

Evidences

Study #4595

Contributing Projects:

- P1057 - Distribute elite maize germplasm with high yield potential, resistance to Striga, stem borers, nutrient use efficiency and high lysine and tryptophan to partners
- P2250 - Smallholder farmers' preferences for sustainability attributes in maize production in Ghana (Africa RISING Program)
- P2053 - Conduct survey on adoption of improved maize in Ghana

Part I: Public communications

Type: Ex-ante, baseline and/or foresight study

Status: Completed

Year: 2021

Title: Comprehensive assessment of farmer-desired traits in Ghana to drive future breeding

Commissioning Study: DTMA

Part II: CGIAR system level reporting

Links to the Strategic Results Framework:

Sub-IDOs:

- Adoption of CGIAR materials with enhanced genetic gains

Is this OICR linked to some SRF 2022/2030 target?: Yes

SRF 2022/2030 targets:

- # of more farm households have adopted improved varieties, breeds or trees

Description of activity / study: Using participatory rural appraisal involving farmers, input dealers, traders, and processors (in Northern Ghana), researchers gathered trait preferences, which overlapped and revolved around grain quality including nutritional value, and stress tolerance and grain yield. Overall, farmers preferred high-yielding varieties with multiple cobs per plant, white grain endosperm color, and bigger and fully filled cobs. This first-time holistic assessment revealed a comprehensive list of traits, which breeders could build on.

Most national/public maize breeding programs in West and Central Africa already consider drought tolerance, Striga resistance, early maturity, and grain yield as high priority traits. In responding to demand (e.g. comprehensive list above), breeders could incorporate other traits into new varieties. While new varieties are being developed, old varieties could be replaced by the more recently released, early-maturing drought- and Striga-tolerant hybrids that are more suited to northern Ghana value chain actors' preferences.

Geographic scope:

- National

Country(ies):

- Ghana

Comments: <Not Defined>

Links to MELIA publications:

- <https://doi.org/10.1007/s13593-021-00708-w>