



TAAT Technology: Raised-bed Planting for Wheat

Link: <https://propas.iita.org/solutions/>

Mechanized raised bed technology (MRT) integrates:

- Mechanized raised-bed furrow making machine (100-130 cm wide and 10-20 cm high)
- Planting wheat on raised beds
- Irrigation using furrows instead of flooding

Advantages:

- Facilitates crop management operations (planting, irrigation, fertilization, harvesting)
- Reduces production costs saving inputs, labor and time



Geography Coverage

- Ethiopia
- Mali
- Niger
- Tanzania
- Nigeria
- Sudan
- Zimbabwe

Commodity

- Wheat (but others too)

Value Chain Position

- Cropping season

Problems Solved and Benefits

- Saves applied water by 20%
- Reduces seed rates by 30-50%
- Reduces fertilizer application by 25%
- Decrease farming cost by 25%
- Increase crop yield by 25%
- Can be used on small plots
- Versatile machine and can be adapted for multiple crops (wheat, barley, maize, sorghum, faba bean, soya bean, sesame)
- An international public good and can be accessed through ICARDA
- Prototype technology can be manufactured and supplied to farmers by local fabricators

What is it for

- Wheat grain producers

Costs/ROI

- A Mechanized raised-bed furrow making machine costs USD 10,000
- The net revenue (= total revenue – total cost) was shown to increase between USD 5 and USD 56 per ton of wheat produced, when adopting Raised-bed Planting

(ICARDA Technical Report "Adoption of Mechanized Raised Bed Technology for Sustainable Farming System in Sharkia and Assiut Governorates" 2017)

Links to Associated Technologies

ICARDA MRB innovation: https://qcat.wocat.net/en/wocat/technologies/view/technologies_5804/

MRB: https://mel.cgiar.org/reporting/downloadfile/file_id/201453/isNotBot/1

Adoption of MRT: <https://repo.mel.cgiar.org/handle/20.500.11766/12553>

Adoption of MRT: <https://repo.mel.cgiar.org/handle/20.500.11766/7976>