

## **Corné Kempenaar**

### **Advances in precision farming**

Precision farming (PF) will contribute to a more sustainable agriculture, contributing to the global challenge of producing 'More with less'. It is based on a farming management concept of observing, measuring and responding to inter- and intra-field variability in crops. PF requires implementation of different technologies on farms. Computers enabled use of Farm Management Information Systems (FMIS) and farm and field specific Decision Support Systems (DSS) since mid 1980s. GEO Information Systems and GNSS allow since ca. 2000 geo-referencing of data and controlled traffic farming. Several types of soil and plant sensors provide site specific data on spatial variation in crops. Today we see the development of several cloud based data storage and use platforms, and apps for soil and crop monitoring and site-specific crop management. This development is likely to continue in the coming years because PF is by far not plug and play. However, we can expect more apps for tactical decisions and operational interventions in crops, and strategic decisions on more-complex issues like optimization of crop rotation. To make this really successful, farming shall become even more data-intensive as it is today. Current state and some advances in PF will be presented and discussed.

### **Bio**

Dr Corné Kempenaar has a R&D carrier in arable farming for over 25 years. He worked most of his time at Wageningen UR on crop protection, weed control and precision farming. Currently he coordinates several Public Private R&D projects on smart farming. He was member of EIP-focus group Mainstreaming precision farming. And he professor Precision farming at University of Applied Science in Dronten (impulse lector).