Use of MESO@LR to calibrate complex crop models

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1. Crop models integrated into Web decision tools



2. Brief description of the datasets used







To calibrate : 10-15 parameters by maturity group





1518 fields from 2013 to 2017

383 fields from 2014 to 2017

3. GLUE method based on model simulations

K. Beven and A. Binley, Hydrological Processes 6 (1992) 279-298



4. Great results for yield on independant datasets

Before calibration



After calibration



5. Computational time for model simulations

Corn model: 365 scenarios × 10 000 samples

6. Some conclusions and perspectives of the work





- We are very satisfied about the model calibration results
- We are happy about the computation time gain
- We wonder how to improve this gain

Perspectives :

- To have a git versioning of our code on the server
- To test Matlab MDCS toolbox (use of several nodes)
- To implement and run the full process of the GLUE method on the server (not only the simulations)