

How Effective is Your Demo Plot? Feedback From a New “Participatory Demo Plot Appraisal Toolkit”

AUTHORS

Usman Abdullahi Angara, Ferdinand Adu-Baffour, Regina Birner (University of Hohenheim, Germany)

Christogonus K. Daudu (NAERLS, Ahmadu Bello University, Nigeria)

Nelson Makange (Sokoine University of Agriculture, Tanzania)

1. THE CONTEXT: PADePAT, Demonstration Plot and Participatory Appraisal

i. Background

- ❖ Demonstration (demo) plot plays a key role in the promotion of new farming practices and technologies. However, demo plots do not always lead to adoption.
- ❖ To better **understand why**, we developed the “**Participatory Demo Plot Appraisal Toolkit**” (PaDePAT) and piloted on the *AAE Project’s demos in Tanzania
- ❖ The **objective** is to evaluate the **effectiveness of the demonstration plots** in stimulating **adoption** and **challenges** of adopting technology.

ii. What is PaDePAT?

- ❖ A novel data collection tool that uses a **visual** and **systematic mapping** to allow a **joint assessment** of agricultural **technologies** promoted through demonstration plot. A **matrix tool** designed to assess adoption and compare with farmers’ traditional practices.
- ❖ PaDePAT can be seen as a **new tool** in the Participatory Rural Appraisal (PRA) toolbox.

2. METHODS AND RESULTS

i. How it Works

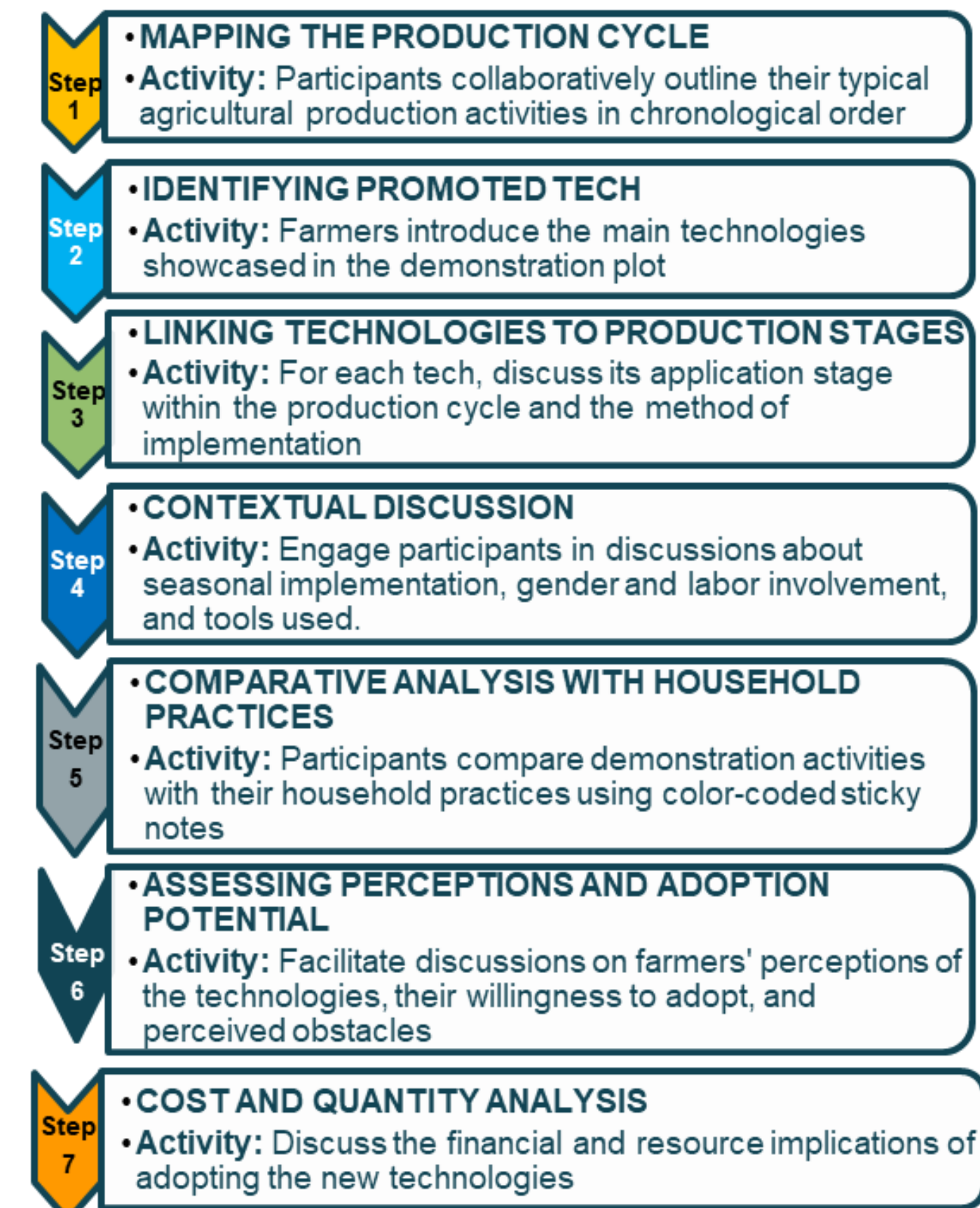


Fig 1: Sample PaDePAT output



Table 1: Sampling procedure and size

CASE A: Dodoma Maize-Sorghum Systems				CASE B: Njombe Potato Farming Systems			
District	No. of Demos Estab.	No. of Group Interv.	No. of Participants	District	No. of Demos Estab.	No. of Group Interv.	No. of Participants
Kongwa	9	8	90*	Njombe DC	13	8	75*
Chamwino	7	5	49*	Wanging'ombe	10	4	41*
TOTAL	16	13	139		23	12	116

Total Demo Groups Interviewed= 25; Total Participants= 255

*7 – 15 participants/session, purposively selected based on active demo participation



Fig 2: Farmers group discussions using PaDePAT tool

ii. Preliminary Results

- ❖ Higher rate of adoption or willingness to adopt technology among maize/sorghum than potato farming systems.
- ❖ PaDePAT **rated 4.4/5** on ease of use by **88% of groups**.

Challenges to Adoption:

- ❖ Adoption of most technologies comes with **extra costs**
- ❖ **No access** and lack of technical skills by *MSPs.
- ❖ Lack of **service roads** significantly reduce adoption.
- ❖ **Commission fees** charged increase cost of operations borne by farmers.

*MSPs= Mechanization service providers; AAE=African Agri-center of Excellence, a 4-year (2021-2025) consortium project aimed at facilitating the adoption of machinery & GAPs through demo plots.

Fig 3: Technologies promoted- Maize systems

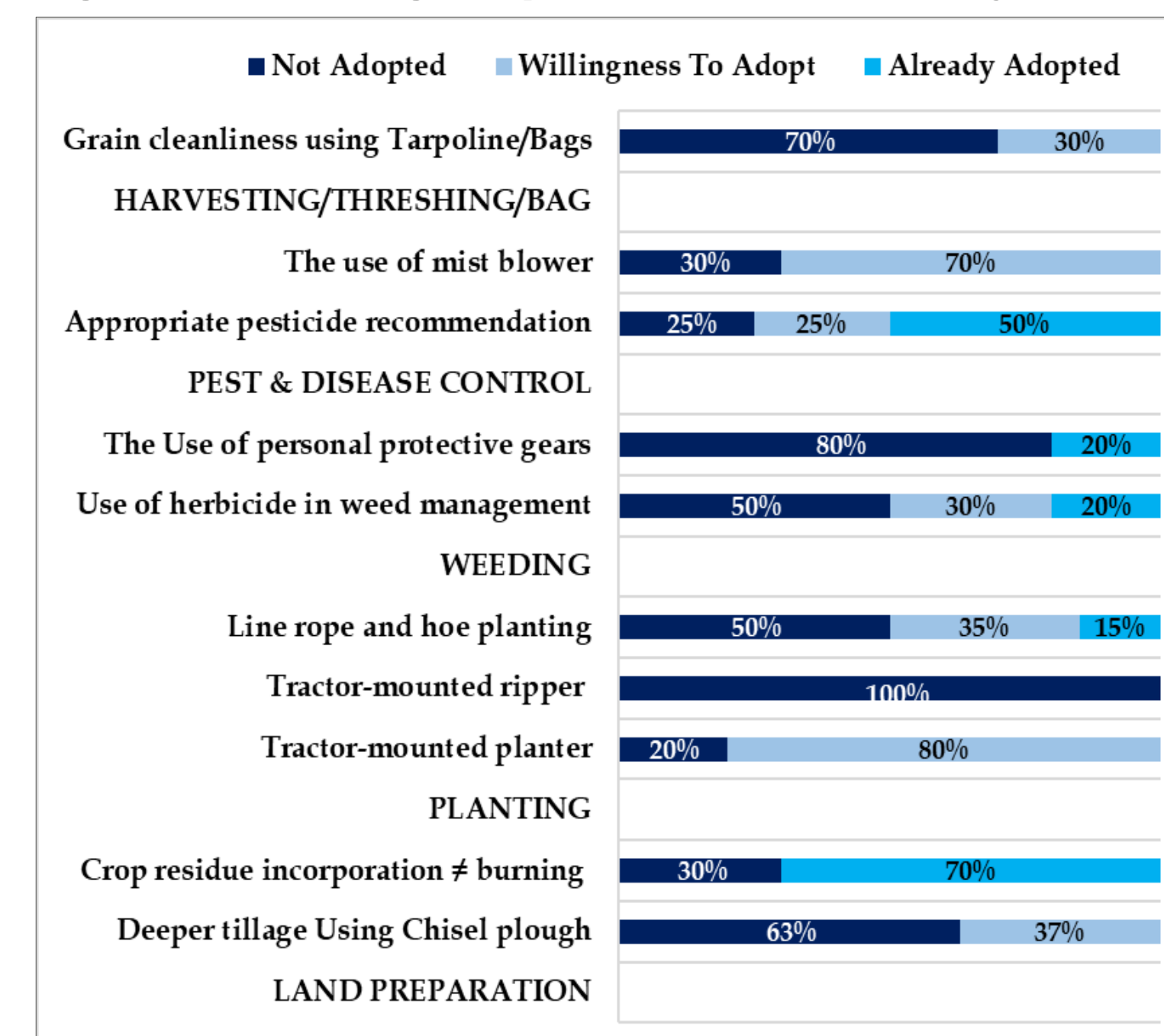


Fig 5: Adoption challenges-Maize systems

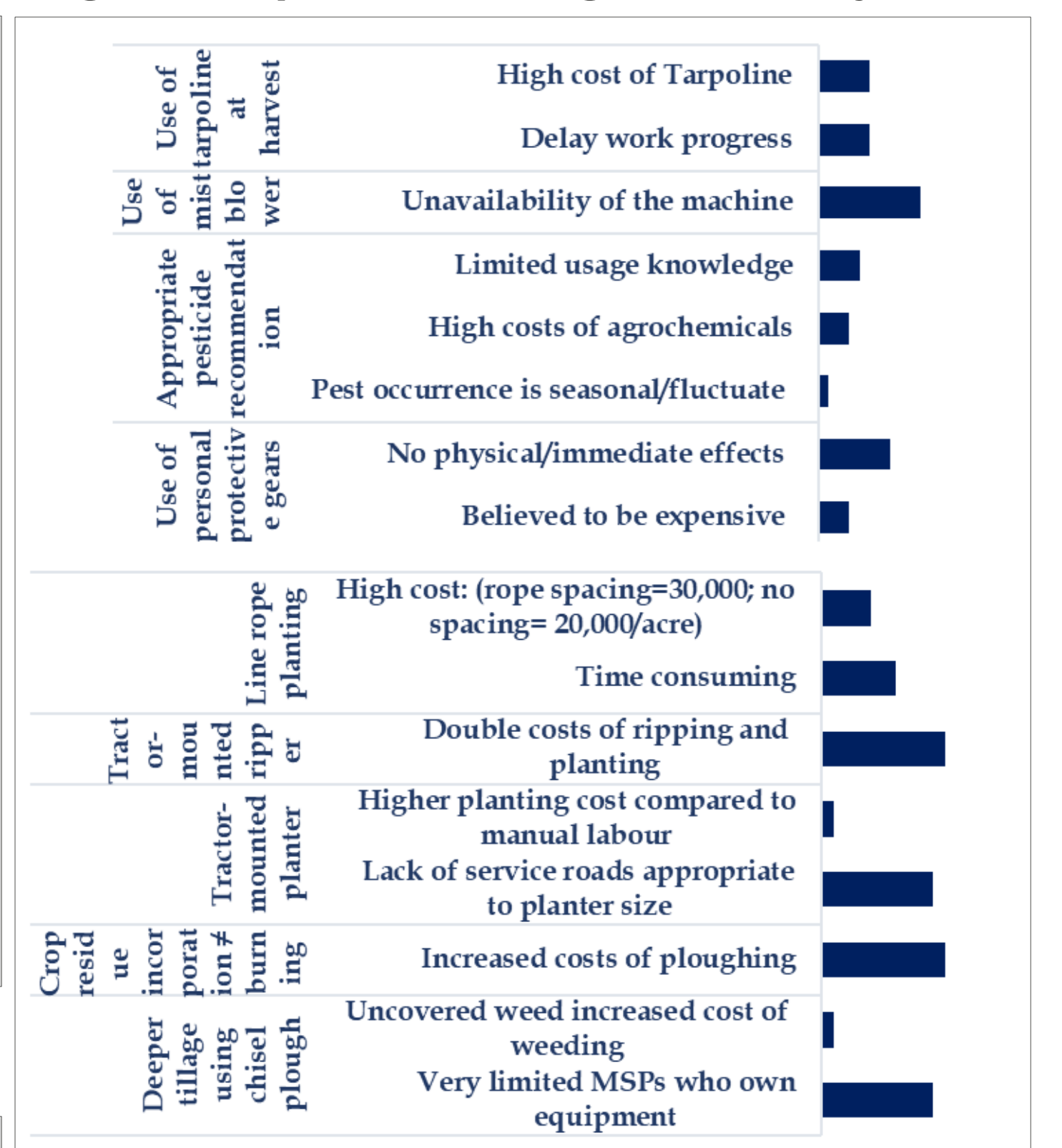


Fig 4: Technologies promoted- Potato systems

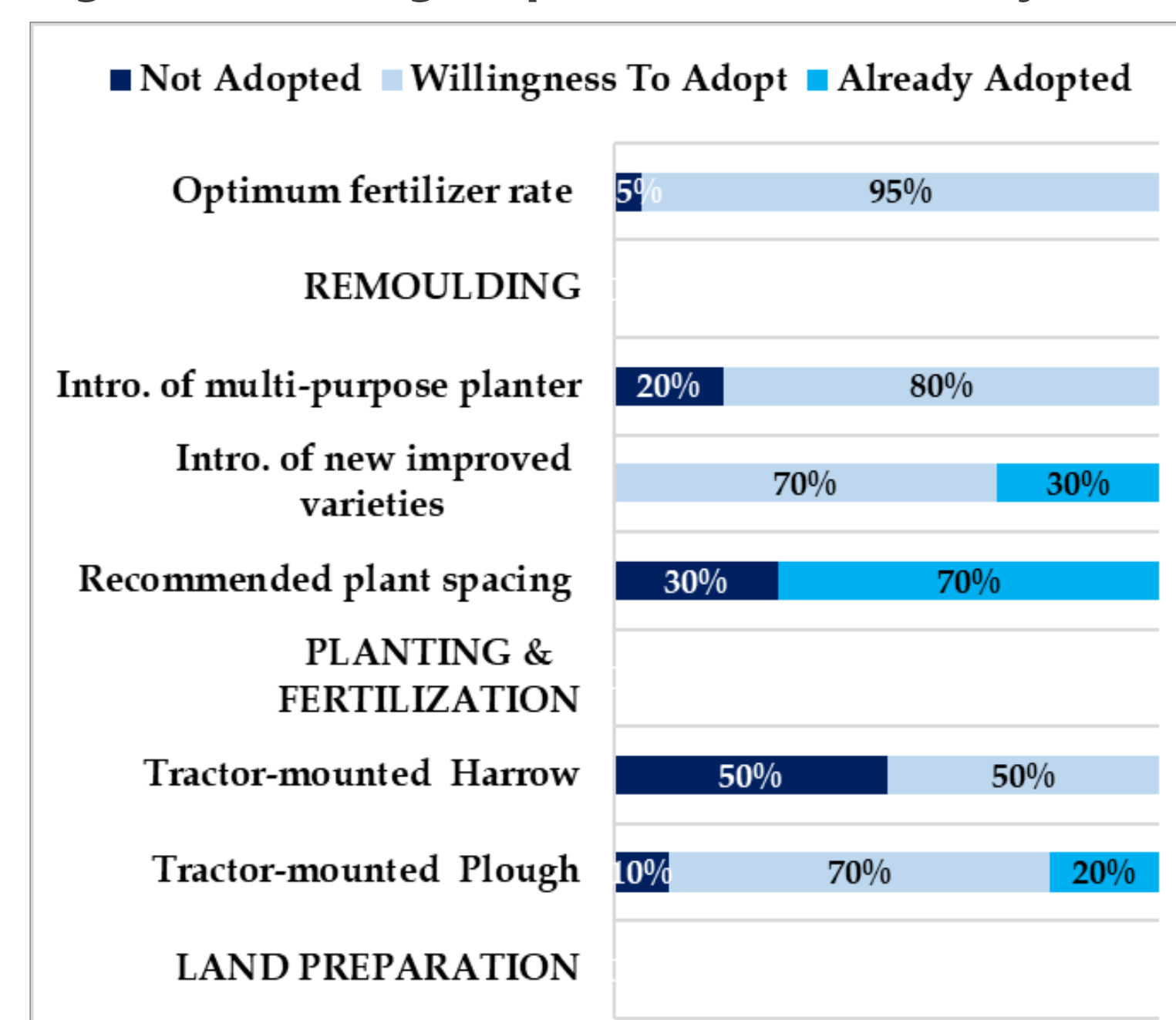


Fig 6: Adoption challenges-Potato systems

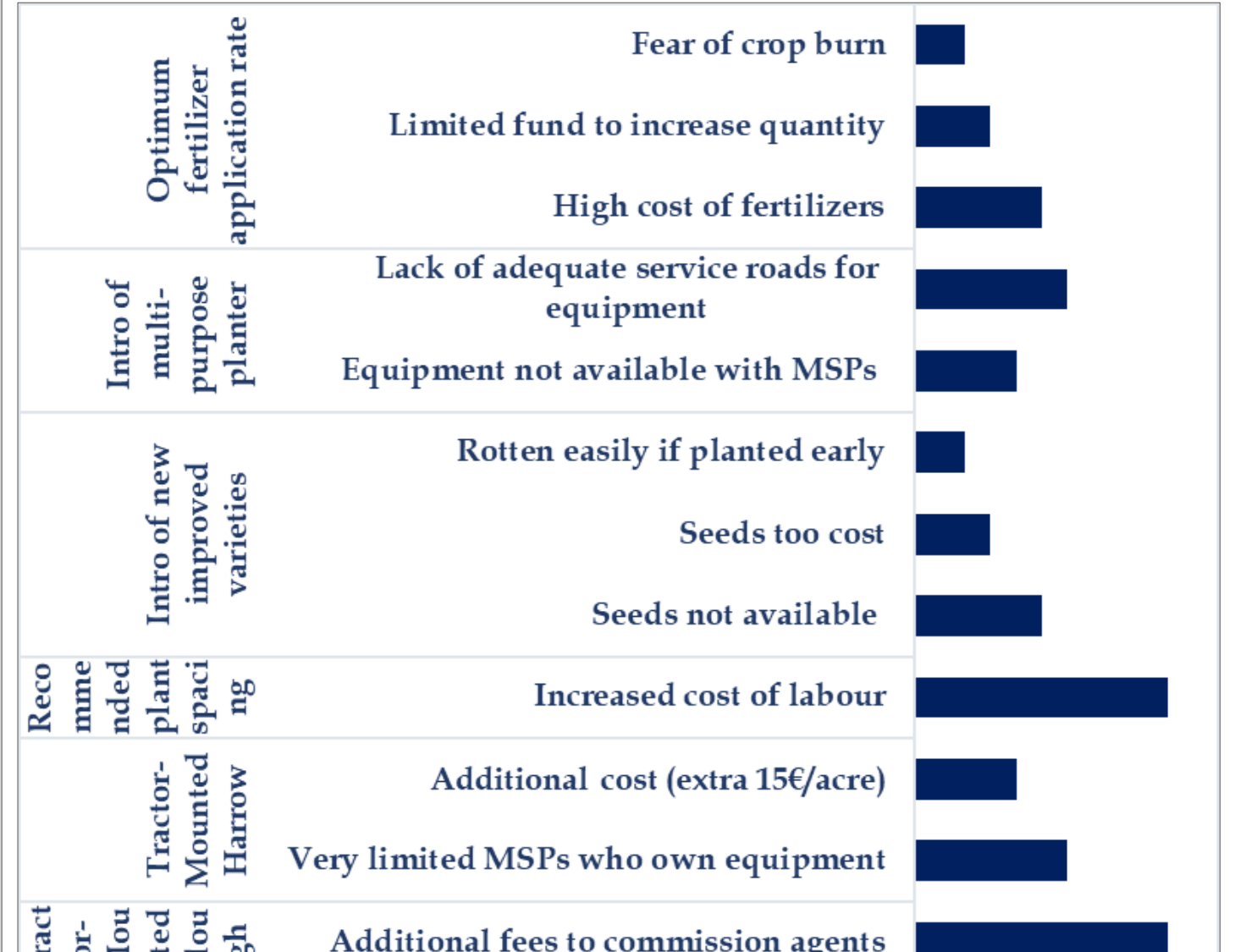


Table 2: Comparative advantage and further application

PaDePAT	Other Assessment Tools
Provides both quanti-&-qualitative insights	Overemphasis on quantitative survey, (extractive & checkbox exercises)
Formal, systematic & visualized for low-literacy context	Most are informal, lack scientific procedures
Facilitates co-learning (results are seen and reflect upon)	Results can be influenced by who collects or interprets the data
Versatile, can be used to assess seasonal fluctuations like food shortages, incidence of diseases, etc.	Context specific, making cross-comparison difficult

3. CONCLUSION

- ❖ The demo has successfully triggered farmers’ interest on promoted technologies with recorded **early adoption**. However, **costs & access** to tech limit adoption.
- ❖ The results provide **impact pathways** for the *AAE project.

Selected reference: Maredia, M. K., Farris, J., Masson, N. M., & Morgan, S. (2025). Does providing free trial packs with demonstration plots increase the adoption of agricultural technologies? Cost effectiveness evidence from Tanzania. *Agricultural Economics*, 2025; 00:1-16. <https://doi.org/10.1111/agec.70033>



CONTACT

Usman Abdullahi Angara
Wolgrassweg 43, 70599 Stuttgart, Germany
usmanabdullahi.angara@uni-hohenheim.de