



European Project n° 613817

2nd Annual Meeting

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Study Area



Production Systems

- Rainfed Agriculture
- 60% No tillage Agriculture (High environmental impact)
- Moderate Amount of Fertilization (60-120 kgN/ha)

High interannual climate variability

Last decades : Intensification and Expansion of Agriculture.

Crop	Area (M ha)	National Yield (t/ha)
Wheat	5.2	2.8
Maize	6.0	7.3
Soybean	19.8	3.2





Wheat Calibration

- 15 Experimental Trials in Potential Conditions
- 5 Contrasting Environments (Balcarce, Parana, Rafaela, Barrow, Marcos Juarez)
- 5 Years (1990-1995)
- 3 Planting dates (in wheat growing region)
- 1 Cultivar

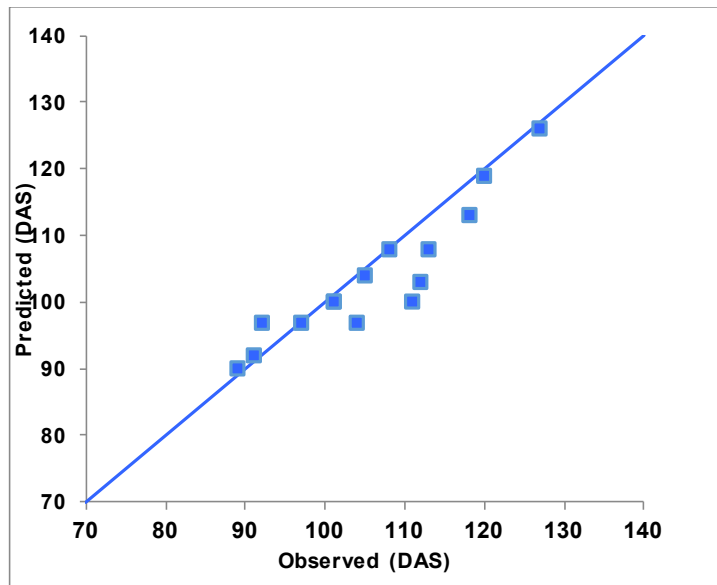
Parameter	Minimun	Maximun
TT Sowing-Flowering (GDD)	970	1360
TT Sowing- Begin Grain filling (GDD)	1180	1440
TT Sowing- P. Maturity (GDD)	1640	1900
R.U.E (g / Mj)	2.0	2.4
Harvest Index (%)	35	40





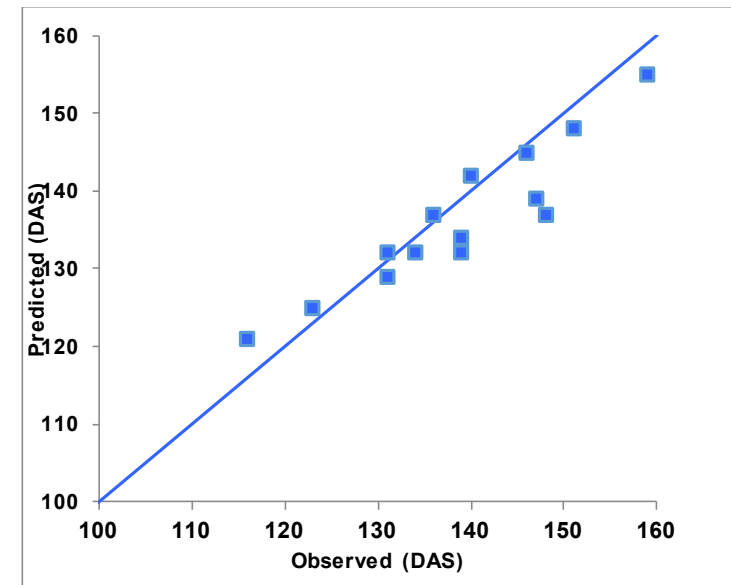
Preliminary Results

Anthesis



NRMSE	4.45 %
I. Agreement	0.94
Modelling Efficiency	0.81

Physiological Maturity



NRMSE	3.37 %
I. Agreement	0.93
Modelling Efficiency	0.81

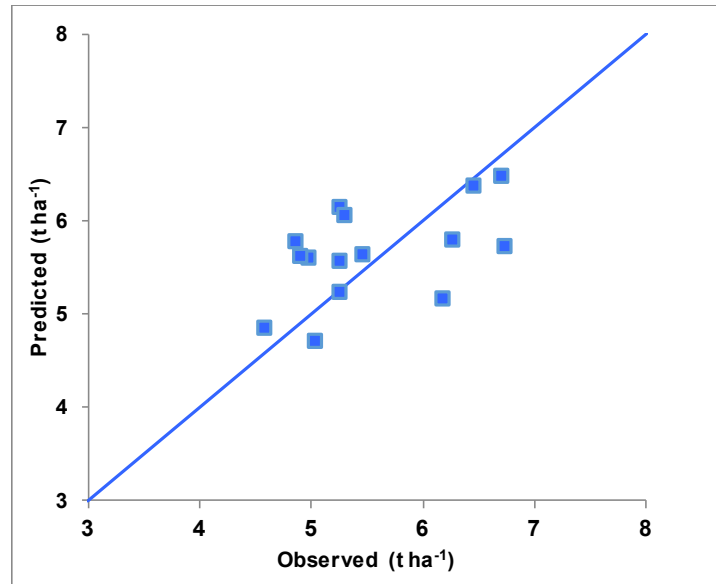


ModExtreme
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3-4 November, 2015



Preliminary Results

Yield



NRMSE	11.20 %
I. Agreement	0.70
Modelling Efficiency	0.2





Problems

- Steep learning curve of the user interface
- Need of Optimization tools for calibration of Crop Model Parameters (specially for soybean)
- For Argentinian production systems it will be desirable to incorporate N balance.





Expected work for 2015

- Calibration of Maize and Soybean Crops model
- Comparison of Bioma-Site with and without the extreme events simulation



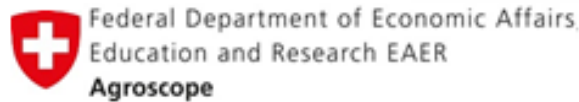


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