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Agricultural Model Exchange Initiative (AMEI)

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Abstract: Model development of managed environmental systems and in particular agricultural systems is complex and driven by both biophysical and socio-economic processes. Additional complexity is created reflecting context- and scale-dependency of the main drivers. It has to offer to the scientist the possibility to create highly diverse models (modelling solutions) combining model components from different domain seamlessly. The AgMIP initiative could show it is not sufficient to run one model to estimate changes in agricultural systems.

The AMEI aims to rise to different challenges exchanging model components by

- defining standards to describe model component exchange format specifically
- developing a (web)-platform to publish, cite and exchange code and model algorithms
- checking and publishing different levels of quality in the documentation of the included algorithms
- including unit tests and standard parametrizations

The author's organizations have invested in the last years to enable their modelling platforms to interact with this exchange approach. This is done by integrating wrappers and/or component import export converters.

Recently interacting partner platforms are: APSIM, BioMA, CropSyst, DSSAT, OpenAlea, RECORD, SIMPLACE, SiriusQuality, STICS

The talk will provides in sociological, scientific and technical terms a conceptual overview in the state of their work. The presenter will give practical examples of successful component exchange within different frameworks and will give opportunity to integrate in the AMEI group.

Keywords: solution component modelling platform ontology