Demo Farmer households' experience with Pod Borer Resistant cowpea training, cultivation, and outreach by the Africa Agricultural Technology Foundation

Introduction

Cowpea is a major source of protein in Nigeria with both men and women involved in its value chain. Pod Borer Resistant (PBR) cowpea can create gender and nutrition household outcomes through increased yields, incomes, and increased women participation. PBR requires less pesticides than conventional cowpea and increases yields by up to 70%.

To increase the uptake of this seed variety, productivity, and income for farmers, AATF and its partners trained Extension Agents (EA) on PBR cowpea and helped to set up Demo Farms (DF) for farmers to learn from. AATF conducted a study on the experience of female and male DFs in the training, planting, and harvesting of PBR cowpea. The study assessed the impact on income, consumption, and dynamics within DF households that planted PBR cowpea.

Research methods

The researchers conducted phone interviews across different regions in Nigeria with 250 DFs and 79 secondary respondents (SRs), who were additional members in the farmer's household of another gender.

Key Findings

More male DFs hosted farm field days compared to female DFs: Forty-one percent of the male DFs hosted farm field days compared to 28% of female DFs.

- Both male DFs and SRs shared information on PBR cowpea with farmers.
- Male DFs and SRs had lower Net Promoter Scores (a gauge of stakeholder loyalty and satisfaction), indicating they are less satisfied with PBR cowpea than their female counterparts.

More farmers preserve cowpea seeds for next season, in hope that they will have more to consume in the future: 68% of farmers preserve some PBR cowpea harvested for the next season, while 32% preserve all their harvests for the next season.

- 33% of DFs and 16% of Secondary Respondents (SRs) who consumed PBR cowpea reported increases in cowpea consumption.
- Most male, and female DFs are the final decision makers in trying out PBR cowpea. This could be attribute to the DF's role which enables them to have responsibility over decisions on PBR cowpea, regardless of their gender.

Other Key Findings:

- Female DFs were less likely to purchase or obtain seeds from Extension Agents than male DFs (75% vs. 90%), but more likely to

purchase/obtain from a seed company (19% vs. 5%).

- 92% of the households harvested the PBR cowpea they planted in the July - September 2021 season. Of the 8% who did not harvest, their crop was eaten by livestock (29%) or had not matured yet (14%).
- For the next season, male and female DFs believe 8 out of 10 farmers will purchase PBR cowpea while female DFs believe 8 out of 10 farmers will buy PBR cowpea compared to 6 male who will buy PBR cowpea.
- Extension Agents cite lack of awareness and skepticism as key challenges in convincing male farmers to try PBR cowpeas, while among female farmers, lack of engagement in farming is a major challenge.
- Male DFs are more likely to use the increased income on household expenditure, while female DFs are more likely to use it for purchasing agri-inputs.
- Male DFs (34%) are more likely to report increases in cowpea consumption in their household than female DFs (21%).
- Male DFs are more likely to consume PBR cowpea every day (19%) compared to female DFs (5%). Male SRs are also more likely to report increases in cowpea consumption (29%) than female SRs (13%).
- Most DFs interact with EAs once a week or 2-3 times per month. Male DFs interact with EAs more frequently than their female counterparts.
- Female DFs are more likely to be trained by a female Extension Agent, while male Demo Farmers are more likely to be trained by a male

"I don't think there's anything that will prevent male farmers from trying this PBR cowpea. People are already asking me where they can get the PBR cowpea."- Demo Farmer, Male, 45

Conclusions and recommendations

1. The study reveals that after training, female farmers' main takeaways were related to the quality of PBR cowpea, while males were more focused on PBR cowpea's effect on farming practices.

   Recommendation: Extension Agents should pay attention to quality and the impact of PBR cowpea's when training DFs to enhance confidence in the female and male DFs' understanding and management of PBR cowpea and its qualities.

2. While male DFs disseminate information on PBR cowpea to more farmers than females, they are less satisfied with PBR cowpea compared to their female counterparts.

   Recommendation: Further conversations with these farmers may help AATF understand the sources of dissatisfaction, ensure that there is no misinformation, and also that challenges are resolved.

3. The study shows that 40% of DFs hosted farmer field days and that male DFs were most likely to host farmer field days than female DFs.

   Recommendation: Encourage DFs, especially females, to host more farmer field days. AATF could also encourage secondary respondents to get more involved in these demos. AATF should also share with EAs the results of a December 2021 study in which many DFs benefited would increase the EA's faith in DFs and the extent of DFs' understanding of the crop.