ICARDA
Science for resilient livelihoods in dry areas

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RESEARCH BRIEF

Gender and agriculture in Tunisia: A brief country report

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Agriculture is highly "gendered" in Tunisia

- Women make up a large percentage of the agricultural labor force in Africa— on average 50%). In Tunisia, agriculture is an important employer, providing work opportunities for 11% of women and 16% men; with women's participation increasing from 27% in 1980 to 33% in 2010 (for more information on the feminization of agriculture in South Tunisia, see also Latreille, 2008);
- Women are disadvantaged in productive asset ownership, including land—only 6% of land is owned by women in Tunisia (FAO Land and Gender Database, n.d)—livestock, control of productive inputs (including access to credit, insurance, technology etc.), and participation in public life (local governance committees) (Latreille, 2008);
- Lack of access can mean there is a lack of motivation among women to increase production; and
- Female farmers produce less than men not because they are less efficient/able farmers, but because they lack equal access to resources.

There are limited sex-segregated statistics on women's roles, ownership and contributions to agriculture in Tunisia (for example, the FAO factsheet on gender and agriculture in Tunisia was last updated in 1994). We seek to make a timely contribution on the status of gender and agriculture in Tunisia. This information is important for understanding the specific roles and hence, the needs of men and women in agriculture, and to respond with proper policies and monitor change.

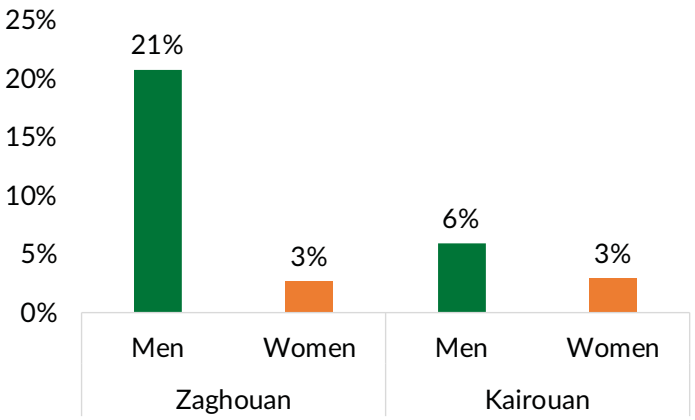
Gender gaps in central Tunisia: Findings from the Mind the Gap Project for improving dissemination strategies to increase technology adoption by smallholders

The project aimed at understanding the roles of men and women in agriculture. Based on a survey of 1,400 respondents (700 men and 700 women), findings reveal (Figure 1) that women on average work longer hours, on various activities, and spend less time on income-generating activities (on average ¼ of the time spent by men) and more

Fig 1. Average time spent on daily activities by men and women.

	Agricultural activities related to livestock (hour/day)	Agricultural activities related to crops (hour/day)	Other economic activities (hour/day)	Housekeeping (hour/day)	Taking care of young and old people (hour/day)	Average time spent on activities (hour/day)
♂	3.45	2.06	1.97	0.02	0.26	7.76
♀	3.51	1.13	0.54	3.52	1.87	10.58

Fig 2. Visits by extension agents for men and women in Kairouan and Zaghouan as per survey responses.



time on unpaid work (on average 4 hours per day more than men). It is worthwhile mentioning here that only 20% of women in rural areas are employed while 58% of men are employed in rural areas (ILO Stat). Thus, it is important to reduce the workload of women to enable them to participate in more paid work, which will simultaneously contribute to enhancing the rural economies.

Despite **women's significant involvement** in crop production (on average 1.1 hours per day) and animal production activities (on average 3.5 hours per day), their **access to extension advice** is **substantially lower** than that of men. As shown in Figure 2, women's access to extension in Kairouan is equivalent to half that of men's, and one seventh that of men's in Zaghouan. This has significant impacts on the adoption of best practices and technologies with negative implications on food security in households and communities more broadly. There is overwhelming evidence which reveals that joint participation of male and female farmers in extension leads to higher technology adoption. Extension services, therefore, must **challenge practices which produce gender inequality in access to information** if they are to be successful in the long-term at increasing agricultural productivity (Diaz et al. 2017).

Women own very few of the productive assets associated with crop and livestock production. This weakens their ability to obtain loans and cope with adverse events, e.g. in cases of natural shocks, such as drought, as well as social shocks, such as marriage dissolution or widowhood. Although our findings about women owning significantly less assets than men are consistent with the available data, our findings on **women's land ownership rates are higher than those reported in the literature**: 9% of land is owned by women (either alone or jointly) in Kairouan and 27% in Zaghouan (Figure 3). A different scenario presents itself in livestock ownership: our findings reveal that women own (especially jointly with their spouses) substantial quantities of livestock in central Tunisia: 36% of large livestock in Kairouan and 49% in Zaghouan, and 46% of small ruminants in Kairouan and 40% in Zaghouan.

Extension often fails to meet or recognize the very different needs of men and women farmers (Diaz et al. 2017). Women's needs are often assumed to be restricted to household-related activities (Latreille 2008; Diaz et al. 2017). To address this gap, we have asked men and women in our target areas what kinds of information they would like from extension. Figure 4 shows that, to different degrees, and contrary to popular beliefs about women's

Fig 3. Gendered distribution of agricultural assets.

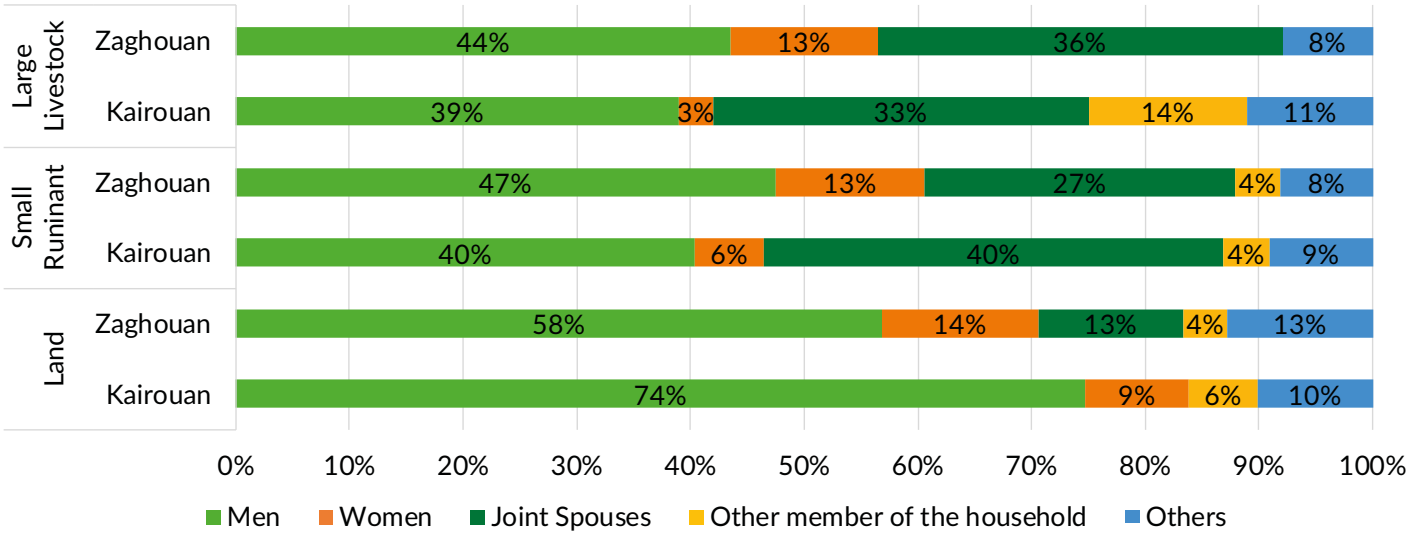
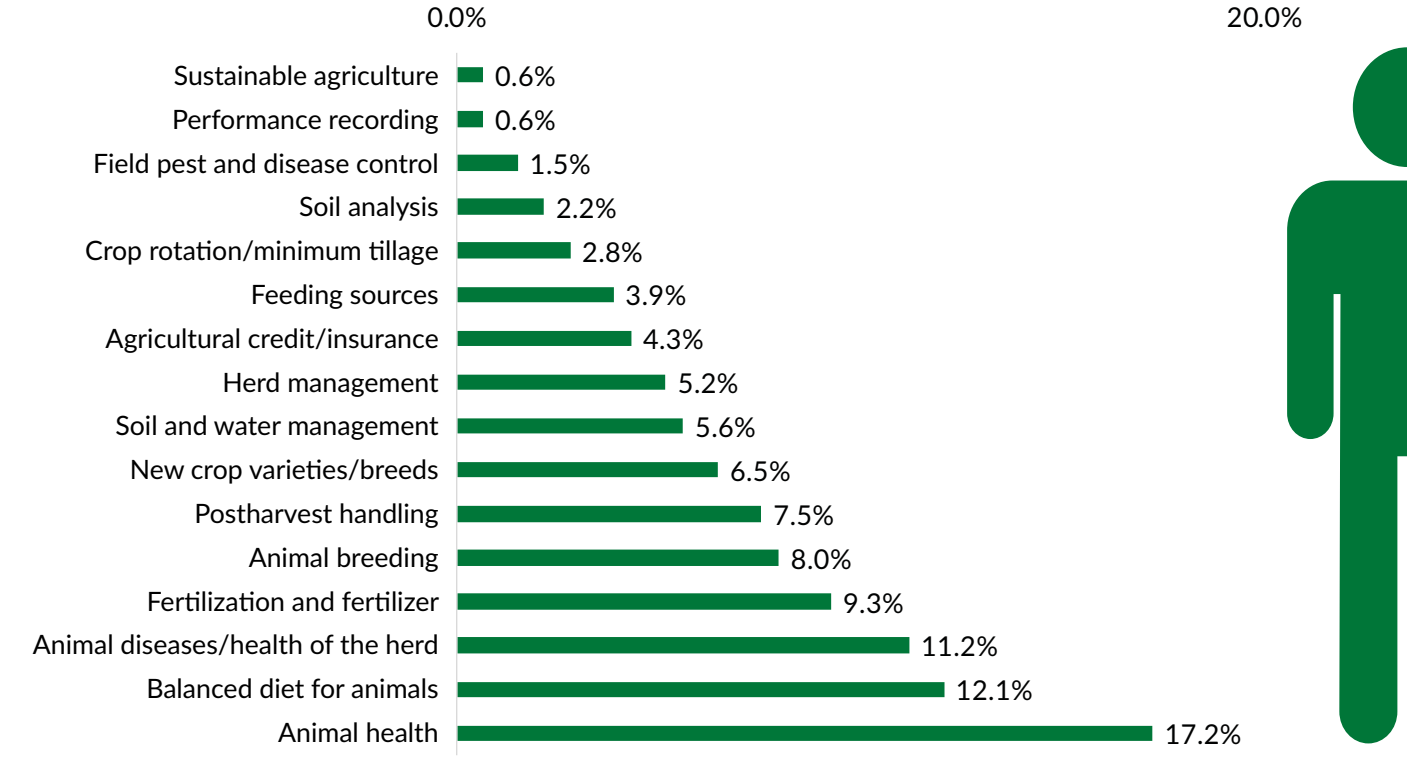


Fig 4. Extension information requested by men and women as per the survey responses.



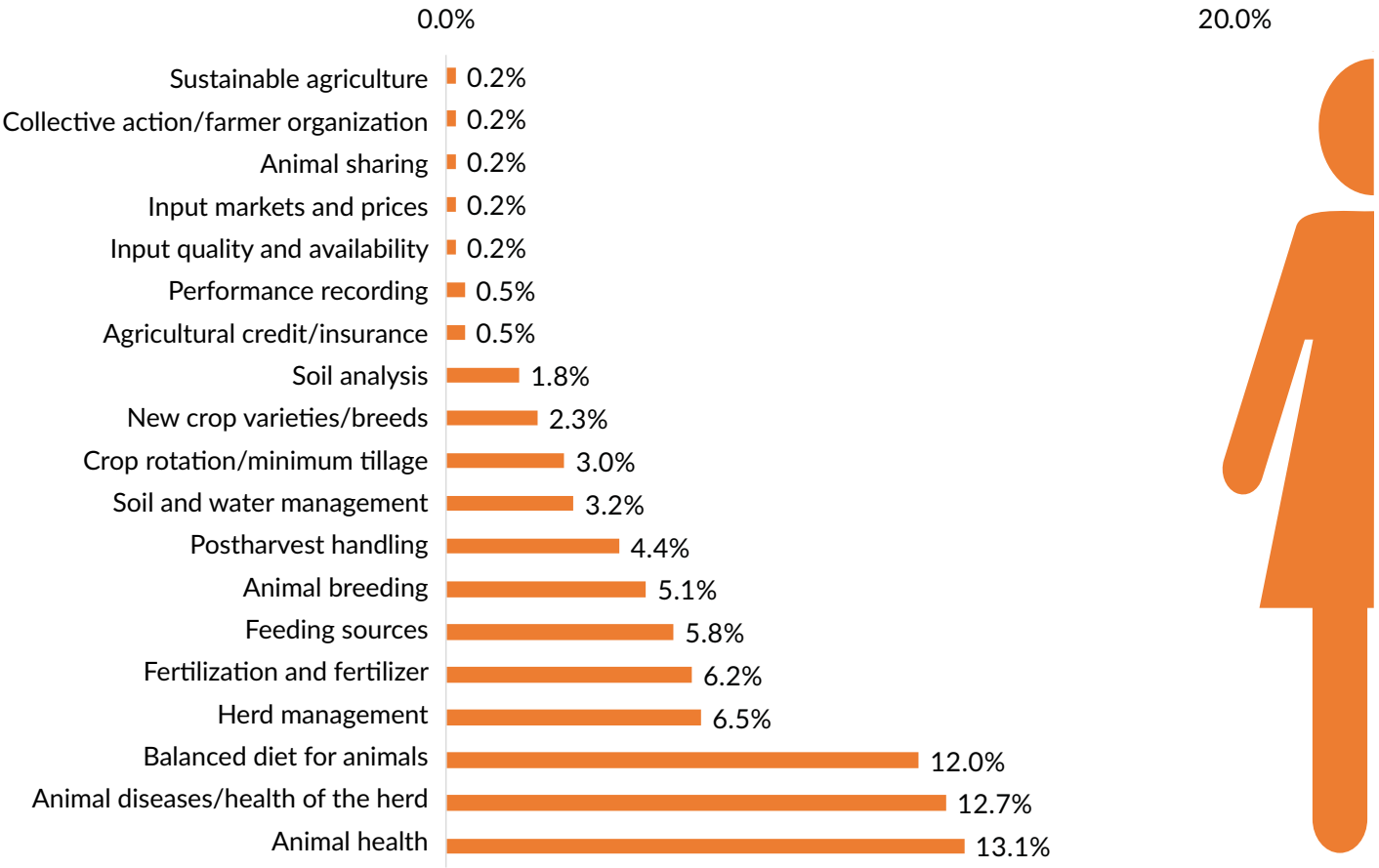


Fig 5. Mind the Gap training sessions.

T1	T2	T3	T4	Control
(N=140)	(N=140)	(N=140)	(N=140)	(N=140)
Technical training	Technical training	Technical training	Technical training	Ø
	Econ/organizat. training	Econ/organizat. training		
		WE	WE	

needs, both men and women wanted to learn mainly about animal health, feeding, herd management, and fertilizer use.

Mind the Gap intervention design and gender considerations

The project aimed at targeting both women and men farmers through three different types of training, known as 'treatments' or 'T' (Fig.5), to enhance their technical production skills, their ability to organize themselves and their economic prospects. The intervention also included a control group who would not receive any training. The purpose of providing different treatments, and a control group, was to compare the approaches to see which delivered on both increased technology adoption and women's empowerment–defined here to mean women's increased decision-making power.

The organization and economic-focused treatments were also delivered through an additional training just for women, entitled Women's Empowerment (WE). This included: a 3-day entrepreneurial course; a 1-day visit to a women farmer's cooperative; and a 1-day training on access to credit and to the Tunisian Government's subsidy programme. The WE trainings used simplified language and visuals to overcome illiteracy, which is more prevalent amongst women. They also aimed at strengthening women's technical skills and their confidence through public speaking.

In total, 700 participants took part with 140 in each treatment and the control group (Figure 5). In the technical treatment, farmers were provided with experiential learning experiences on the use of livestock feed blocks and the cultivation of Kounouz barley. The technical treatment also included sending out SMS to the farmers relating to the use of these innovations, as well as the use of animal vaccines, fertilizers and crop and herd management techniques.

Gendered results of extension interventions in central Tunisia

The trainees were provided with a survey of 14 questions relating to agricultural production, and responses showed that, compared to the control group, both men and women participants in the Mind the Gap treatments were significantly more informed about issues related to herd management and barley cultivation. Women who received the empowerment trainings were especially well informed.

Our findings reveal that treatments which had the WE trainings had the best results for the adoption of Kounouz barley, fertilizer, as well as vaccines. These findings highlight the importance of providing training to both men and women.

Furthermore, female and especially male farmers who received all three treatments combined were more likely to ask for extension advice than those who received only the technical treatment (Figure 8). This suggests that the development of soft skills among farmers (i.e. organizational skills), and the provision of information regarding extension services and organizations, are more likely to continue accessing extension information in the long-term.

With regards to decision-making, our findings reveal that men's and especially women's contribution to the control of income from livestock revenues has increased. Similar trends are observed for decision-making related to incomes from subsistence crops. This change is significant because women significantly contribute to livestock and crop production and it is important that they have a say in their management and use of the income generated. All treatments increased contributions to decision-making more so for women than for men (Figure 9 and Figure 10). Treatment four (Tech +

Fig 6. The average number of correct questions per respondent category.

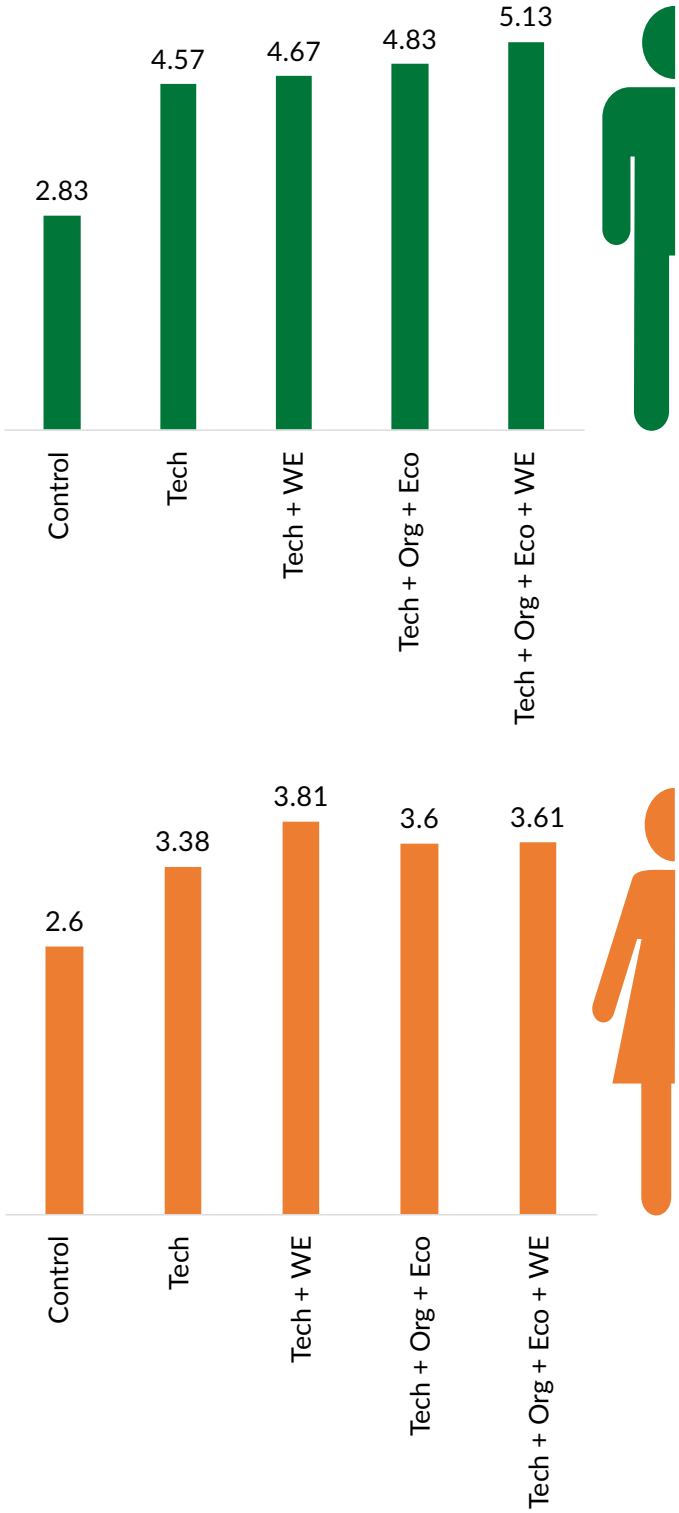
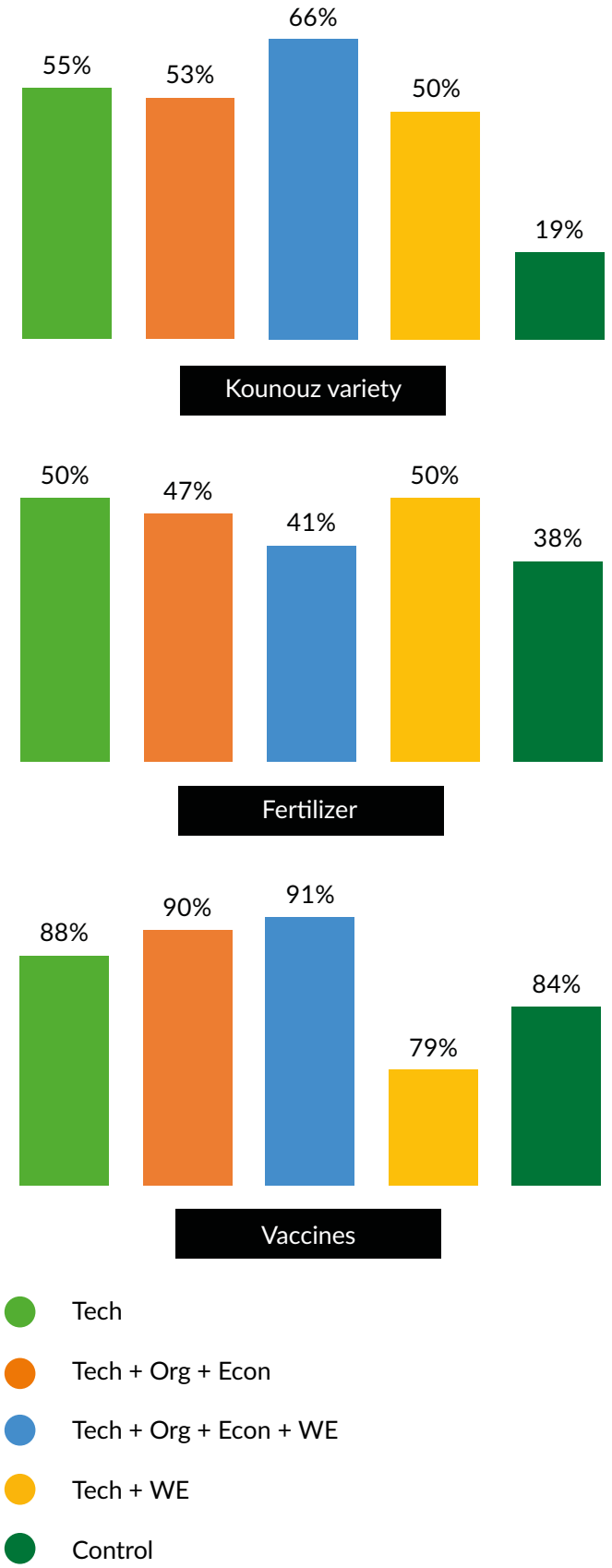


Fig 7. Adoption of technologies according to the different training sessions.



WE), in particular, has improved women's decision-making power for decisions around both crop and livestock over other sessions. Treatment three (Tech+Org+Econ+WE), on the other hand, albeit including WE, led to the lowest increase in decision-making for both men and women, possibly because they both received similar trainings.

Fig 8. Percentage increase in visits made to extension office by men and women according to the training session they attended.

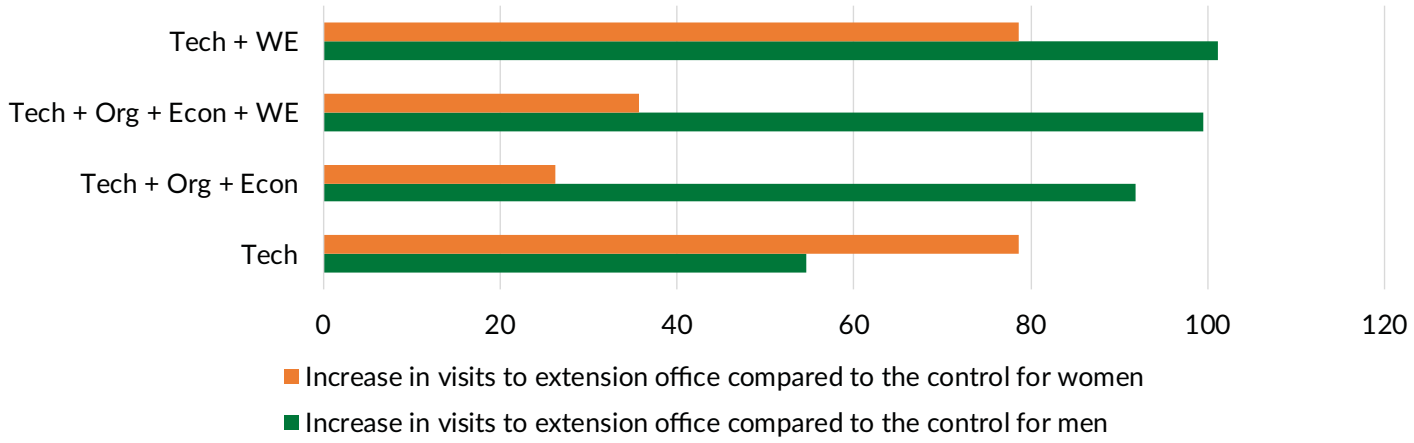


Fig 9. Decision-making outcomes compared to the control in relation to spending income from livestock production.

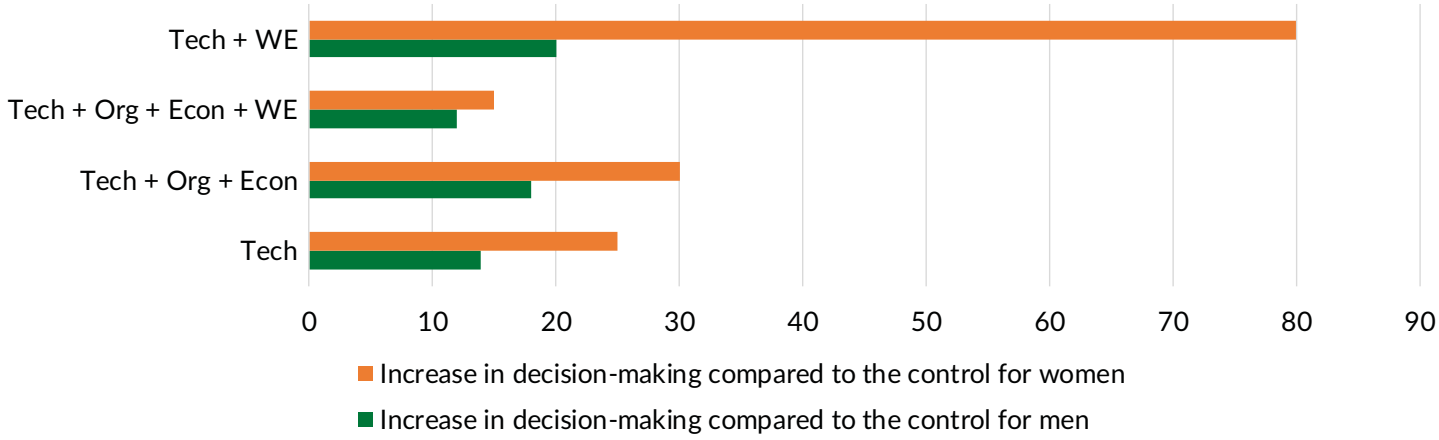
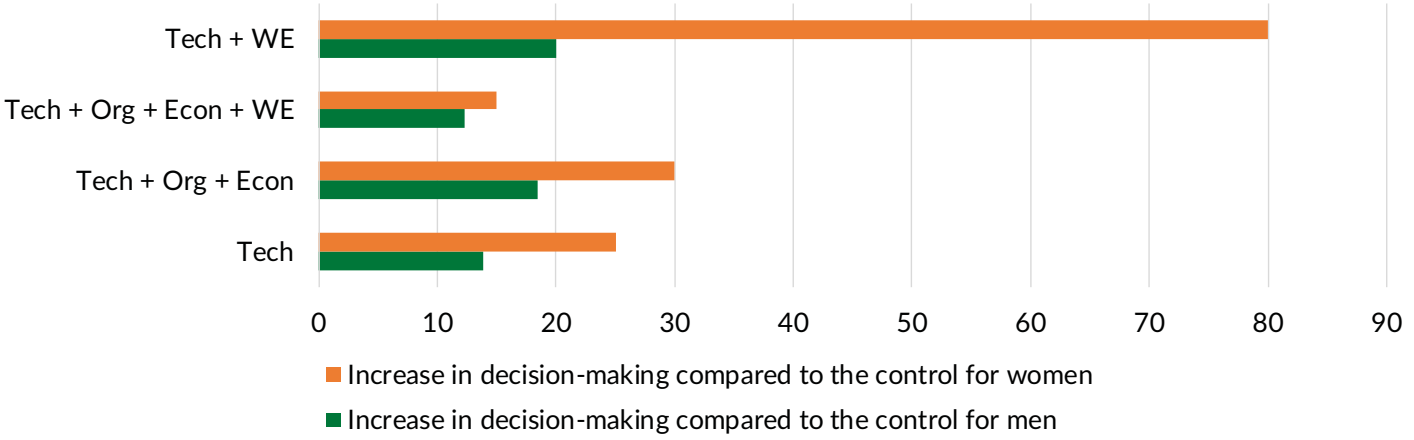


Fig 10. Decision-making outcomes compared to the control in relation to spending income from crop production.



Conclusions and recommendations

The long-term success of extension services is dependent upon addressing the underlying causes of gender inequality. However, gender analysis is often not included in the design and implementation of extension services. Our aim with this project was to highlight the importance of gender integration into agricultural extension programmes

in order to raise much needed awareness on the subject. Our findings reveal that training treatments that included women were particularly salient in improving adoption of agricultural technologies and increasing the decision-making power for women. This has important implications for the wellbeing of women, whose labor contributions are significant and yet, their decision-making power is low. The organization and economic training treatments were found to have more sustainable impacts as female, and especially male farmers, were subsequently more proactive in accessing information from extension centers.

Further reading

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Development and research partners

International Center for Agricultural Research in the Dry Areas (ICARDA); Office of Livestock and Pasture in Tunisia (OEP); Agricultural Extension and Training Agency in Tunisia (AVFA); National Agricultural Research Institute of Tunisia (INRAT); the Agricultural Research and Higher Education Institution in Tunisia (IRESA); Georg-August-Universität Göttingen in Germany; the Federal ministry for economic cooperation and development in Germany; and the CGIAR.

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