Crop Modelling to Support Crop Improvement

Workshop Program

Kingaroy, 4-5 Dec 2013

Objective-

To review and discuss the physiological framework underpinning the dynamic crop growth and development modules in APSIM and avenues for utilising this capability to support plant breeding and Crop improvement in general.

Approach –

Presentations as discussion openers (not lectures)

Be prepared to question and interact

Wednesday 4 Dec

10 am	Arrival and morning tea
10.30 – noon	Session I - Physiological determinants framework for modelling crop growth and development (Graeme Hammer); APSIM demo (Greg McLean)
Noon – 1pm	Lunch
1 – 2.30 pm	Session II – Environmental characterisation – environment from the plant's perspective; how can it help breeding? (Graeme Hammer); Legume example (Yash Chauhan)
2.30 – 3 pm	Afternoon tea
3 – 4.30 pm	Session III – Trait dissection – using modelling concepts to break down complexity, inform phenotyping, and improve links with genetics – sorghum staygreen, roots, and tillering (Graeme Hammer); wheat (or maize LER) example (Karine Chenu)

Drinks and Dinner

Thursday 5 Dec

9 – 10.30 am   Session IV – Simulating G*M*E and trait value – exploring novel systems (Greg McLean); wheat adaptation in Australia (Karine Chenu)

10.30 – 11 am   Morning tea

11 – 12.30pm   Session V – Simulating approaches to breeding – general vs specific adaptation in variable environments (Graeme Hammer)

12.30 – 1 pm   Wrap up

1pm   Lunch

Close and departure