Gender-specific drivers of best practice adoption among teff farmers in Ethiopia

Introduction

Teff is the most important cereal crop in Ethiopia, used mainly to make injera, an Ethiopian staple flatbread that can be eaten with most meals. In 2011, teff products accounted for 12% of Ethiopian food expenditures. It is also valuable to farmers as a cash crop, with the price per kilogram being significantly higher than any other cereal in the country.

In many communities, women often face constraints in deciding to adopt an agricultural technology or best practice. These include limited access to information or low literacy to use the information; limited access and control over inputs, income, labor, and services; and limited availability, affordability, and usability of technologies. Sociocultural constraints also influence women's decisions on adopting innovations and best practices. These include customs, religious beliefs, social norms, and traditions that determine men and women's roles in the agricultural sector. Other constraints are gender gaps in rural institutions and agricultural extensions services.

This study, led by Laterite on behalf of SAA, was conducted in the Amhara region of Ethiopia and explored which gender-specific factors influence the decision to adopt, partially adopt, or not adopt best practices for teff farming. It examined intra-household decision-making patterns between women and men with respect to teff farming, as well as gender roles, knowledge of best practices, and attendance to training, to determine if these factors drive the adoption of best practices.

Research methods

The study was conducted in 2021 and 2022, using a mixed methods approach.

555 households participated in three rounds of a household survey, where one adult man and one adult woman from each household were interviewed in each round. Observation of one teff farming plot was also conducted at each household in every round to evaluate the adoption of Best Practices.

Qualitative data was collected through focus group discussions (FGDs) and in-depth interviews (IDIs) with farmers, and key informant interviews (KIIs) with development agents (DAs). In total, 9 FGDs, 12 IDIs, and 4 KIIs were conducted.

Results

The results show that men and women have different levels of involvement into various teff farming activities, with women being more involved in activities such as weeding by hand or sowing in rows. These best practices are particularly labor-intensive, with farmers commonly reporting that they lack the labor force or time resources to implement them. The study found numerous factors which are associated with more or less adoption of best practices, with many of them being gender-specific.

1. Gendered factors that influence teff best practice adoption

The study identified the following as the gender-specific factors that play a role in a farmer's decision on whether to adopt best practices in teff farming or not.

- **More access to information for both men and women** – lack of information is a barrier for adoption of best practices, especially for women. In this study, increased access to information is strongly associated with more adoption of BPs for both women and men. This finding is consistent with existing literature.
- **More attendance to training by women** – adoption of best practices is more likely when women attend more training that is focused on teff-farming activities where they play a bigger role (e.g., weeding, sowing in rows). Access to information is also strongly associated with attendance to training for both women and men.
- **More control over teff produce and income** – when women are more in control of decisions over how the income from teff should be used and what to do with the produce (whether to consume or sell),

there is less adoption of best practices, compared to when men make the decisions. Men's control over the use of income from teff is significantly associated with choosing the right fertilizer type or harvesting teff at the right time, while women's increased control has a negative impact on the adoption of these practices.

- **More decision-making power on teff farming –** adoption of best practices in teff-farming, such as harvesting at the right time, is more likely when men have more input into decision-making, and less likely if women make the decisions. For instance, when women have more input into weeding or harvesting decisions, households are significantly less likely to weed or harvest teff at the right time, and less likely to weed the recommended number of times, compared to when men make the decisions.
- **Having a female development agent has mixed effect on adoption of best practices** – women farmers who were trained by a female development agent were found to be three times more likely to sow teff at the right time than those trained by a male agent. However, women trained by a female development agent were also significantly less likely to harvest teff at the recommended time. For men, being trained by a female agent appears to have a negative impact – they were significantly less likely to sow teff in rows. Qualitative interviews showed that farmers are more skeptical of women agents, believing them to be less knowledgeable at times and sometimes even refusing to take their advice.
- **More membership to community groups** – being a member of a community group, such as including women groups, microfinance groups, or religious groups, was found to significantly increase the chances of both male and female farmers adopting harvest timing best practice and sowing in rows for men. This is likely due to the increased social interactions and discussions with other farmers and development agents. However, group membership is also associated with less adoption of weeding best practices (timing and frequency) for women.
- **More household members and wealth** – in general, having a wealthy household with many members is associated with more adoption of best practices in teff farming. This may be attributed to availability of more hands for labor, which is necessary in adopting time consuming best practices such as sowing in rows and weeding by hand.

2. Intra-household decisions on the adoption of best practices

This study examined how teff farming households in Ethiopia decide to adopt various best practices, and how the decision-making process differs between different types of households. The findings show that:

- **Men are responsible for most productive decisions when farming grains in general, and teff specifically** – 63% of respondents said men alone make the decisions and only 34% reported decisions are made jointly (men and women). While women may have some contribution, the final decision is made by the man.
- **There are significant gender disparities in access to information for decision-making** – men consistently reporting higher access to information than women, and women are significantly more likely to report no access to information.
- **Men control income from teff farming,** as they are the ones selling large quantities of the produce following harvesting, while women have some control over income from small quantities which are left over from the large sales, and which they sell to raise cash for other goods for the household's consumption.
- **On adoption of best practices, men appear to make most decisions.** Men were reported to be the sole decision makers regarding tilling of the land, how teff is sown (broadcast or in rows), and use of fertilizer. In addition, men make decisions on decisions on pest management, and harvesting and threshing the teff. On the other hand, women contribute to decisions on where to plant teff, and how much of the plot should be covered by the crop. They are also involved in post-harvest management and storage, with 73% of women respondents and 61% of the men reporting that decisions at this phase are made jointly by the couple. Couples also jointly make decisions on how much of the produce to sell.

"[...] The discussion for the women is like the direction we receive to do a particular activity. For instance, if the plan for tomorrow is sowing teff, the men inform the women as well as children to be ready for tomorrow. The same is true for weeding, and other activities." – FGD participant / woman farmer

3. Influence of extension interventions on adoption of best practices by teff farming households

SAA trains government development agents on best practices in teff farming, who then train farmers using community demonstration plots. SAA therefore contributes to household decision-making through the training content and farmer attendance to training.

- **Men attend training far more than women.** More than half of the farmers (54%) in the study had attended some teff training. More men (78%) had attended at least one teff training, compared to only 30% of the women. Both women and men overwhelmingly found the training useful.
- **There is a clear link between attending more training and having more knowledge of best practices in teff farming.** There is evidence that training is effective in disseminating information and knowledge to farmers. Both men and women had more knowledge of best practices when they attended more training. Women reported that they had more access to information with increased attendance to training. Compared to those who had not, women who ever attended SAA training were twice as likely to have input into decisions on land preparation and harvesting of teff, as well as decisions on sowing, weeding and fertilizer application.
- **Having female development agents train female farmers appears to have a positive impact** on the women's access to information, and input into decision-making on teff farming. Women farmers trained by a female agent were significantly more confident in their ability to apply best practices. However, most male and female farmers stated that they had no preference on the gender of the agent, as long as they were educated and could do their job well.

Conclusions and recommendations

This study has shown that training attendance and access to information are key to the adoption for some best practices in teff farming. Attending training also increases a woman's input and involvement in key decisions around teff farming. In view of this, the following recommendations can be made for implementation by SAA and partners.

1. **Empower DAs with strategies to get more women to attend training.** especially on farming roles where women are heavily involved (e.g., sowing in rows, weeding, storage).Such strategies could include having more women-assisted demonstrations; establishing women-only groups; having more female development agents; and engaging male agents and community members to champion the work of female agents, to build trust in their capabilities.
2. **Address the sociocultural norms .** which contribute to gender misconceptions and gender barriers, which prevent women from taking part in teff farming, training, and decision-making.
3. **Increase access to information** by directly addressing farmer concerns and misconceptions on best practices, especially for women, in order to increase adoption.

Organizations Involved

Laterite is a data, research and analytics firm dedicated to providing high-quality research services for social impact in East Africa. Laterite provides technical advice on the design and implementation of research projects, development interventions, and socio-economic policies. Laterite is a learning partner on the IGNITE project.

Tanager, an ACDI/VOCA affiliate, is an international non-profit that brings people together at the table, on the ground, and across supply chains to co-create economic and social opportunities that change lives. Tanager is the lead partner on the IGNITE project.

Sasakawa Africa Association (SAA) works in close collaboration with national agricultural extension services in Ethiopia, Mali, Nigeria and Uganda to support smallholder farmers along agricultural value chain. SAA aims to increase farmers' income and food and nutrition security through promoting market-oriented, sustainable, resilient, and regenerative and nutrition-sensitive agricultural innovations and building the capacity of Extension Agents and farmers.