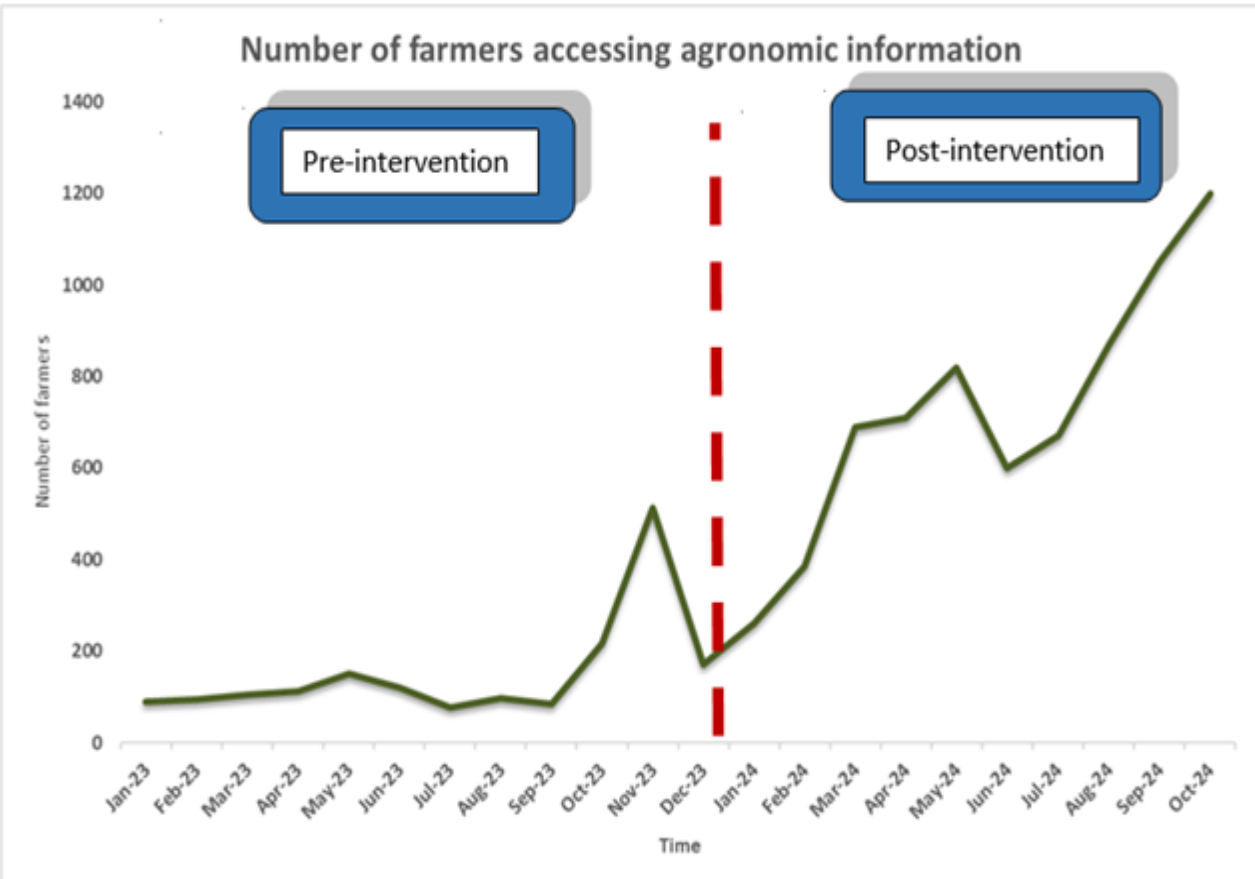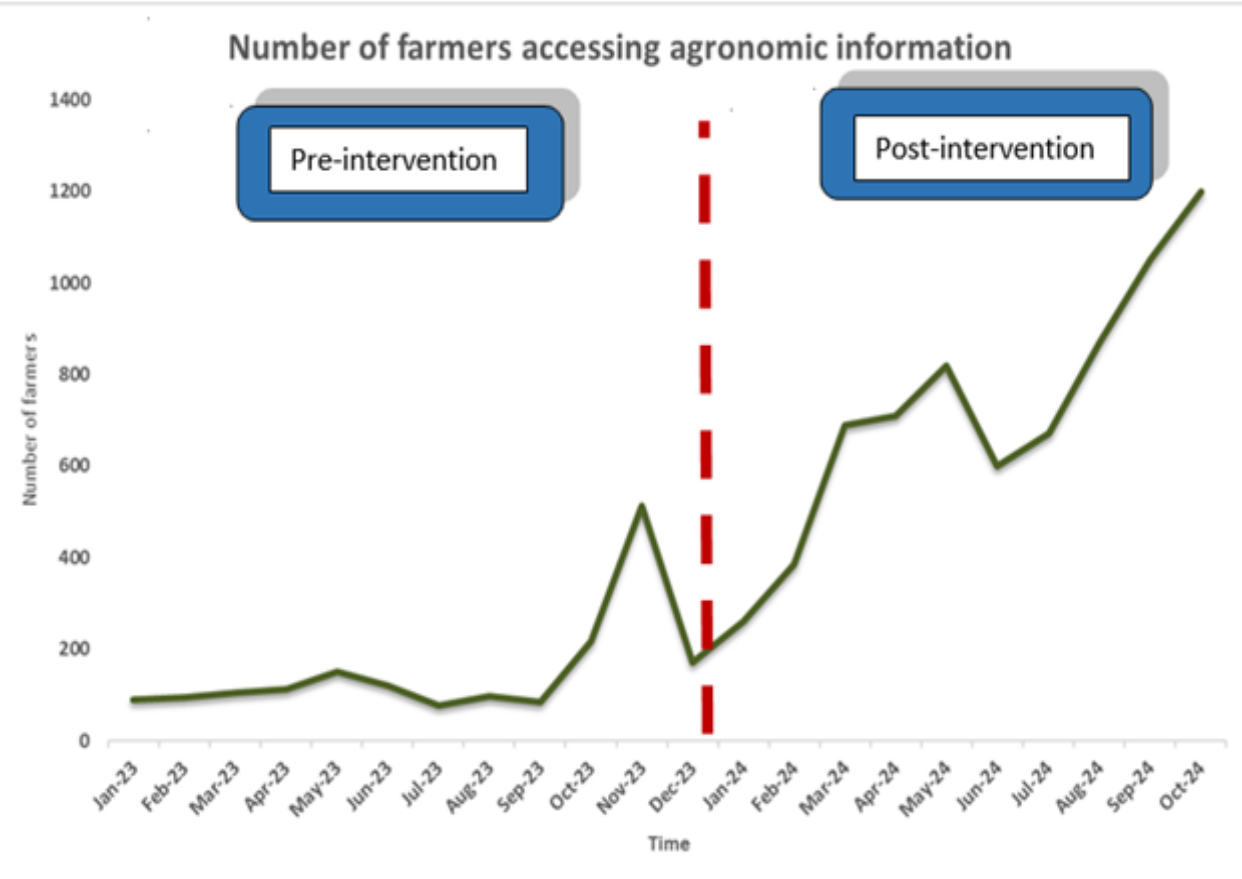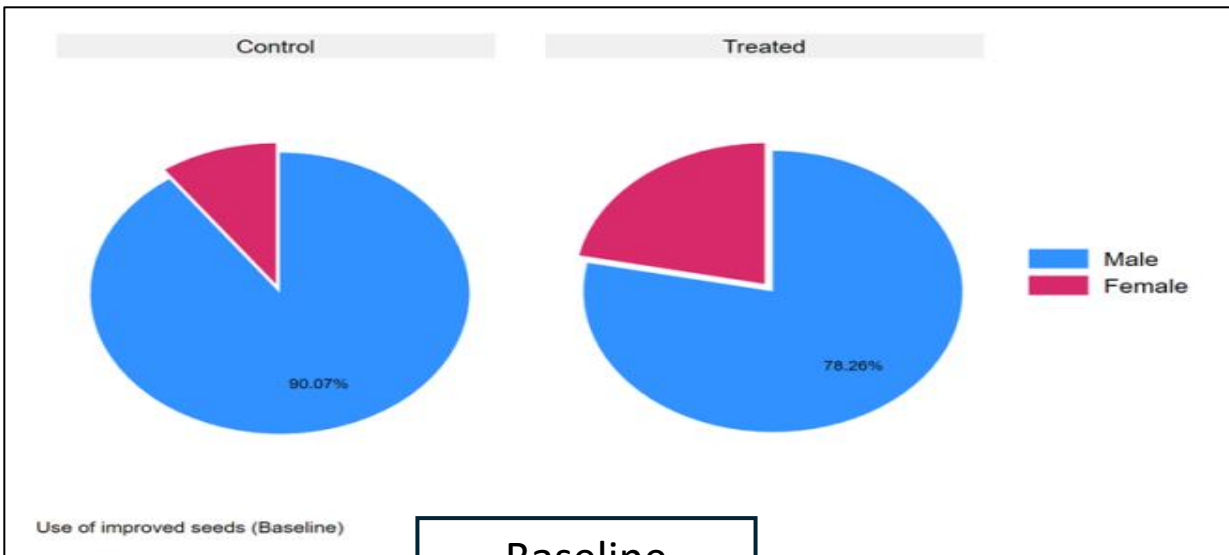
Services accessed

Access to agro-inputs and Extension services-the main services accessed through the platform
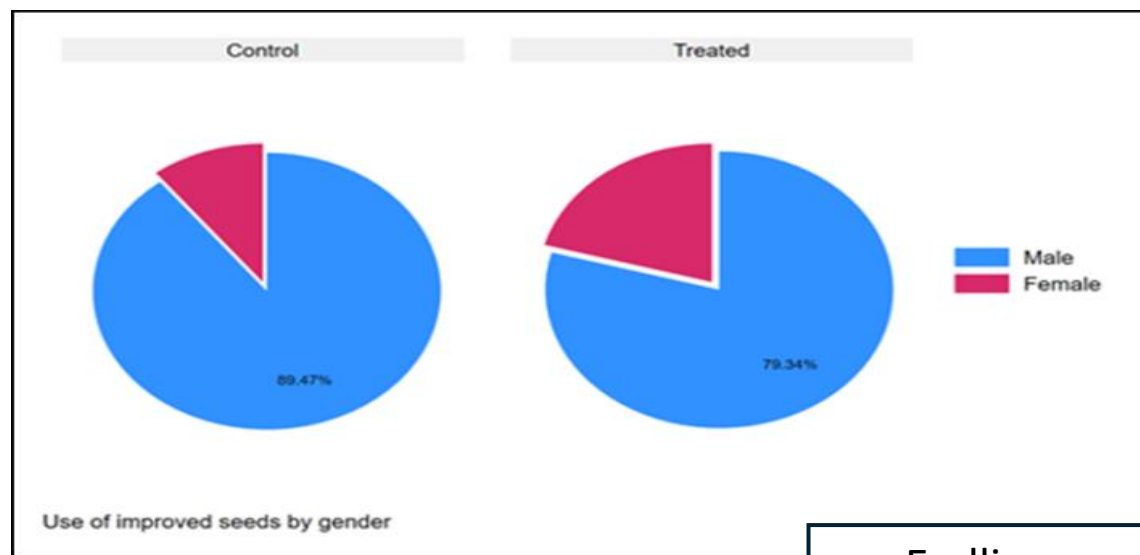

Services accessed by farmers by treatment status

Men had more access to agro-inputs than women but a slight increase in usage by female-headed households observed.
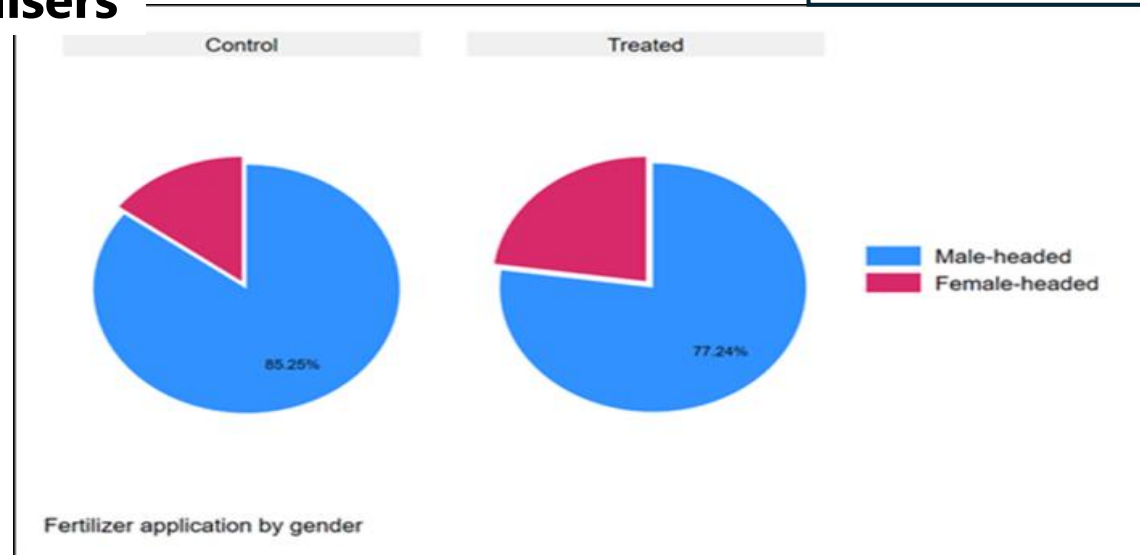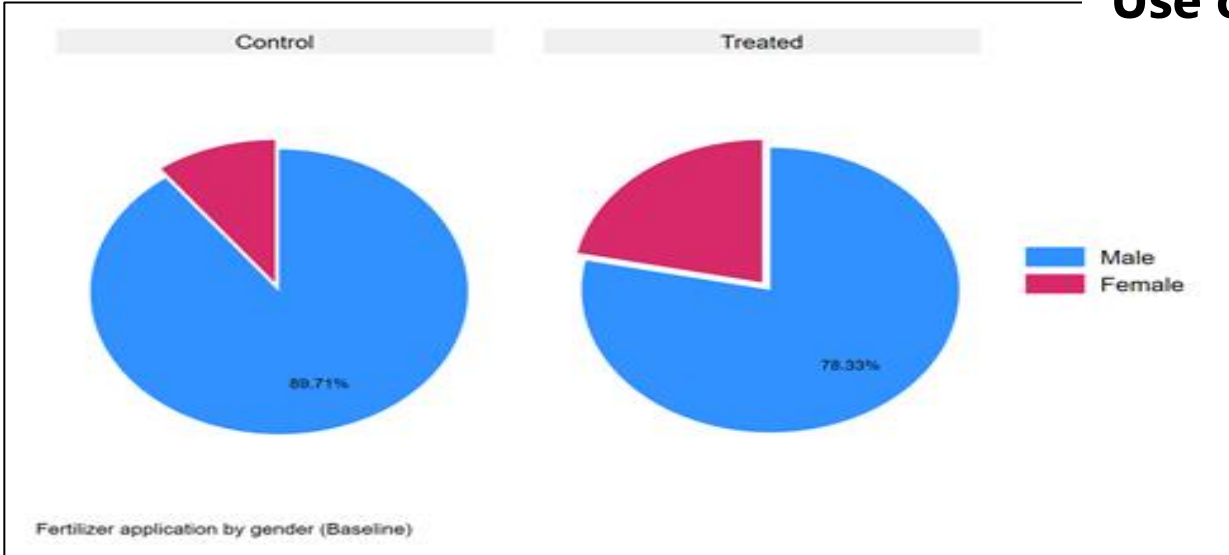
Use of Improved seeds

Baseline

Endline

Use of Fertilisers

The impact of the intervention on awareness of the EzyAgric platform increased

- Awareness of the platform increased by 170 percentage points post-intervention.
- Awareness among female farmers was lower compared to their male counterparts despite overall gains

Variables	(1) Awareness	(2) Awareness
Treatment effect	1.601*** (-0.128)	1.679*** (-0.135)
Female (1=Female, 0=Male)		-0.321* (-0.168)
Household size(count)		.057** (-0.026)
Group member (Yes/No)		0.118 (-0.137)
Farm size (acre)		0.001 (-0.003)
Distance to village market (km)		0.028 (-0.028)
Distance to agro-input dealer (km)		-0.008 (-0.016)
Constant	-1.086*** (-0.100)	-1.554*** (-0.226)
Observations	512	512
Pseudo R2	0.25	0.264

Note: *Standard errors are in parentheses *** p<.01, ** p<.05, * p<.1, column 1 is the result of the regression including only the treatment*

The impact of the intervention on Agricultural inputs

- Positive and statistically significant effect of the awareness creation on improved seeds.
- 41-percentage point increase in the use of improved seeds.

Variables	Improved seeds	Fertilizer	Agrochemicals
Treatment effect	0.411***	0.147	-0.477***
	(-0.116)	(-0.114)	(-0.110)
Constant	-0.466***	0.037	0.378***
	(-0.085)	(-0.081)	(-0.080)
Observations	490	490	536
Pseudo R2	0.019	0.002	0.026

Note: *Standard errors are in parentheses *** p<.01, ** p<.05, * p<.1, column 1 is the result of the regression including only the treatment*

The impact of the intervention on productivity indicators

However, a positive trend is observed in yields suggesting emerging productivity gains that could result from the intervention.

	(1) Maize yield (kg/acre)	(2) Beans yield (kg/acre)	(3) Banana yield (bunches/acre)	(4) Coffee yield (kg/acre)
Treatment effect	0.034	0.015	0.129	0.201
	(0.234)	(0.23)	(0.167)	(0.153)
Constant	4.537***	4.454***	3.054***	5.429***
	(0.169)	(0.166)	(0.125)	(0.111)
Observations	536	536	391	267
R-squared	0	0	0.002	0.006

*Notes: Standard errors are in parentheses; *** p<.01, ** p<.05, * p<.1*

The impact of the intervention on Welfare indicators

Positive and statistically significant effects on all four welfare outcome indicators

	(1) Food expenditure per capita	(2) Non-food expenditure per capita	(3) Gross production revenue	(4) Total value of assets
Treatment effect	0.153**	0.228**	0.219**	0.239**
	(0.063)	(0.099)	(0.097)	(0.105)
Female (1=Female, 0=Male)	-0.103	-0.236*	-0.158	-0.400***
	(0.080)	(0.127)	(0.123)	(0.135)
Household size(count)	-0.044***	-0.088***	-0.070***	0.019
	(0.013)	(0.020)	(0.019)	(0.020)
Group member (Yes/No)	-0.055	-0.029	0.016	0.188*
	(0.066)	(0.105)	(0.102)	(0.112)
Distance to village market (km)	-0.019	-0.039*	-0.041**	-0.040*
	(0.013)	(0.021)	(0.021)	(0.023)
Distance to agro-input dealer (km)	-0.005	-0.010	-0.009	-0.010
	(0.007)	(0.011)	(0.011)	(0.012)
Constant	12.747***	10.232***	8.967***	6.273***
	(0.183)	(0.657)	(0.681)	(0.534)
Observations	487	499	508	500
R-squared	0.116	0.075	0.097	0.363

Note: Standard errors are in parentheses; *** p<.01, ** p<.05, * p<.1

CONCLUSION AND RECOMMENDATIONS

- **Potential of Digital Innovations**:
  - Cost-effective tools to address agricultural challenges.
  - Require digital literacy and awareness campaigns to boost adoption.

- **Intervention Outcomes**:
  - Significant increase in awareness and use of the EzyAgric platform and genuine seeds.
  - Reduction in agrochemical use due to safe handling training.
  - Positive, though not statistically significant, effects on crop productivity (maize, beans, coffee, bananas).

- **Wider Impact**:
  - Significant improvement in household consumption expenditure, gross revenues, and asset value.
  - Findings highlight the potential for scaling digital innovations in Uganda.

Implementation challenges

Short intervention time- need for continuous training

Limited time after intervention for adoption before the cropping season began.

Farmers unaware of the potential losses caused using counterfeit products

Lack of immediate, visible benefits and incentives

Women encounter challenges with user interface and language barriers.

Lesson learned

Need
- Need to broaden the training content to include other services offered on the App.

Include
- Include incentives in the innovation bundle

Scaling
- Scaling needs to draw more on agro-input merchants as intermediaries for farmers

Gender
- Gender and social inclusion programing

- [Falling guy](#)

End of Presentation

Thanks for listening