Crop Model Improvement Team

AgMIP XXXX-CMIT

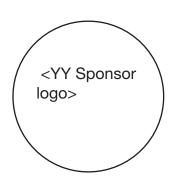


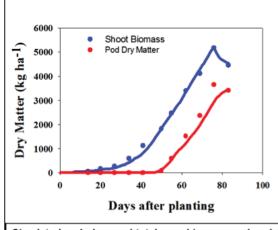
Background and Need:

XXXX is one of the most important staple crops of resource-poor farmers in developing countries, and it also has good potential for increased utilization as a commercial product. Improved XXXX crop models are needed to enhance research understanding of this crop on performance of XXXX under current and future climate conditions and to help evaluate improved genetic and management technologies across a wide range of environments worldwide. Only a few XXXX models exist at present, and these have had very limited testing. There is a critical need to evaluate and improve existing XXXX crop models for use in evaluating potential benefits of new technologies globally, under existing climate and soil conditions and under climate change scenarios, to help target research investments for different agroecological zones and to provide information for policy makers to evaluate alternative policies that improve food security and reduce environmental degradation across a wide range of production and socio-economic environments.

Sponsors/Support:

Core funds have been provided by ????? to organize the XXXX-CMIT. Initially, the team is studying relationships used in existing XXXX models (specifically, in the models A, B, and C). Also, some support is being provided by AgMIP to help coordinate the team and link to other resources and by current team members' own institutions for their participation. Additional support is necessary to achieve the overall model improvement goal. Proposals will be developed by the team to obtain support from various sources, including YYY donors, NARs, and the private sector. In particular, additional support is needed for a programmer/crop modeler to create the improved code in at least one crop model platform, to help coordinate and organize video teleconference meetings, and to assemble existing data needed for improving the models. Support for future group meetings of modelers and experimentalists is also needed; support may also be needed for new experiments..





Simulated and observed total crop biomass and pod mass over time for snap bean at Gainesville FL using the CROPGRO Dry Bean Model (courtesy, D. Djidonou, M.S. Thesis)

Objectives:

The overall objective is to develop XXXX model capabilities for accurately simulating growth and yield of this crop grown under a wide range of climate, soil, genetic, and management conditions. An output from this effort will be an open-source global public good that is available for use by researchers worldwide (public and private). A set of specific objectives and timetable are being refined by the AgMIP XXXX-CMIT.

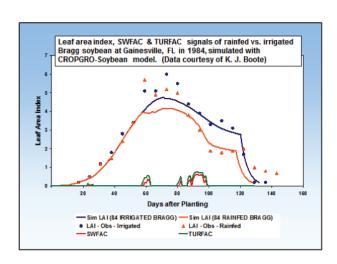
The XXXX-CMIT Team: An AgMIP XXXX-CMIT has been (or is being) formed that consists of crop modelers who are working on existing models and experimentalists who have existing XXXX datasets or who will perform new experiments and collect a minimum set of data for model evaluation and development. The team includes experimentalists and crop modelers (refer to AgMIP web site where there is an updated list of XXXX-CMIT members). The team has a leader (????? of YYY institute) and a co-leader (????? Of YYY institute).who are responsible for leading

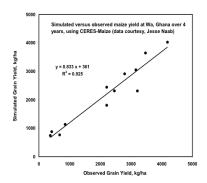


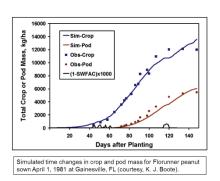
the overall initiative, organizing meetings, assembling data, communicating advances to the team and external agencies in publications and reports, documenting new model components, and ensuring that the team operates in accordance with the principles in the AgMIP guidelines (open access to model code; full attribution of data and model components, and posting of datasets in the AgMIP and AgTrial databases (including any needed delay in data posting due to publication or other proprietary issues).

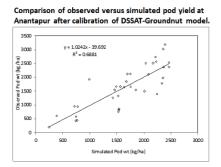
Outputs:

Outputs from this overall activity include scientific and other publications developed by team members with transparent identification of target papers and authorship, improved functional relationships for modeling development and growth processes of XXXX, at least one improved open-access XXXX model with documentation of the improvements made using sentinel site datasets, and an open access XXXX experiment/ trial database that is interoperable for access by different crop modeling efforts. These outputs collectively will provide a cumulative set of products over time, with strong contributions from scientists in the developing and developed world and in public and private research labs. Outputs from this initiative will be made available from both the YYY and AgMIP web sites, although not exclusively as other contributing team members may want to make them available through their own outreach programs (with attribution to AgMIP and YYY).









Contact



