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THIRD AFRICA CONGRESS ON CONSERVATION AGRICULTURE
5-8 June 2023 | Rabat, Morocco

CGIAR INITIATIVE ON Climate Resilience

BRIDGE consortium

CIHEAM MONTPELLIER

PERCEPTIONS OF STAKEHOLDERS ON NO TILLAGE AS AN EFFECTIVE CLIMATE CHANGE ADAPTATION

Theme:
Building a Resilient Future in Africa through Conservation Agriculture and Sustainable Mechanization

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Content

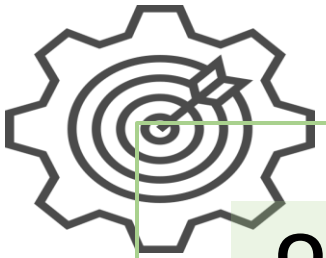
1

INTRODUCTION

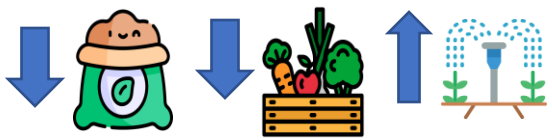
Water-energy-food-ecosystem (WEFE) nexus assessment

Water-energy-food-ecosystem (WEFE) nexus assessment

From the perspective of the water-energy-food-ecosystem (WEFE) nexus assessment, smallholder farmers in the dryland area are the first ones to be affected by both climate and market uncertainties.



Objective – to find out the most suitable adaptation strategies focused on improving the use of water and energy, by triggering scenarios under NT in the study area of the Meknes region (Morocco).



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Methodology

Materials and Methods

Framework

Multicriteria Analysis

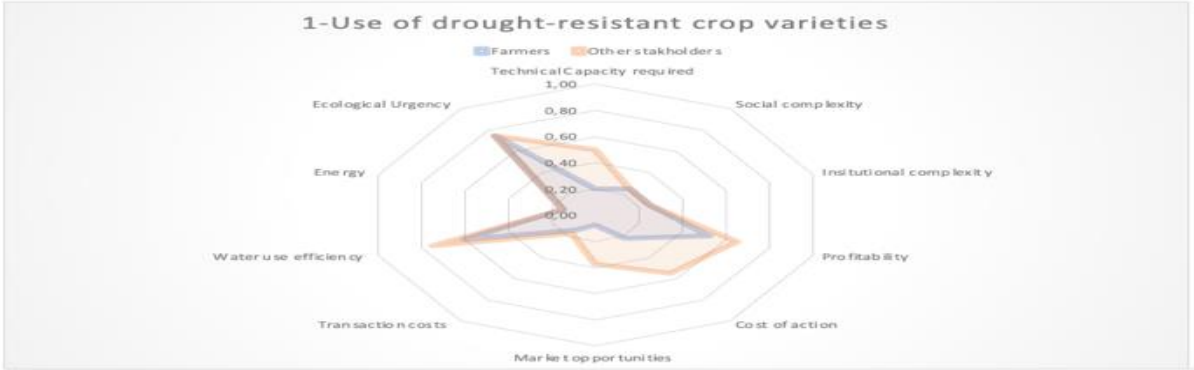
Scoring bands	
5	very high
4	high
3	average
2	low
1	very low

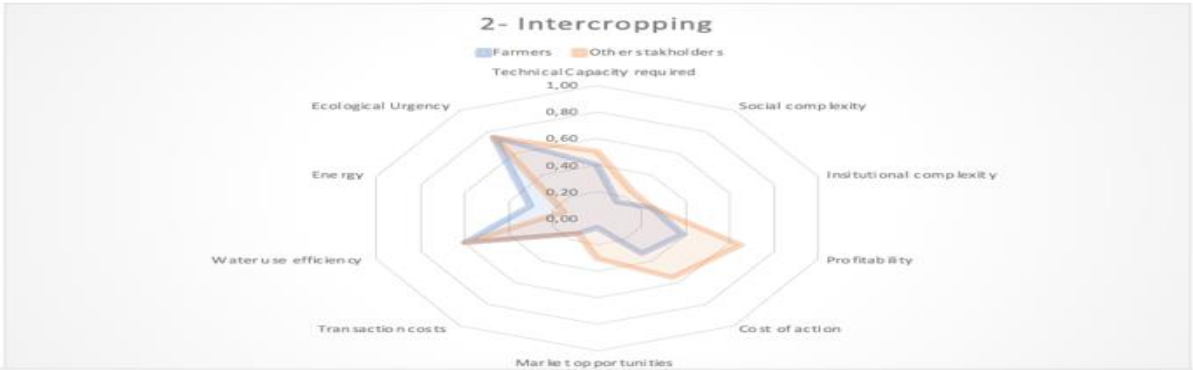
No	Adaptation options	Technical Capacity required	Social complexity	Institutional complexity	Profitability	Cost of action	Market opportunities	Transaction costs	Water use efficiency	Energy	Ecological Urgency	Comments (Reasons behind your ratings)
1	Introduce minimum tillage practices											
2	Organic fertilizers such as compost and manure											
3	Use of drought-resistant crop varieties instead of traditional varieties											
4	Adopt efficient water management practices, such as drip irrigation											
5	Intercropping											
6	Rainwater harvesting											
7	Integration of olive trees with cereal crops											
8	Production of alternative livestock fodder											
9	Integration of olive trees with vegetable crops.											
10	Provide financial incentives to farmers who adopt water conservation practices											
11	Establishing schemes for revolving loans with a focus on women											
12	Using less fertilizers											
13	Crop rotation											
14	Integration of livestock and crop production											
15	Crop diversification											
16	Soil conservation practices											

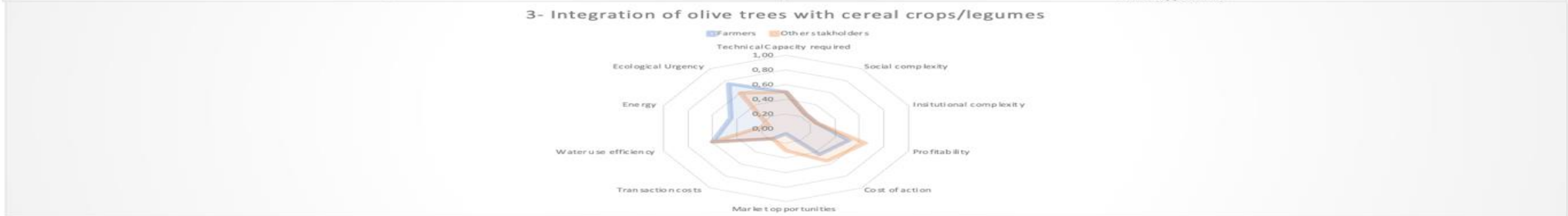
3

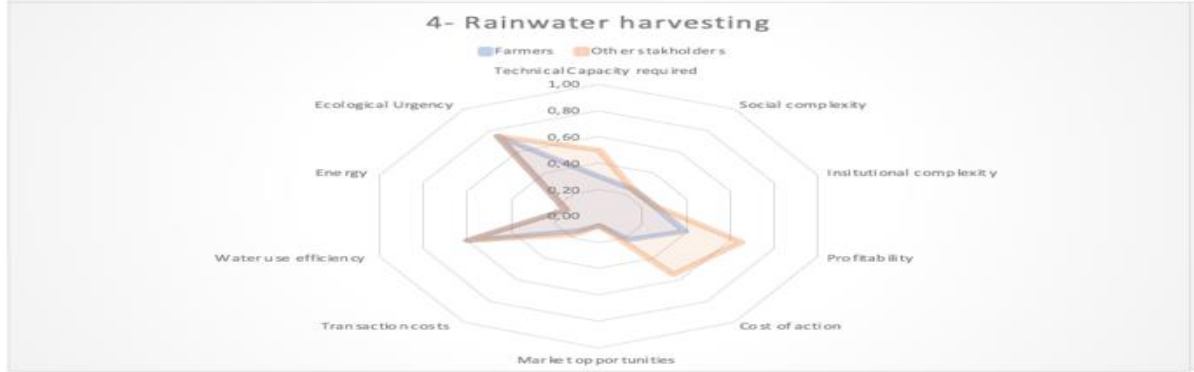
Results and discussions

No tillage seems to be not the first option for stakeholders









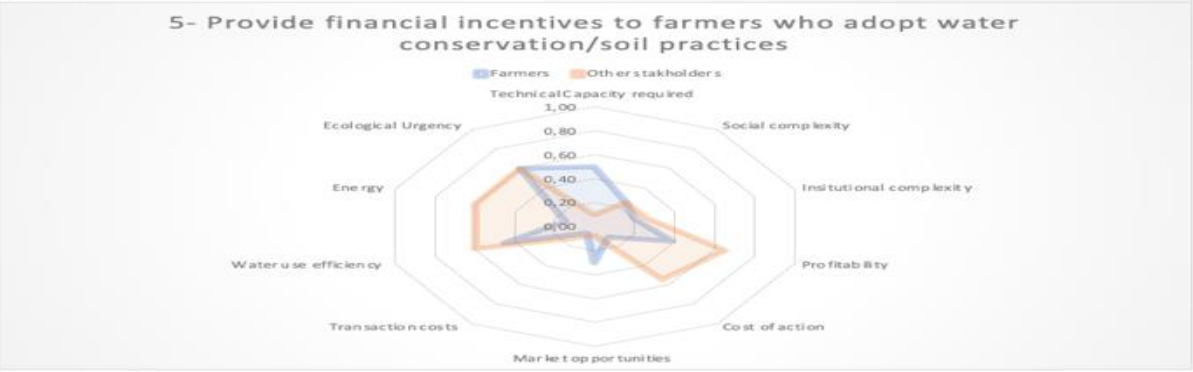


Figure 1. The top adaptation strategies from 1 to 5 of farmers for each criterion

Contd.

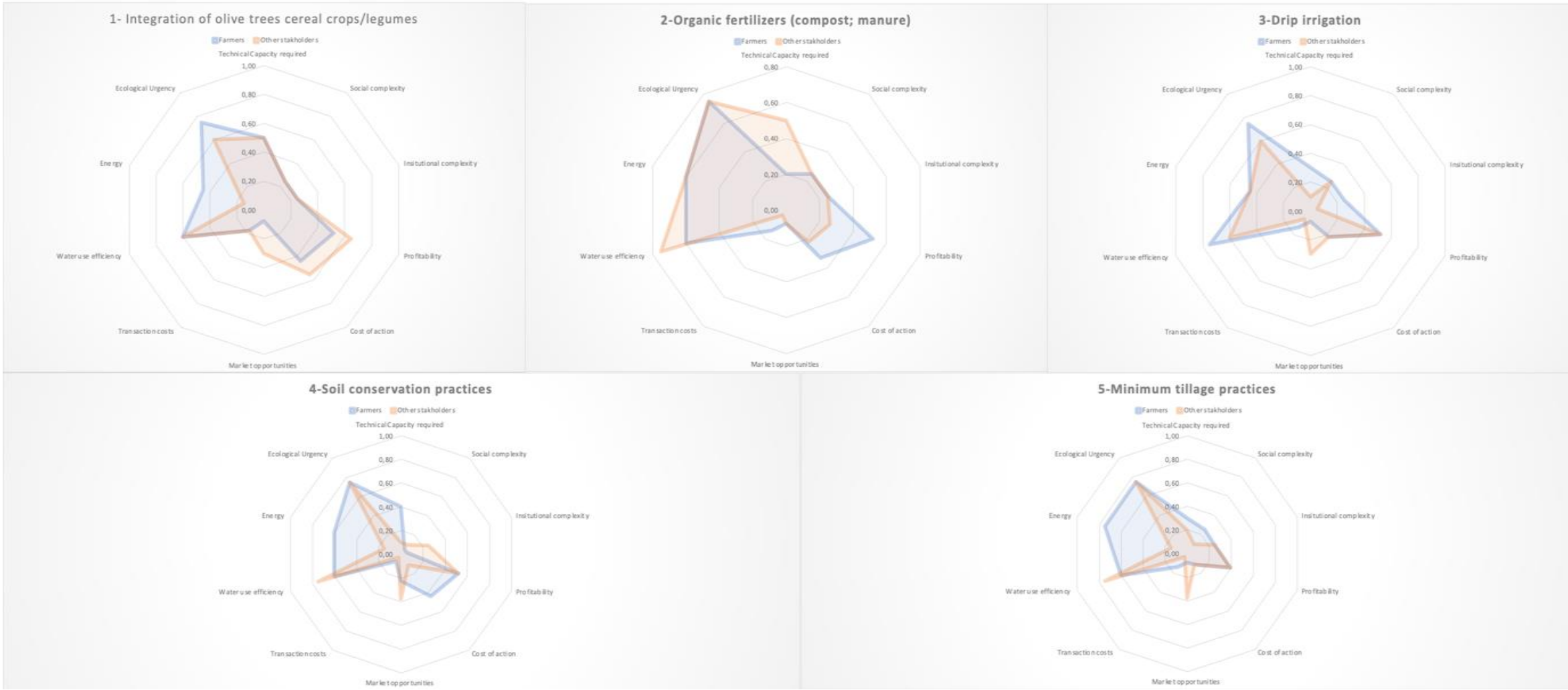


Figure 2. The top adaptation strategies from 1 to 5 of other stakeholders for each criterion

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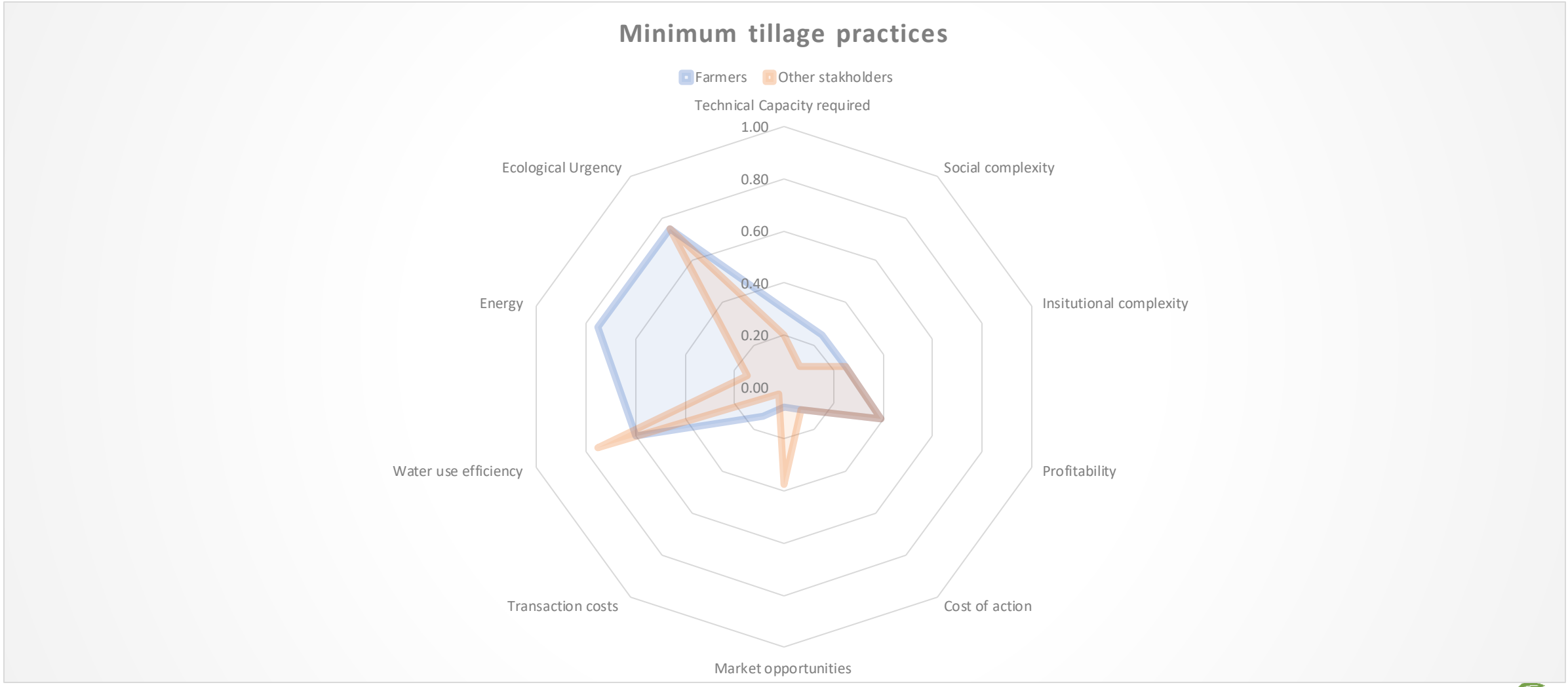

Figure 4. Minimum tillage- multicriteria analysis

Why other strategies seems to have more impacts on WEFE than NT practices

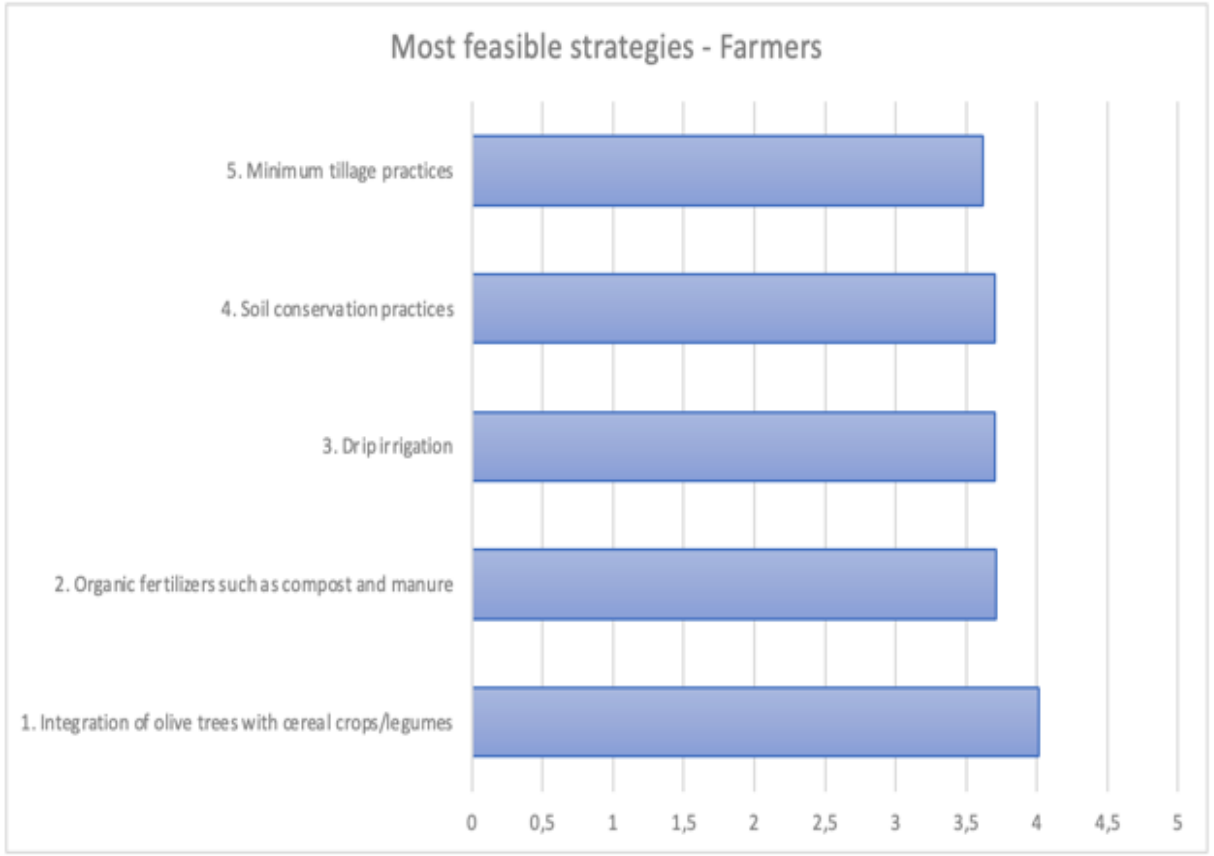

Figure 4. Comparison of the feasibility assessment: Other stakeholders vs Farmers

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Thank You!

References

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