agri benchmark

Relevance and perspectives for precision crop production
Workshop, June 30, 10:45 – 11:45
Coordinator: Yelto Zimmer

I.   Background

(1)   Since many years a lot of growers have invested in tools to (a) track site-specific yields and (b) to actually apply inputs site-specific within fields. However, the actual use of these tools is relatively limited (auto-steering and N-sensors [which is of course not related to yield data but rather to accrual appearance of the crop] are probably the most relevant tools in practical agriculture). The key reason for that is the lack of appropriate algorithms to generate reasonable site-specific prescriptions.

(2)   Against this background JD and we at the *agri benchmark* Center are eager to understand the economic potential of the technological options. The idea is to look for way to understand the variability of natural conditions [e.g. soil types, slope, access to water] within farms.

II.   Goals

(1)   Have a better understanding about the current relevance of precision ag in crop production.

(2)   Get an overview on data available for growers in advanced production systems (e.g. CA, US, BR, AR, AU, UK, DE, SE, DK) about the variability of natural conditions on their farms.

(3)   Explore options to get access to data like that on a broader basis.

(4)   Explore options for an economic analysis on the potential value of site-specific farming.

III.   Key questions to address

(1)   What is the current status in **site-specific crop production within fields** (what input applications are done site-specific, what share of growers does it and on what basis [who is generating the application rates and alike]?

(2)   What kind of data is available re. the **variability of natural conditions within fields**?

(3)   Do you know of any information on appropriate yield expectations associated with the variance in natural conditions?

(4)   How **widespread is the availability of such data** in the respective grower community?

(5)   Do you have an idea how to design a research project on the "average" variability of natural conditions within fields and the economic potential for site-specific applications of inputs?

We are aware that most likely there will be no statistics on that, hence a guestimate would be perfect.