

Satellites à l'appui d'outils d'aide à la décision dans l'agriculture:
applications passées et futures

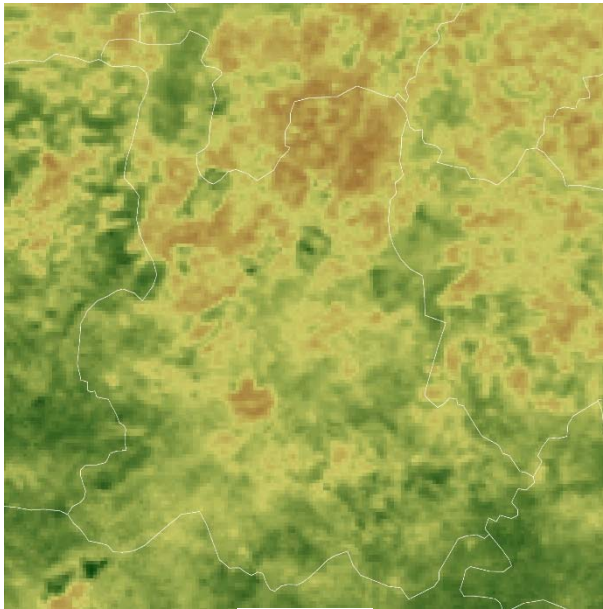
27 Novembre 2016 - Courtrai

Joost WELLENS & unité Eau - Environnement - Développement



... Suivi

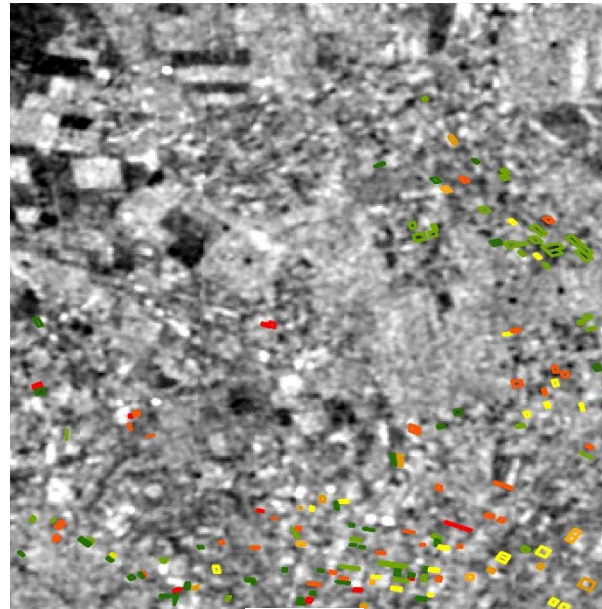
- applications à ≠ niveaux -



170 km

National / régional:
- MODIS (NDVI, GAI, ...);
- profils temporel;
- données historiques.

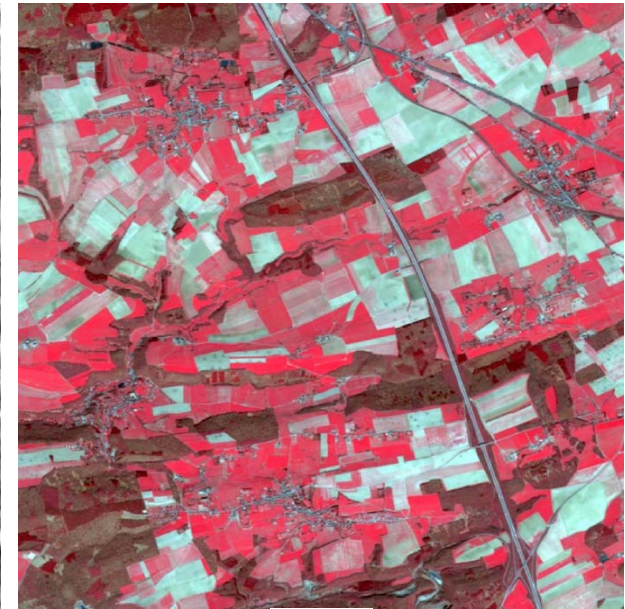
↓
Statistique



10 km

Régional:
- ERS-2, Sentinel-1;
- observations d'irrigations.

↓
Analyse du signal



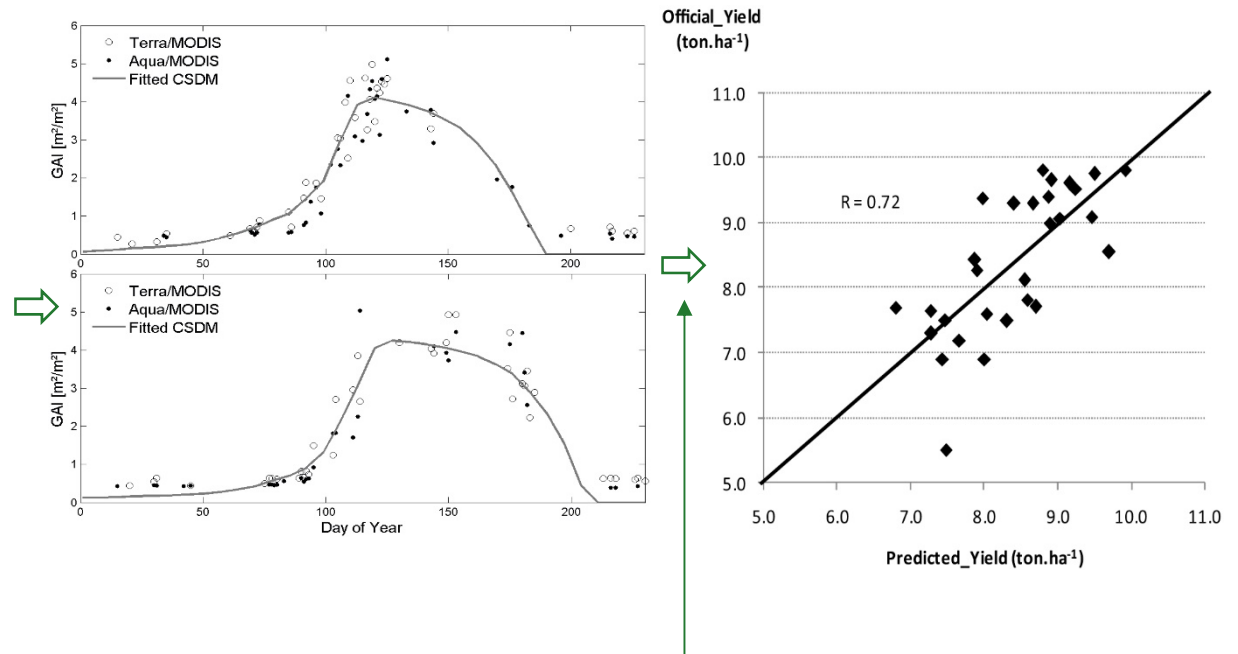
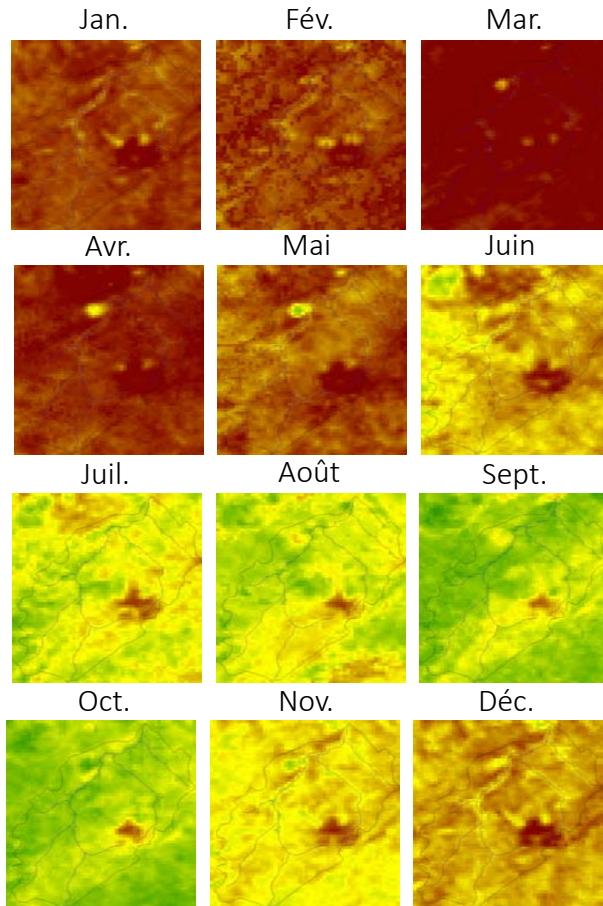
5 km

Parcelle / Régional / National:
- Sentinel-2;
- séries temporelles;
- observations de terrain.

↓
Assimilation

1 Suivi régional (grossier) de cultures

- ajustement de courbes / curve fitting -



Forme des courbes décroissantes de l'indice de surface verte

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Rendement régional de blé

- MODIS;
- GAI, profils temporels.
(‘green area index’ = indice de surface verte)

2 Suivi régional (détaillé) de cultures

- la révolution des Sentinelles -

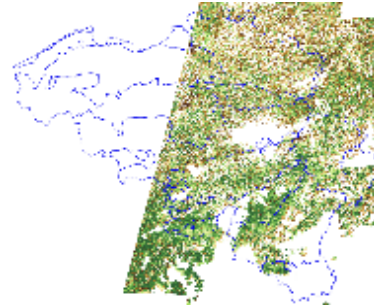
08/05/2016



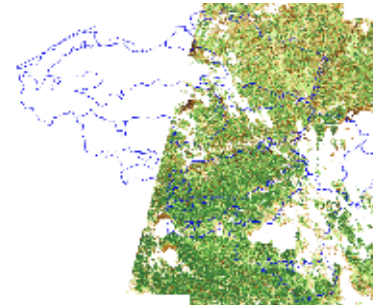
18/05/2016



28/05/2016



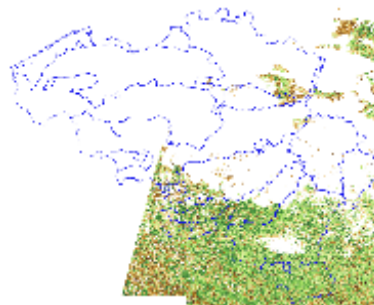
07/06/2016



27/06/2016



07/07/2016



17/07/2016



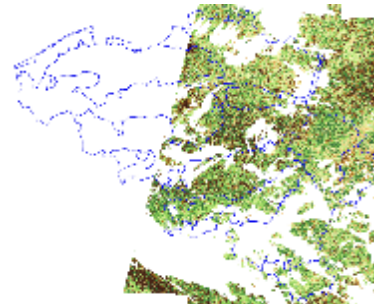
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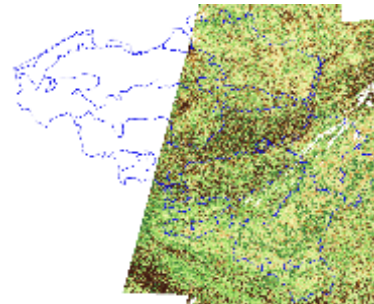
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16/08/2016



26/08/2016

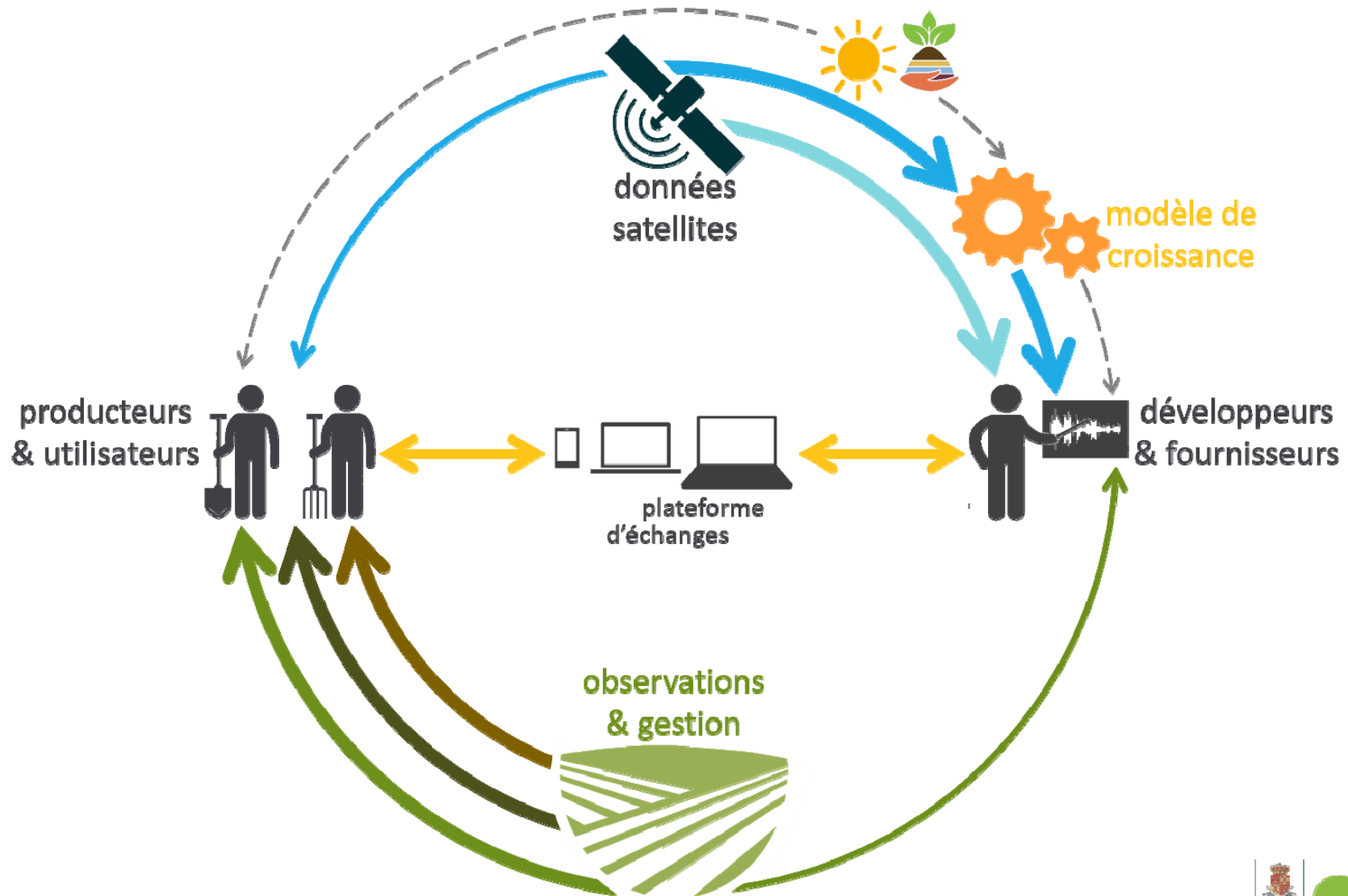


05/09/2016



3 Convergence des données

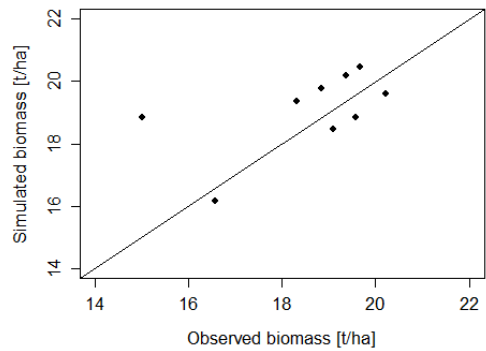
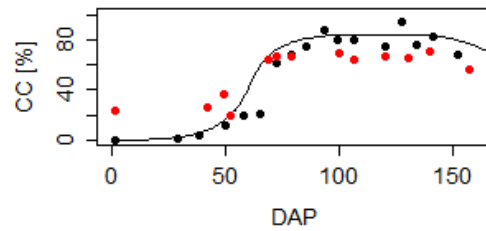
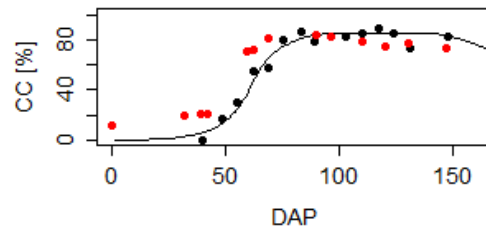
- ex. watchITgrow -



4 Quelques résultats

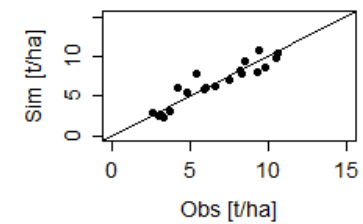
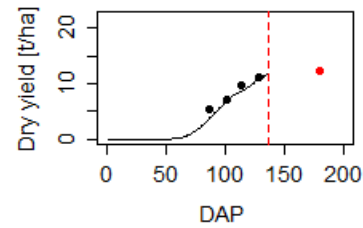
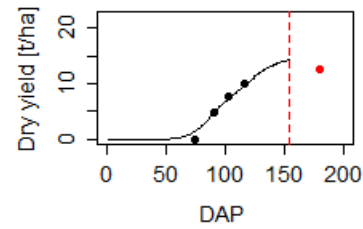
- première campagne -

maïs:



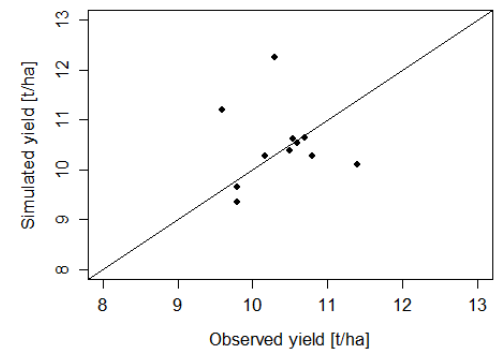
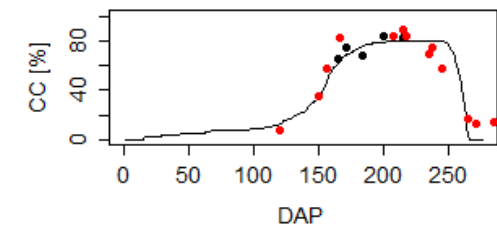
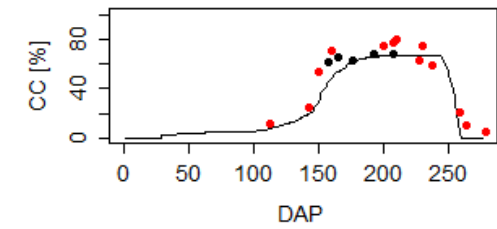
Erreur = 1,6 tonnes/ha

pomme de terre:



Erreur = 0,9 tonnes/ha

froment d'hiver:



Erreur = 0,9 tonnes/ha

Merci!

www.eed.ulg.ac.be



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