

Processing chain for parcel & regional crop monitoring (PROCCY):  
Open Data, Sentinel-2, AquaCrop and sugar cane

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## 1.i CSS

- Compagnie Sucrière Sénégalaise -



## 1.ii CSS

- irrigation & yield management tool -



## 2.i AquaCrop (FAO)

- decision support tool -

Simulation	Production
Start: 15 September 2013	End: 15 September 2013
Water: 0.000 m³/ha	Biomass: 1.187 t/ha
Soil: 0.000 t/ha	Dry Yield: 7.624 t/ha

- Field level;
- Root and tuber crops;
- Fruit/grain producing crops;
- Leafy vegetable crops.

Calibration / Validation:  
minimise observations ↔ simulations  
(fCover, water balance & biomasse)

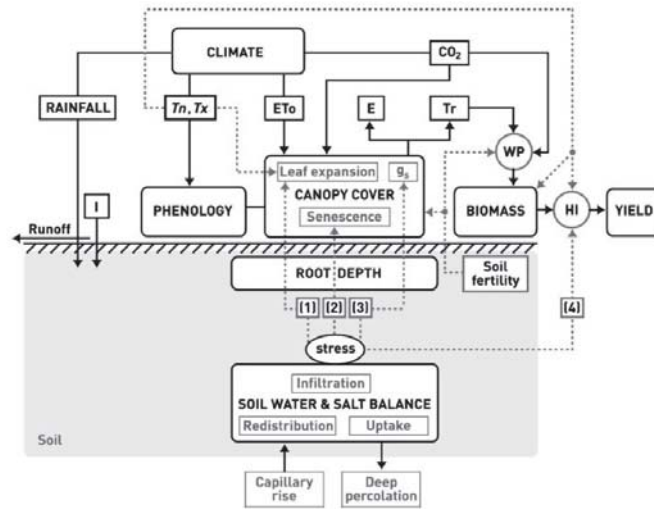
## 2.ii AquaCrop (FAO)

- the basics -

simple  
&  
solid

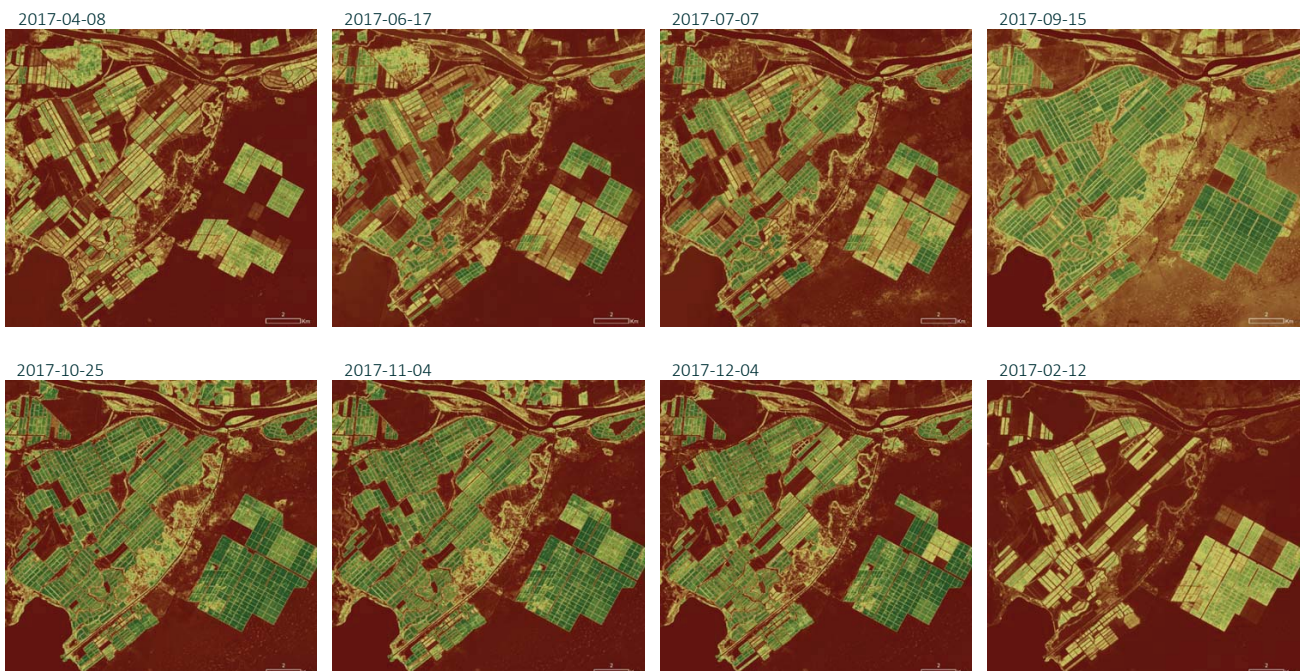
$$B = WP \cdot \sum Tr \text{ or } \text{Biomass} = \text{Water productivity} \cdot \text{Sum of transpiration}$$

$$Y = HI \cdot B \text{ or } \text{Yield} = \text{Harvest index} \cdot \text{Biomass}$$

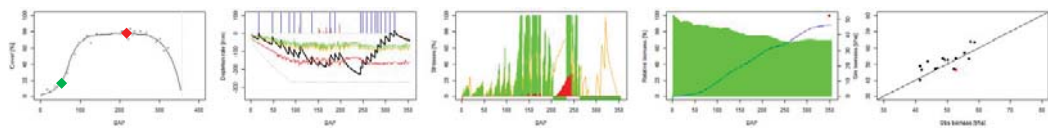
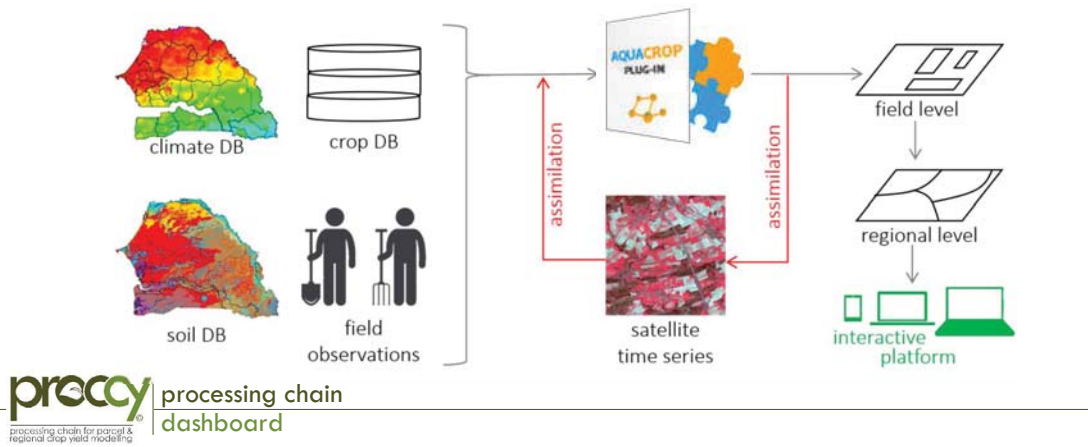


## 3 Towards a regional approach

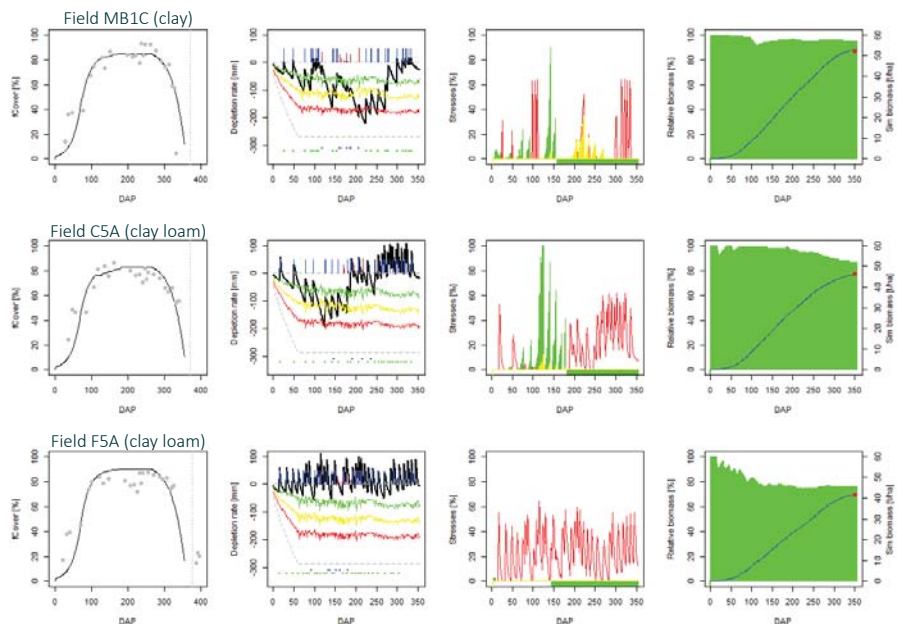
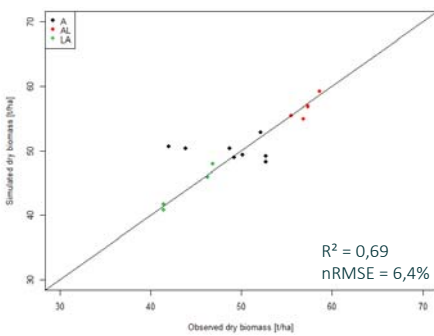
- Sentinel-2 fCover -



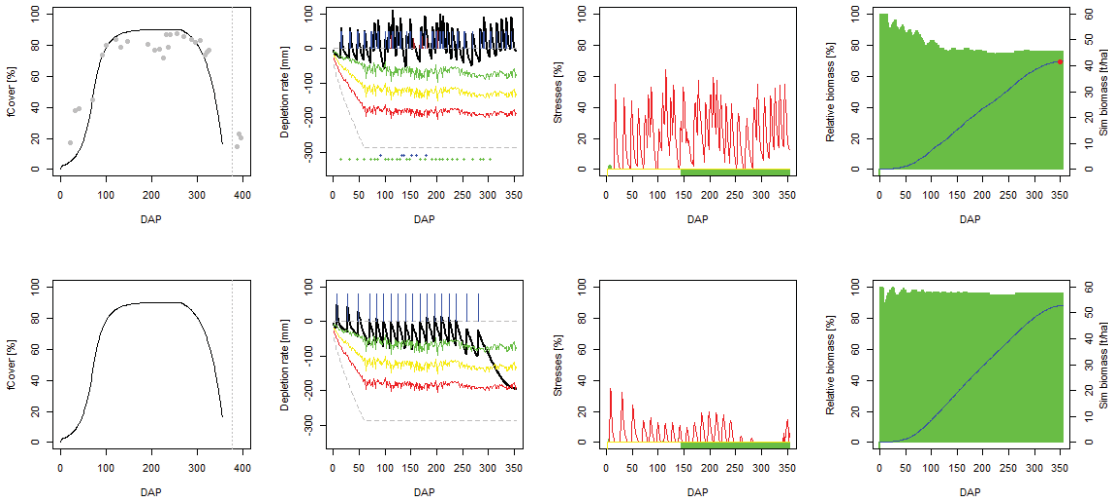
## 4.i PROCCY - work flow & dashboard -








## 4.ii PROCCY - decision/management support tool -



## 4.iii PROCY CSS - before & after AquaCrop -

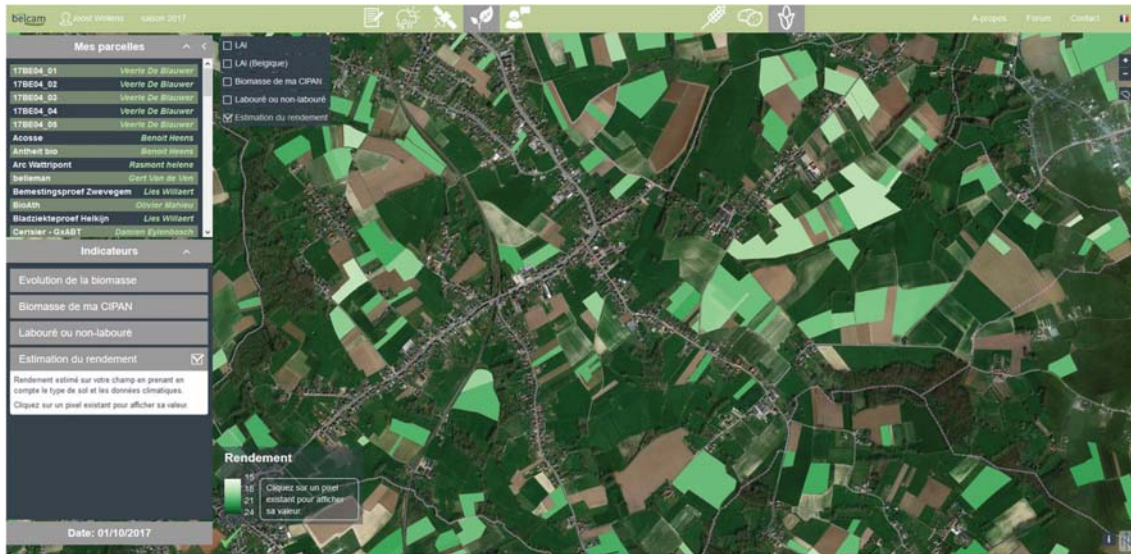


## 5.i Ongoing projects - same idea; ≠ background; ≠ target -

-  : maize, winter wheat and potatoes;
-  : winter wheat;
-  : rice and sugar cane;
-  : durum wheat;
-  : sorghum.

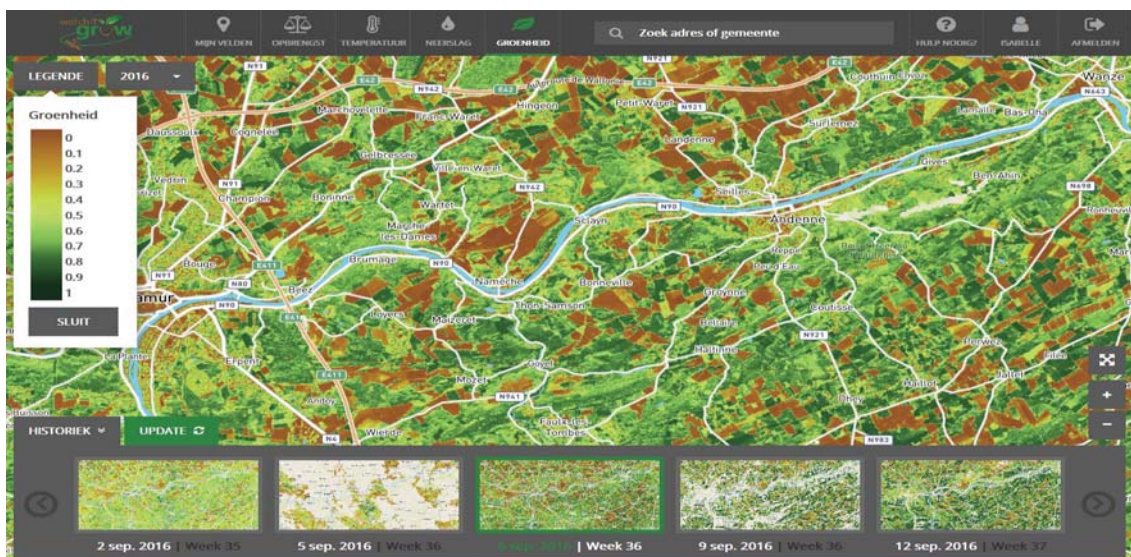
## 5.ii Similar applications

- Belcam -



## 5.iii Similar applications

- watchTgrow -



*Thank you!*

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