

Evidences

Study #3983

Contributing Projects:

- P1299 - Feed the Future: Malawi Improved Seed Systems and Technologies (MISST)
- P2103 - DeSIRA- Climate-smart innovations to improve productivity, profitability, and sustainability of agriculture and food systems in Malawi through multidisciplinary research
- P1965 - Africa RISING: Sustainable intensification of low-input farming systems

Part I: Public communications

Type: Program/project adoption or impact assessment

Status: Completed

Year: 2020

Title: Long term (10–12 years) maize-based Conservation Agriculture's impact on soil hydraulic conductivity & water retention (Malawi)

Commissioning Study: BBSRC, MAIZE, CISANET

Part II: CGIAR system level reporting

Links to the Strategic Results Framework:

Sub-IDOs:

- Closed yield gaps through improved agronomic and animal husbandry practices

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
- Increase in water and nutrient (inorganic, biological) use efficiency in agro-ecosystems, including through recycling and reuse

Description of activity / study: Conservation agriculture (CA) is widely promoted across Sub-Saharan Africa, but impacts on key soil physical properties and functions governing water storage and transmission are not well understood. On-farm trial results show that maize-based CA systems result in significant changes to soil hydraulic properties that correlate with improved soil structure, whilst no significant build-up in soil organic matter was recorded, point to need to improve crop residue management. Study indicates CA's potential to store antecedent water and make it available to plants during dry spells. Future studies should assess carbon balance, to identify pathways of soil organic matter loss.

Geographic scope:

- National
- Regional

Region(s):

- Southern Africa

Country(ies):

- Malawi

Reporting 2021 Evidences

Comments: <Not Defined>

Links to MELIA publications:
<Not Defined>