

Sustainable Digital-based Farming

How does my research contribute to this theme?

Improved understandings of soil health
Robots for (e.g) weeding
Improved phenotyping
Pest management
Peatlands

Collaboration within the department and beyond:

Considerable collaboration already taking place, but more needed on:

Applied digital agriculture seen to hold great potential – but need time to develop concepts (and applications) within AGRO and with Eng

We are good at field experiments – but we need understand the biological aspects of robotic weeding better – should be a key department focus -
Expand off-station experimentation – and further develop crop-specific technologies

Precision agriculture: discussed application of liquid and mineral manure. Again, biological dimensions could be in focus here as well

AI for Soil Health project, as a project that has AGRO– wide potential (methods and approach), also when it comes to detecting water tables in peatlands

Concrete suggestions for increased department collaboration:

1. Davide's (Vita) project – there might be a need to know the soil characteristics better

AI for Soil Health project (Maria) could complement

'Complex' brand robot may come in useful

2. Rene and Bo will explore further collaboration

3. Remark: Uniform methods (cameras in particular) at Flbjerg and Foulum need to be applied

4. AGRO capacity for the interpretation of satellite images need strengthening - Lucas and Franka, Vita may contribute? Also keep in mind the competencies at the LandCraft center

Great deal of digital agriculture competences exist in AGRO – but we need to avoid fragmentation, and ensure better Flakkebjerg – Foulum collaboration

How can the area contribute to our teaching, including attracting more students and contributing high school activities?

Need links with farming schools; need to educate (young) farmers on the biological context, not only the tech

Tech is attractive to young people – engineering students could get involved

But need to also consider how to involve 'improve the food system in sustainable direction agenda' enthusiasts? Make tech more meaningful – connect it didactically with sustainability? After all digital technologies mean reduced compaction, fewer pesticides, lower energy use, may enable diversified production.....

We need to be better at documenting the sustainability benefits

National, international Collaboration:

Lots of national collaborators; not least private sector.

Did not discuss international dimension much - but reference made to e.g. WUR lab scale digital agriculture; however, we need to be better at applying things at field scale

How does the area contribute to regenerative agriculture?

Discussion on role of large companies adopting regenerative agriculture. It's all about the soil.....

Funding:

Good – optimization through greater department focus and collaboration.