

Evidences

Study #4336

Contributing Projects:

- P1329 - Crop modeling to simulate the implications of climate change and technological options in WHEAT AFS
- P1356 - 'HeDWIC' initiative to address wheat production in LDCs under global warming during the next 3 decades
- P1225 - IWYP- Research Projects
- P1357 - Incorporation and validation of molecular techniques in wheat breeding and development of new genomic prediction models
- P1327 - Building foresight portfolio for WHEAT AFS, including synthesis, gap analysis and new studies, as input in conducting priority setting for WHEAT AFS

Part I: Public communications

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

Status: Completed

Year: 2021

Title: Private and public sector consensus on priority, pre-competitive wheat research issues

Commissioning Study: WHEAT

Part II: CGIAR system level reporting

Links to the Strategic Results Framework:

Sub-IDs:

- Adoption of CGIAR materials with enhanced genetic gains
- 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: Public sector and six major seed companies' scientists identified key translational research areas (e.g. to translate knowledge from pure plant science to crop breeding) with a high probability of boosting productivity in a wide range of crops and environments that could be researched in 'precompetitive' space, leveraging previous knowledge: Research into hormones, recombination, respiration, roots, and source-sink, which make it more feasible to explore crop genetic resources and improve breeding strategies and the models behind them. The focus is on researchable issues that benefit from combining breakthrough technologies with proven ones. While authors focus on genetic improvement through crop breeding, increased knowledge integration would create opportunities to improve crop adaptation through better-targeted use of external inputs and genotype × management technologies (e.g. modified planting, tillage systems, plant growth regulators etc.). Companies and institutes affiliated with the review are collaborating to develop a partnership to address these challenges in pre-competitive space.

Geographic scope:

- Global

Comments: Public and private sector scientists identified key translational research areas with a high probability of boosting productivity in wheat and other crops that could be researched in 'precompetitive' space.

Links to MELIA publications:

- <https://doi.org/10.1038/s41477-021-00988-w>