



TEKNOLOGISK
INSTITUT

Introduction to Danish Technology Institute

A PART OF THE EUROPEAN R&D-NETWORK



The institute is a member of EUROTECH*, along with nine of the biggest Research and Technology Organisations in Europe:

- CEA
- Fraunhofer
- TNO
- VTT
- SINTEF
- RISE
- IMEC
- TecNALIA
- AIT
- DTI

*EUROTECH is a special interest group originating from EARTO (the European Association of Research and Technology Organisations)



DIVISIONS



FOOD & PRODUCTION



**BUILDING &
CONSTRUCTION**



ENERGY & CLIMATE



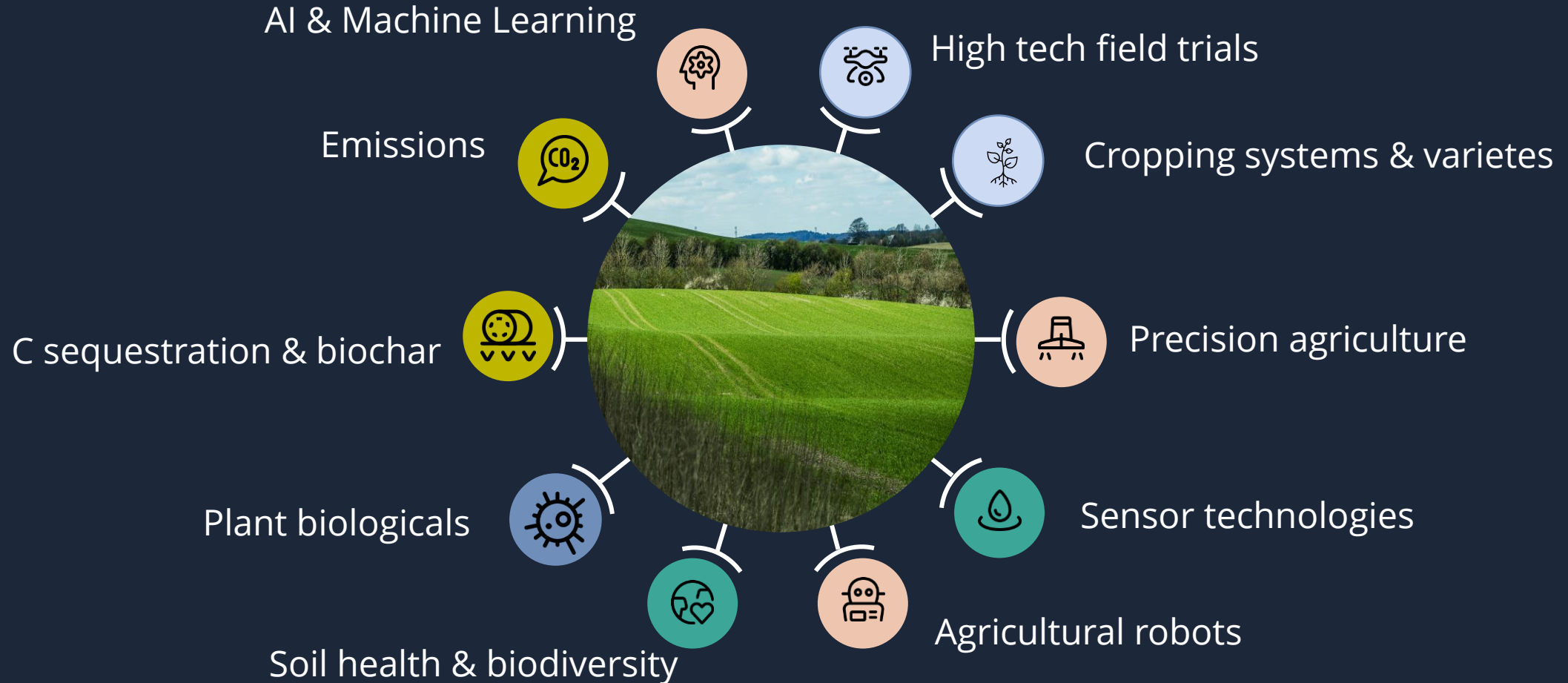
**ENVIRONMENTAL
TECHNOLOGY**



MATERIALS



Center of Agriculture & Digitalization



Danish Technological Institute facilitates Field Trials

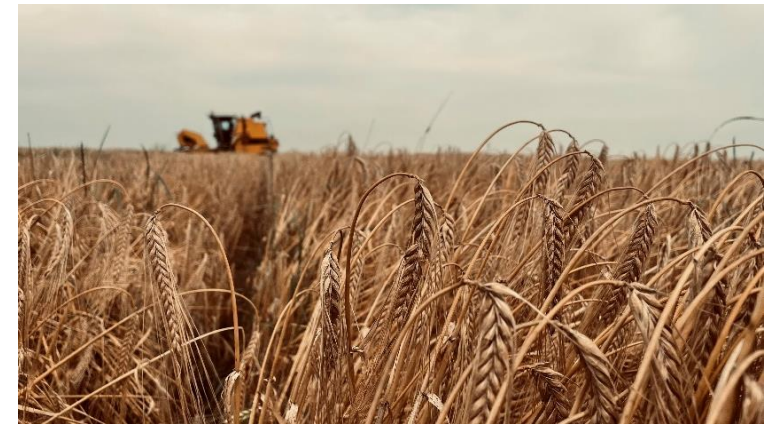
Infrastructure and competencies to coordinate and handle large volumes



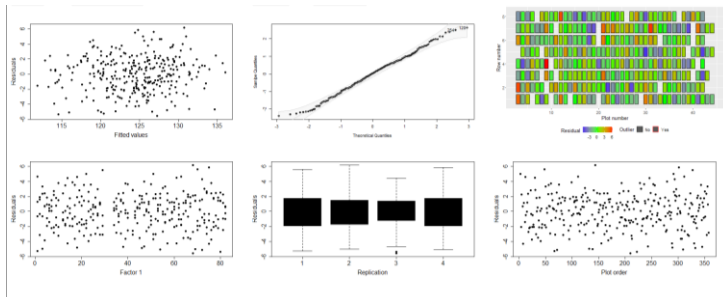
Traceability with unique barcoding



Huge field variation



Data analysis and presentation of results



Specialized field trial equipment



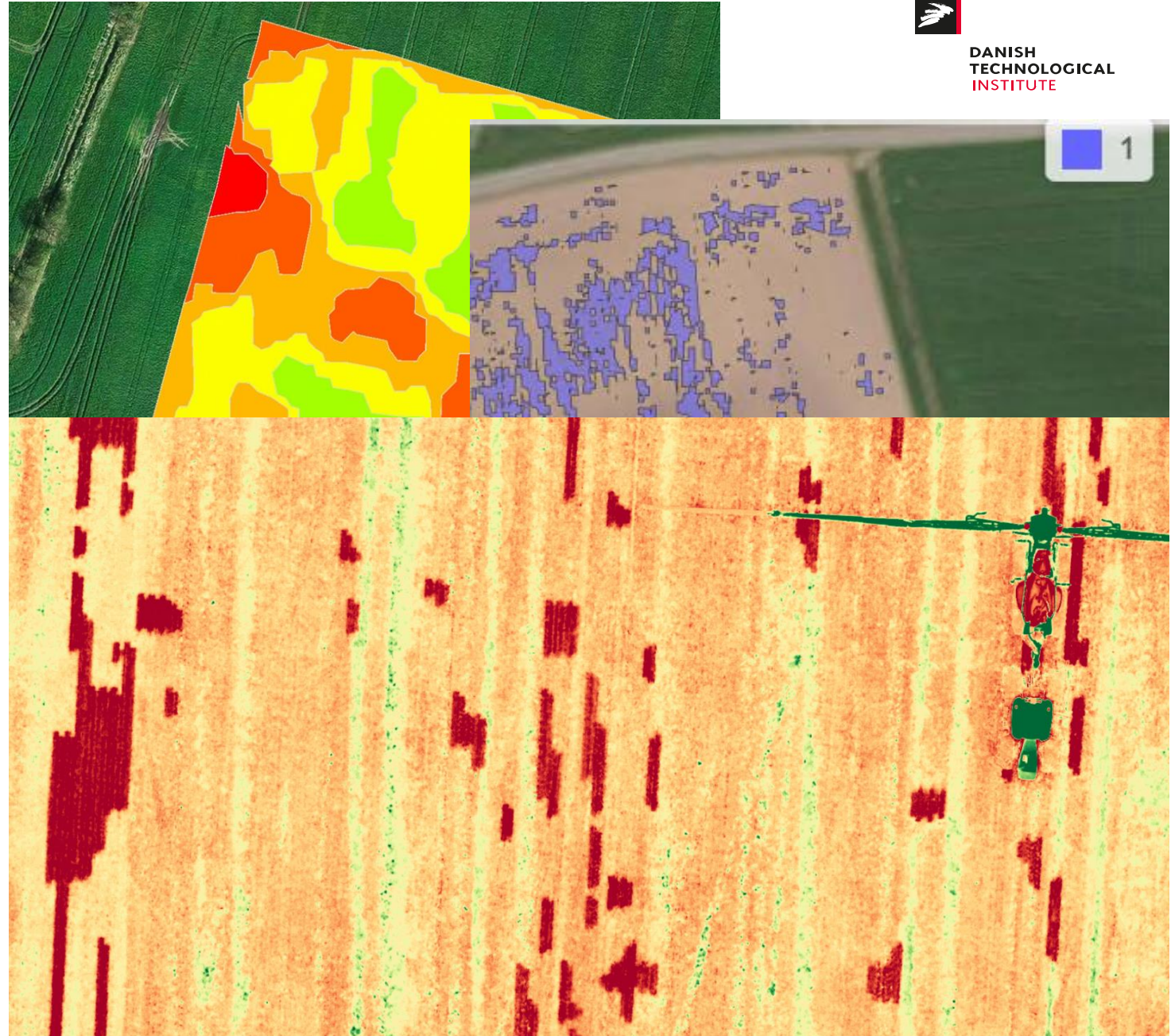
Quality analysis of various crops



Precision Spraying



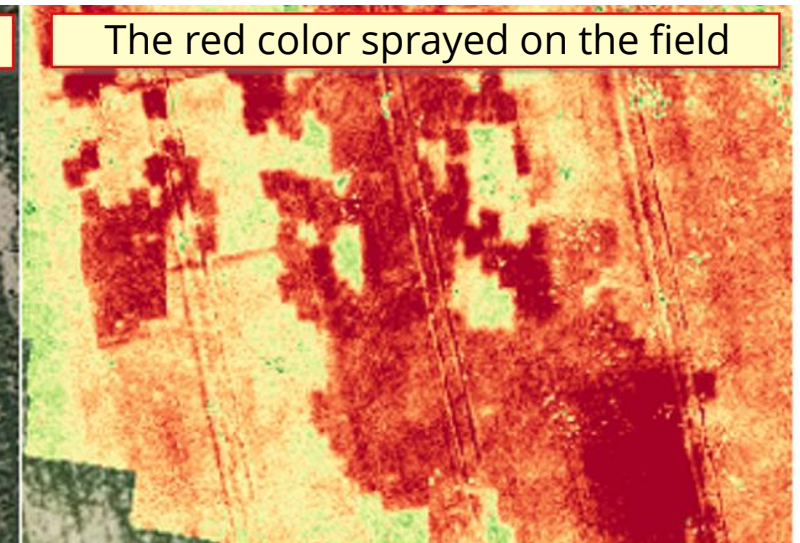
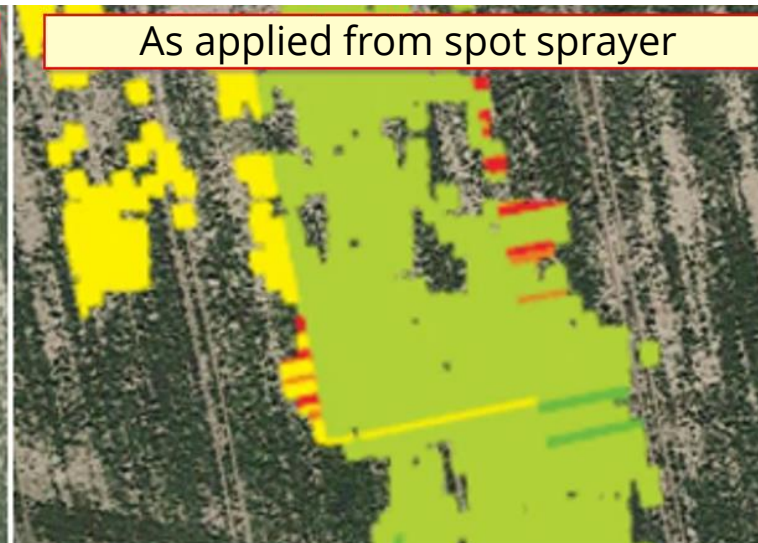
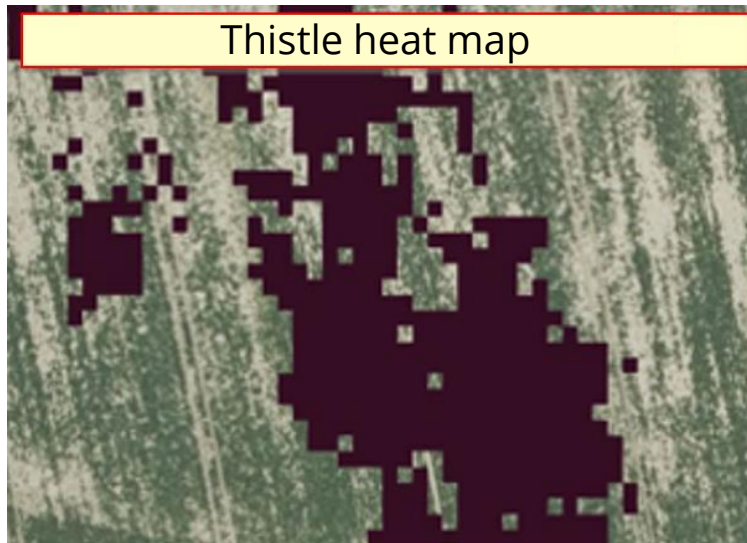
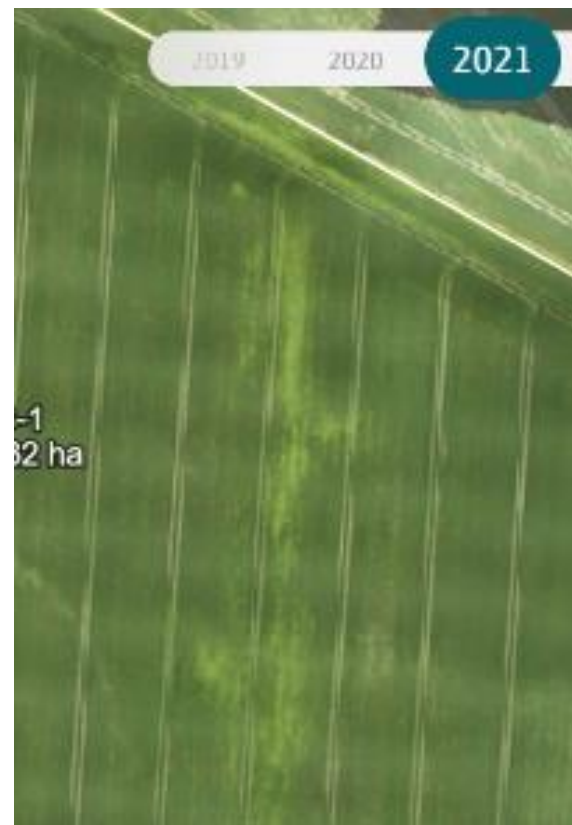
- Variable maps for the entire boom width
 - Fertilizer
 - Pesticides
 - Fungicides
 - Herbicides
- Spot spraying
 - Uses the sprayer's GPS section control



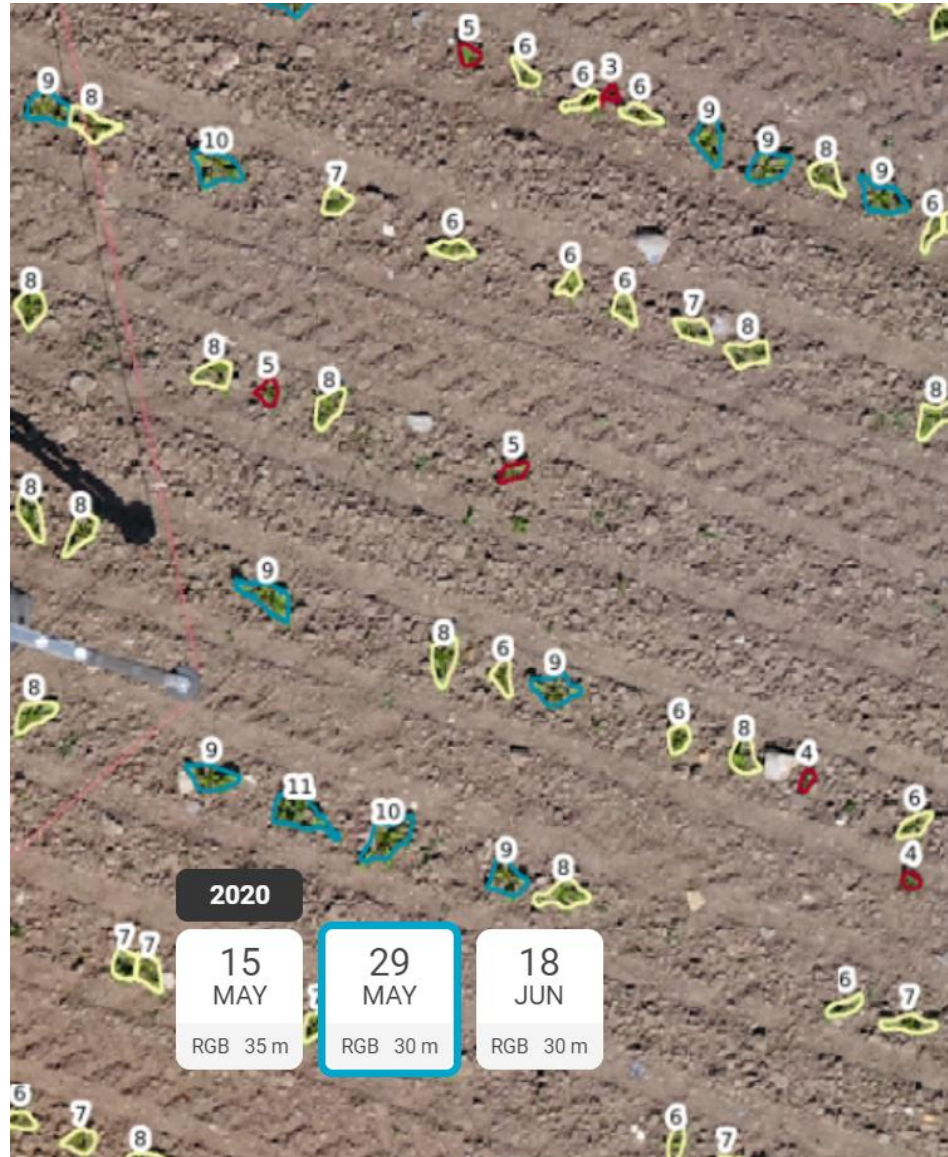


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Spot Spraying

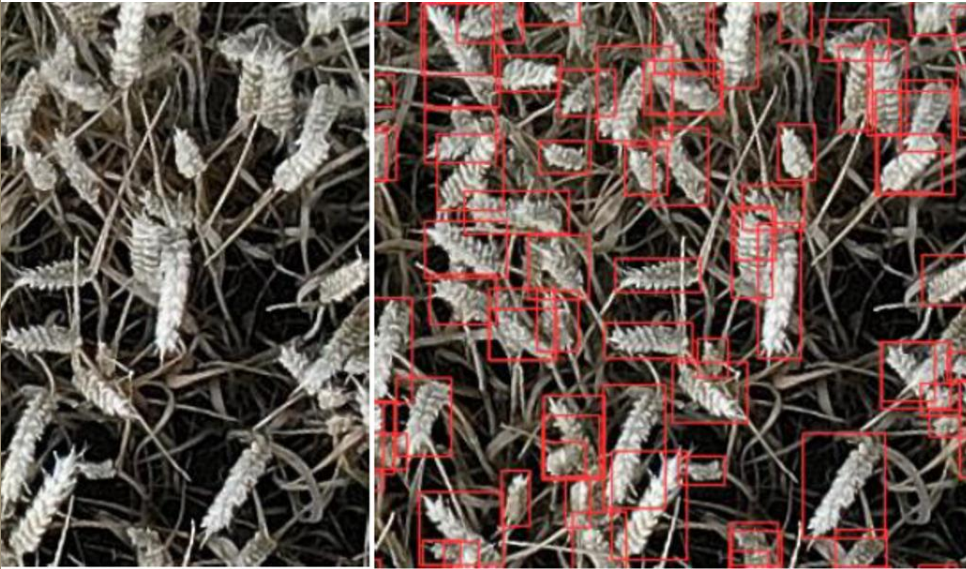


Crop counting with DL



Plant breeding — Counting wheat ears

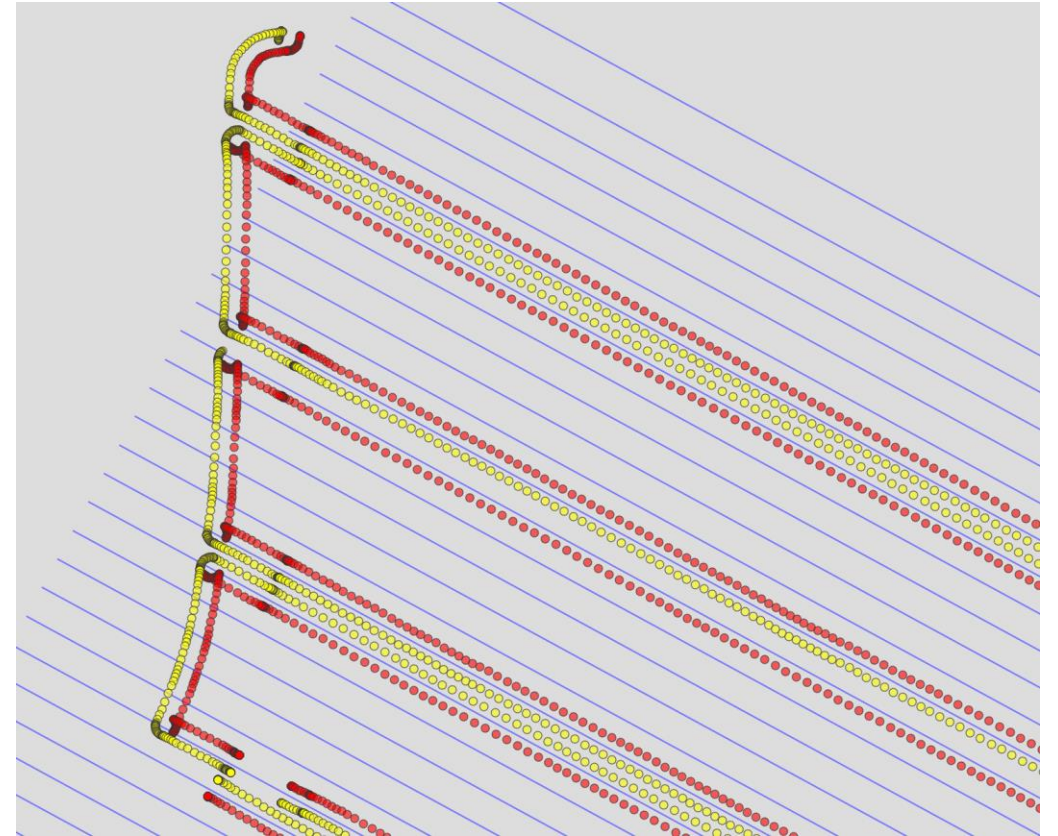
Growth characteristics have a major influence on suitability for early or late sowing





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Accuracy on implement





ROBOTS safety

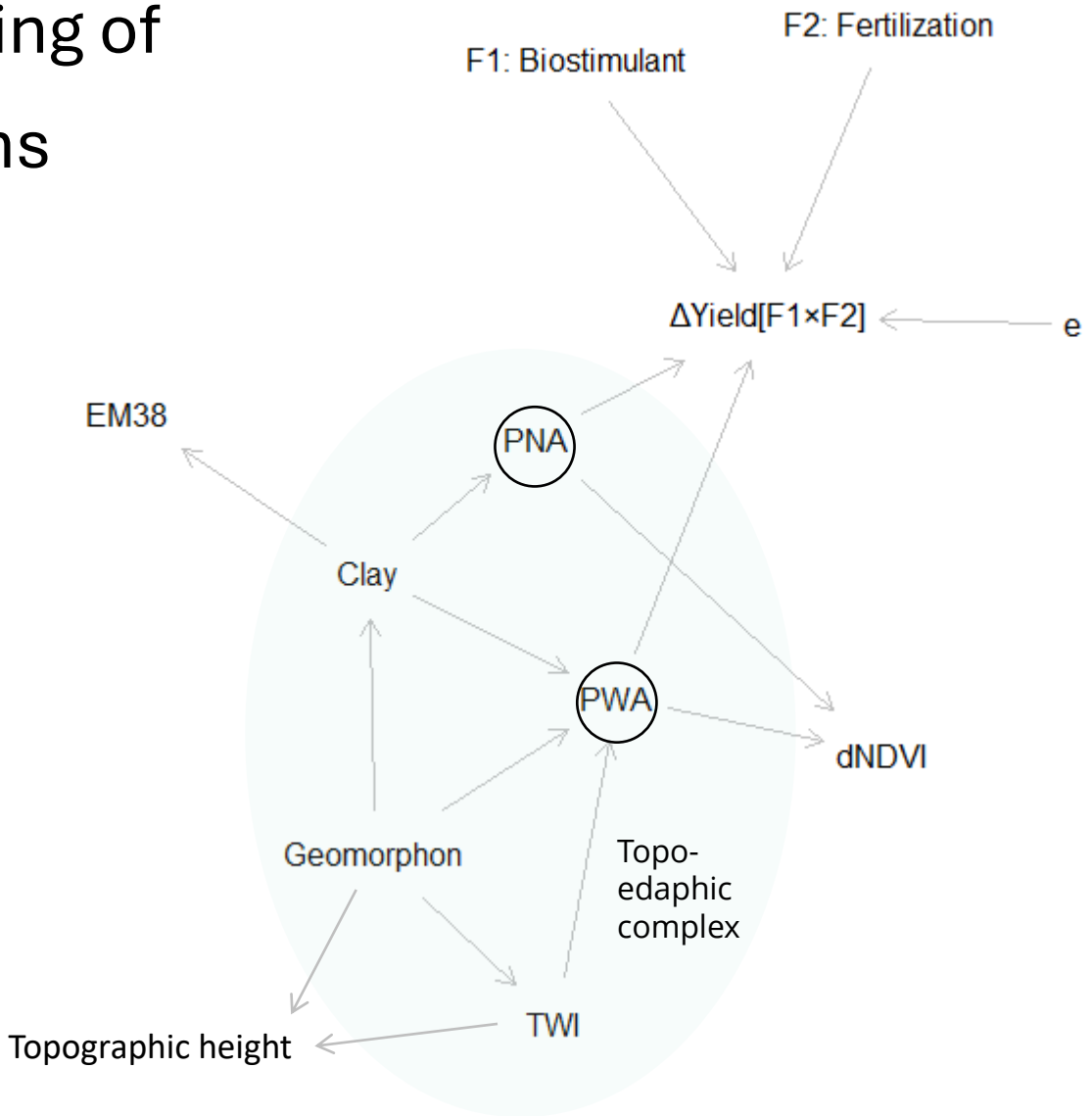


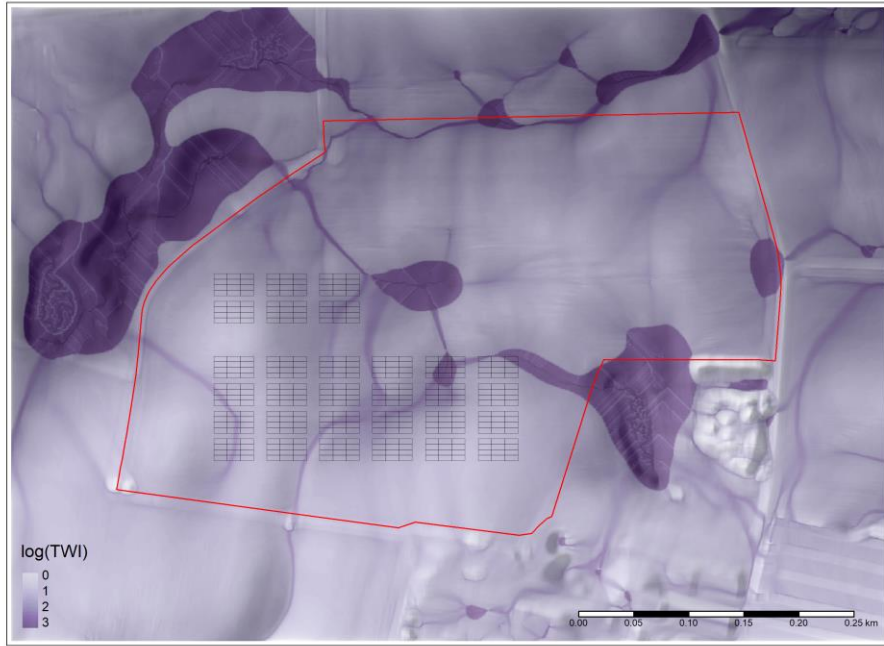
Value creation:

- Validates companies' technologies
- Unbiased test
- Adds a touch of Agronomy to the technically strong companies

Often in collaboration with our robotics department in Odense.

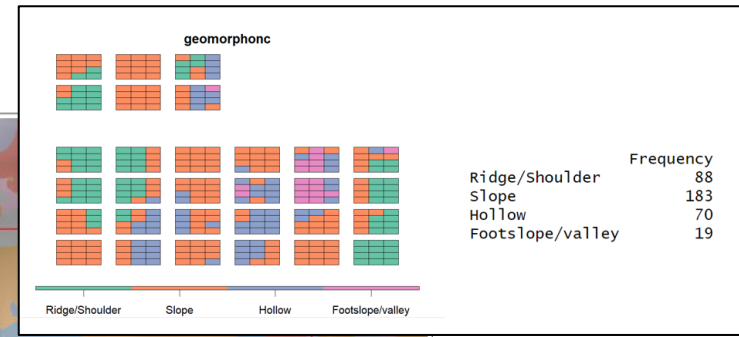
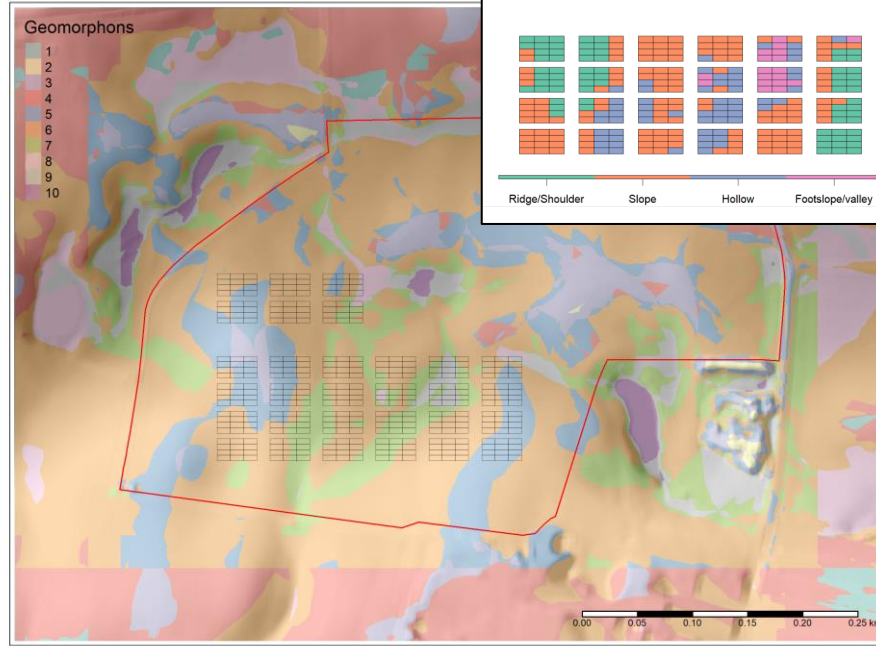
Statistic modelling of cropping systems





Topographic Wetness Index (TWI)

describing the propensity for a site to be saturated to the surface given its contributing area and local slope characteristics.



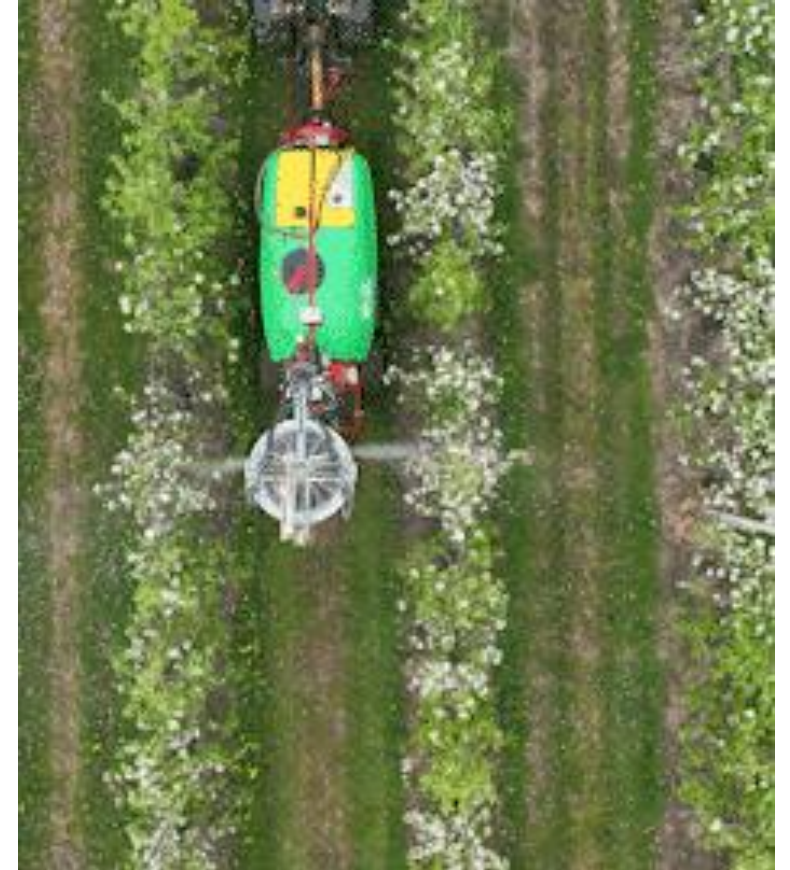
Value	Landform Type
1	Flat
2	Peak (summit)
3	Ridge
4	Shoulder
5	Spur (convex)
6	Slope
7	Hollow (concave)
8	Footslope
9	Valley
10	Pit (depression)

Geomorphons - landform classification

line-of-sight analysis for the eight topographic profiles in the cardinal directions surrounding each grid cell.



Spot spraying and tree specific root pruning



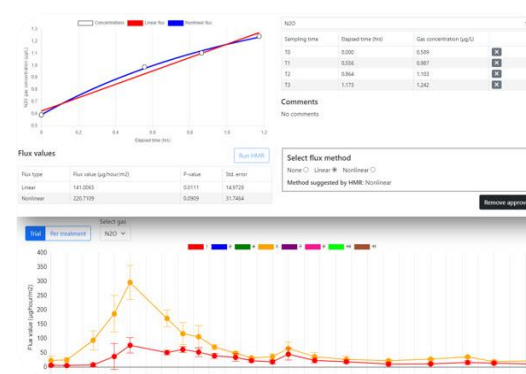
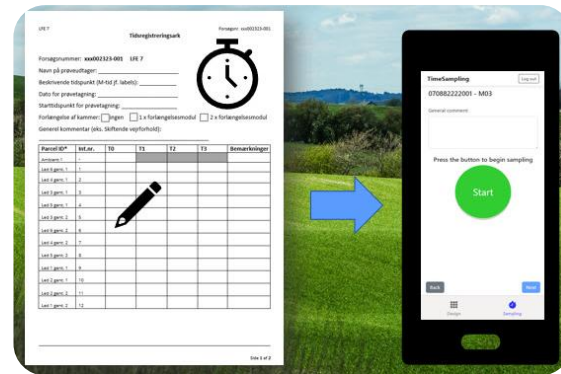
AGRO EMISSION PLATFORM

Unique ID system

Time sampling app

Automatic flux calculation

Automatic chamber methods and data analysis





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Rikke



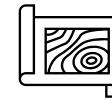
Hanne



Bo



Thomas



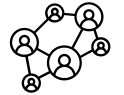
Julie



Svend



Nicolai





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Questions?

