

Re-designing irrigated intensive cereal systems through bundling precision agronomic innovations for transitioning towards agricultural sustainability in North-West India

Project Title: P259 - Scaling-up Strategies for Climate Risk Management in South Asian Agriculture

Description of the innovation: Various management alternatives advocated to address agricultural sustainability in North-West India. However, their application in isolation has not delivered the potential benefits. Here, innovations have been done by bundling of agronomic practices as packages. These innovations are 11.2-29.2 % more productive, more profitable with 20-85% less irrigation water use and better nitrogen and energy use efficiency. They will be helpful to the governments to prioritize and make efficient use of investments for impact at scale.

New Innovation: No

Stage of innovation: Stage 1: discovery/proof of concept (PC - end of research phase)

Innovation type: Production systems and Management practices

Geographic Scope: Regional

Region:

- Southern Asia

Description of Stage reached: A field study was conducted for 2 years (2016–17 and 2017–18) in Karnal, India. The experimental site represents the sub-tropical and semi-arid climate, capturing current predominant as well as potential future cereal-based systems. The innovation has been documented in Nature Scientific Reports.

Name of lead organization/entity to take innovation to this stage: <Not Defined>

Names of top five contributing organizations/entities to this stage:

- CSSRI - Central Soil Salinity Research Institute
- BISA - Borlaug Institute for South Asia
- ICAR - Indian Council of Agricultural Research

Milestones: No milestones associated

Sub-IDs:

- 8 - More efficient use of inputs
- 29 - Enhanced adaptive capacity to climate risks (More sustainably managed agro-ecosystems)

Contributing Centers/PPA partners:

- CIMMYT - Centro Internacional de Mejoramiento de Maíz y Trigo

Evidence link: <https://cgspace.cgiar.org/handle/10568/106104>

Deliverables associated:

- D19287 - Re-designing irrigated intensive cereal systems through bundling precision agronomic

innovations for transitioning towards agricultural sustainability in North-West India
(<https://tinyurl.com/yyv8puoy>)

Contributing CRPs/Platforms:

- Wheat - Wheat