Sector update: Agriculture

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ISIMIP workshop 2020

June 16, 2020

ISIMIP3 runs: "Every crop, everywhere"

- Prioritizing 3b runs (2015soc)

- "Soft deadline" July 31 (for AR6 paper inclusion)

- Protocol and all inputs have been released

- 28 modeling teams planning to contribute

Crops in protocol (unknown how many groups will simulate each)

<u>Maize</u>	Millet	Sugar beet
<u>Spring wheat</u>	Sorghum	Groundnut
<u>Winter wheat</u>	<u>Soybean</u>	Cotton
<u>Rice</u>	Sunflower	Rapeseed
<u>Rice (2nd season)</u>	Potato	Beans
Barley	Cassava	Peas
Rye	Sugarcane	

New inputs this round

- Crop calendar (planting & harvest dates)
  - Huge improvements
  - Jonas plans to publish

- Fertilizer (now includes manure)

- Soil (based on cropland-specific soil map)

Sessions tomorrow (Wed. June 17; times CEST=UTC+2):

- 10:15–11:45   Land use, irrigation, and fertilizer

- 15:00–16:00   Crop calendars and growing season adaptation

Paper plans: AR6 deadline

- Müller et al: Comprehensive global climate change impact assessment for crop yields (35 GCMs x 5 crops x 9 crop models* in emulation)

- Jägermeyr et al.: Future extreme event impacts on crops

- Kornhuber et al.: Drivers and trends in yield co-variability across major breadbasket regions

Paper plans: After AR6 deadline

- Irrigation and water availability

- Attribution

- Biogeochemistry (including C cycling)

- Adaptation: Growing season and management inputs

- Geoengineering and air pollution

- Crop quality

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