



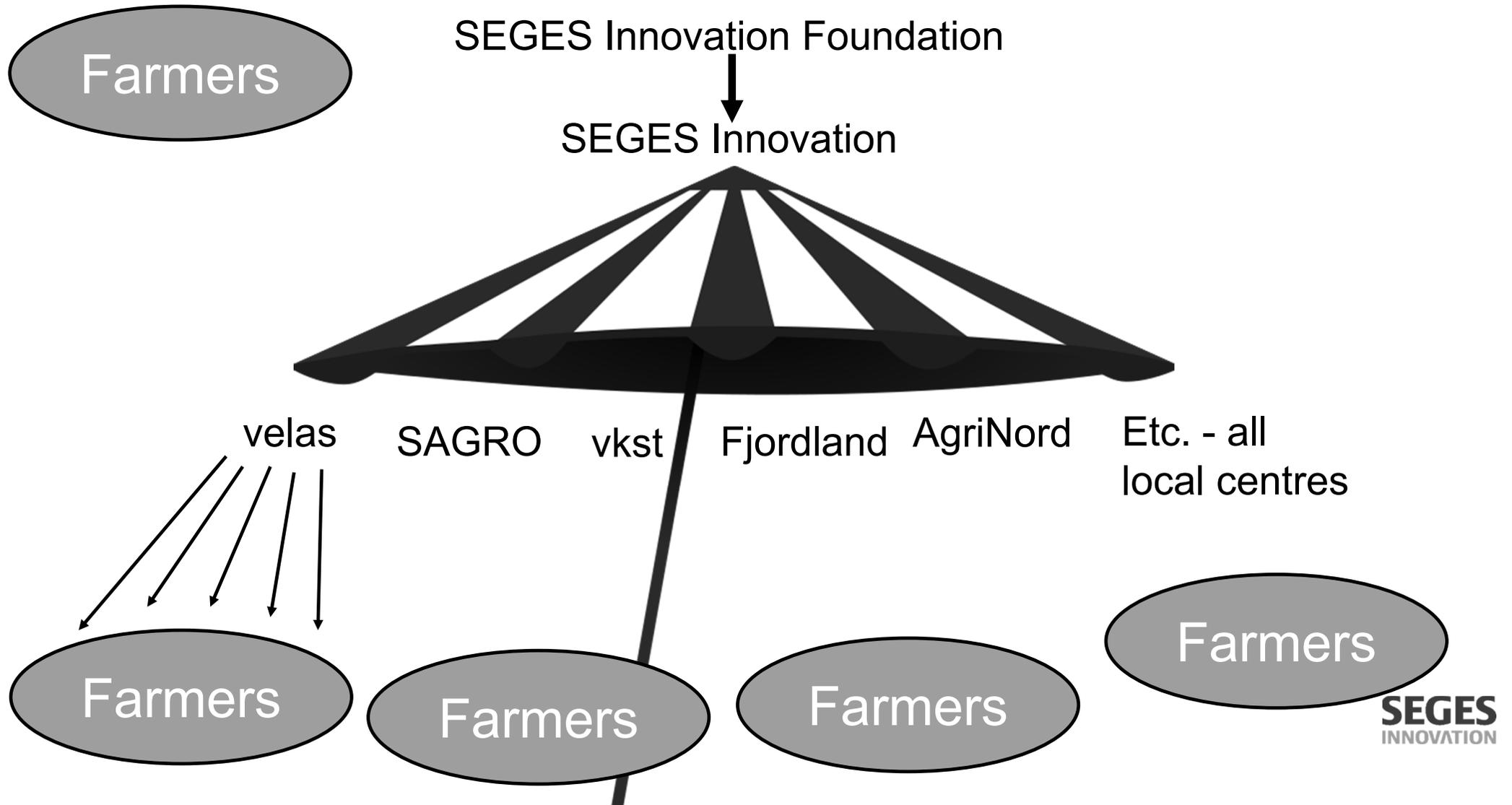
# **Danish case studies showing how digital solutions support sustainable agriculture practices**

Jens Erik Jensen, senior specialist

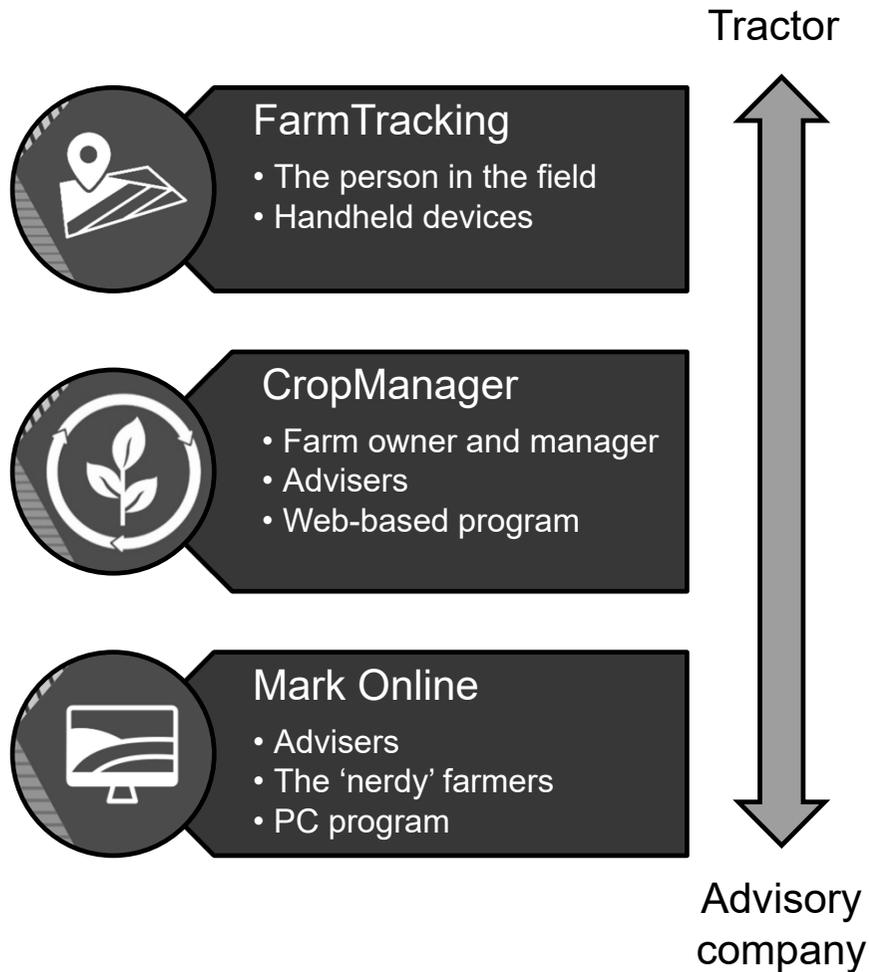
**CropLife Conference Brussels 7 March 2023**

**SEGES**  
INNOVATION

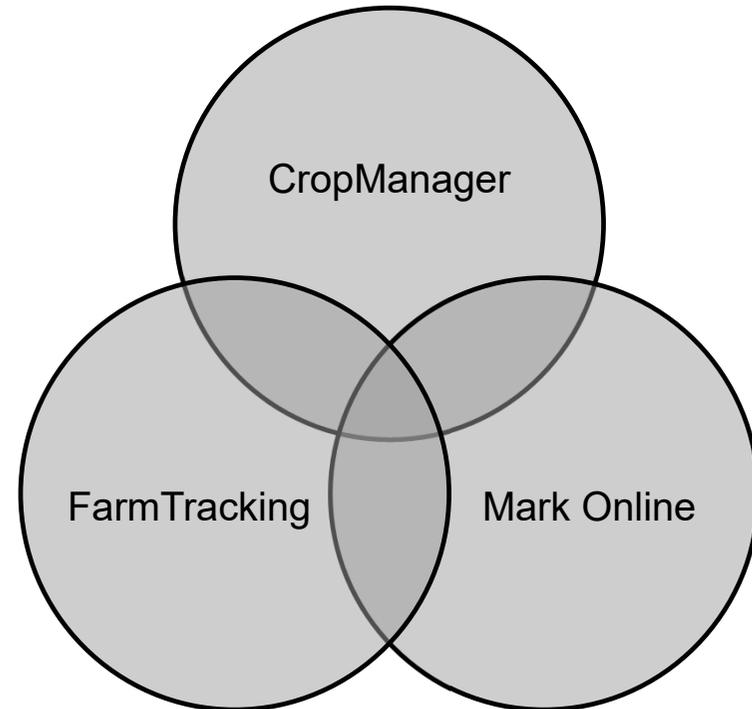
# Two-layer advisory system



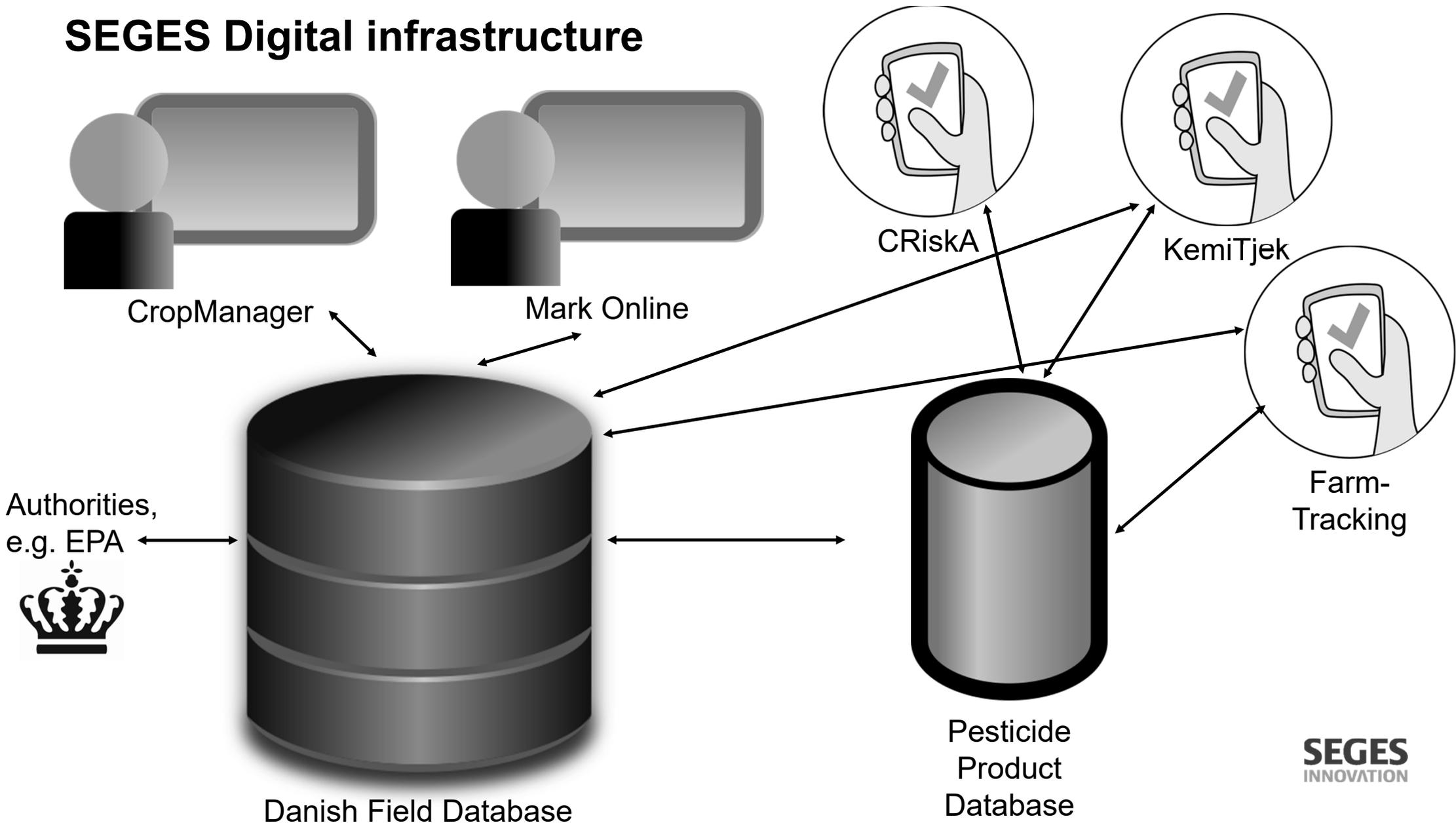
# Main plant digital apps / programs



All programs access the same database, i.e. Danish Field Database

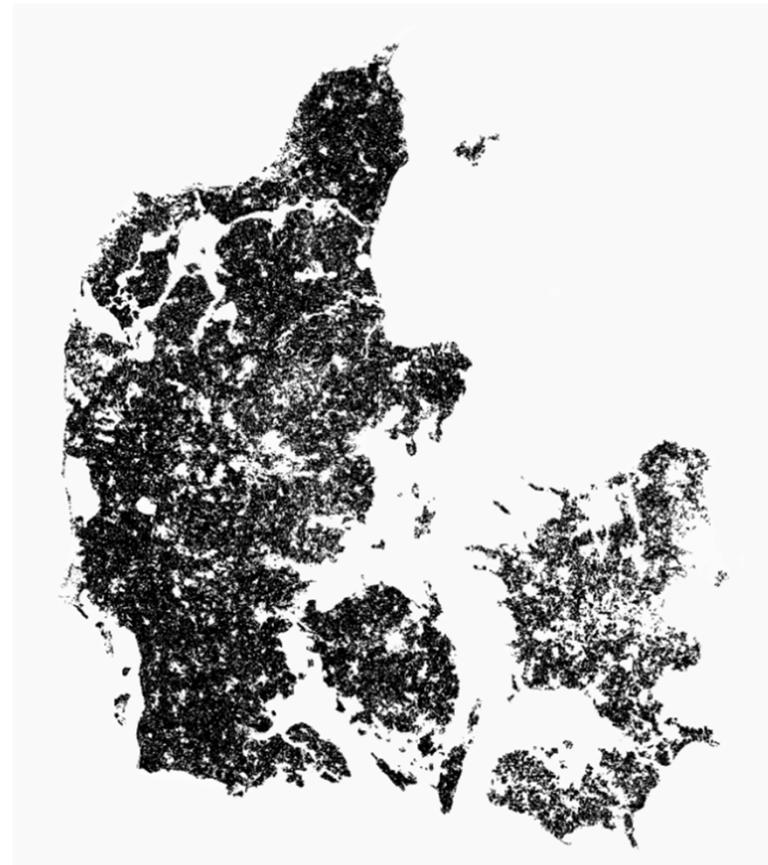
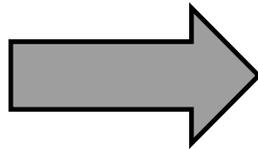


# SEGES Digital infrastructure



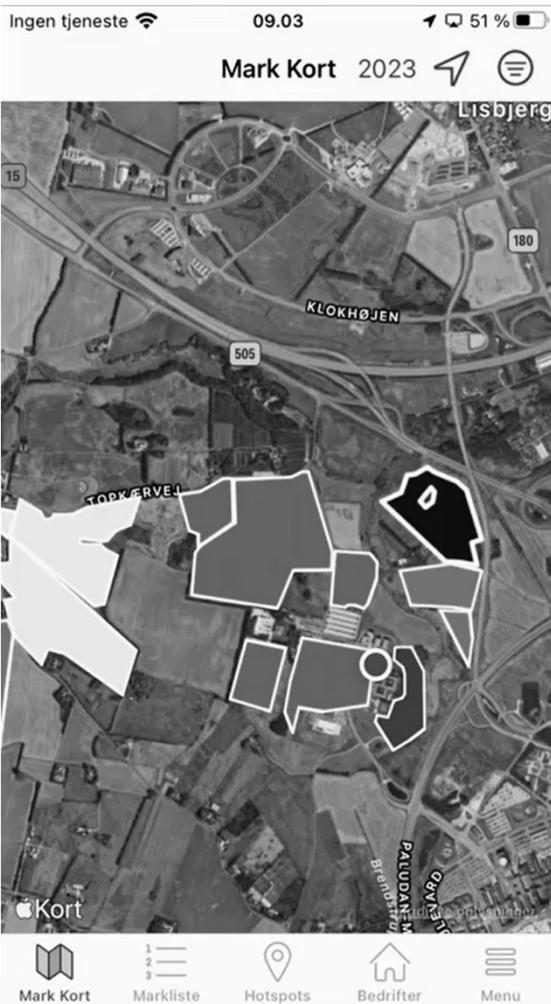
# Great data coverage in Denmark

Today: 88% of the farmed land is in the Danish Field Database  
often possible to track field management history 20+ years back

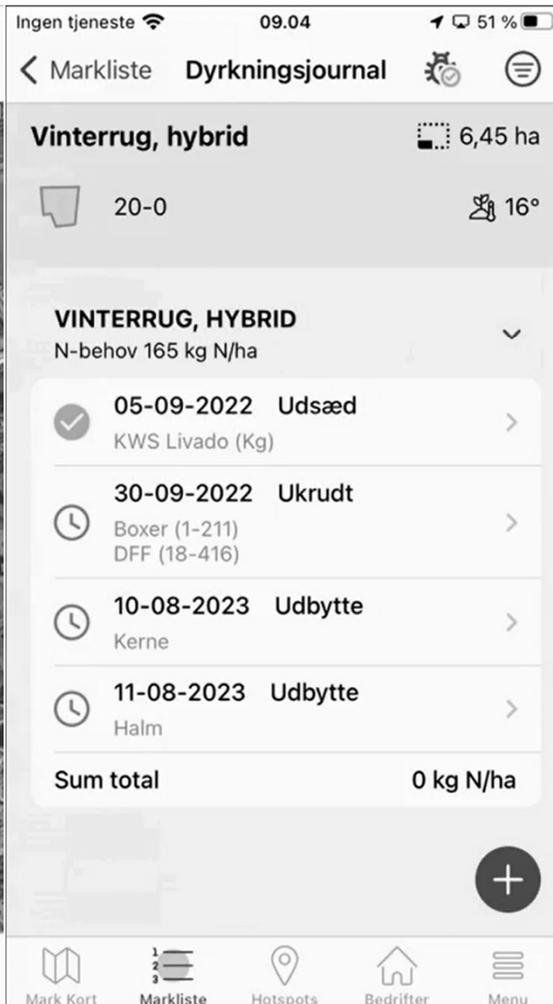


# FarmTracking – pesticide record keeping

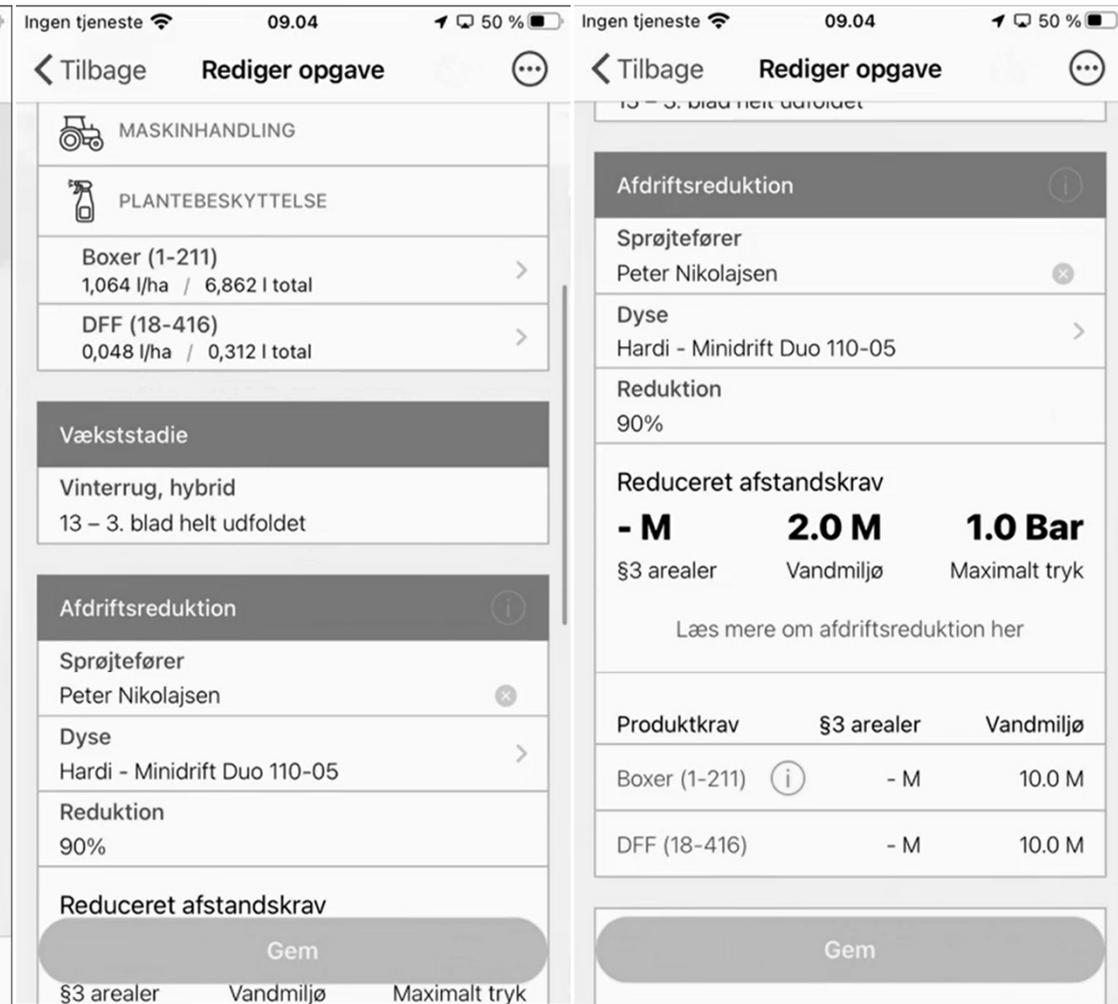
Choose field



Overview planned operations



Edit spraying task

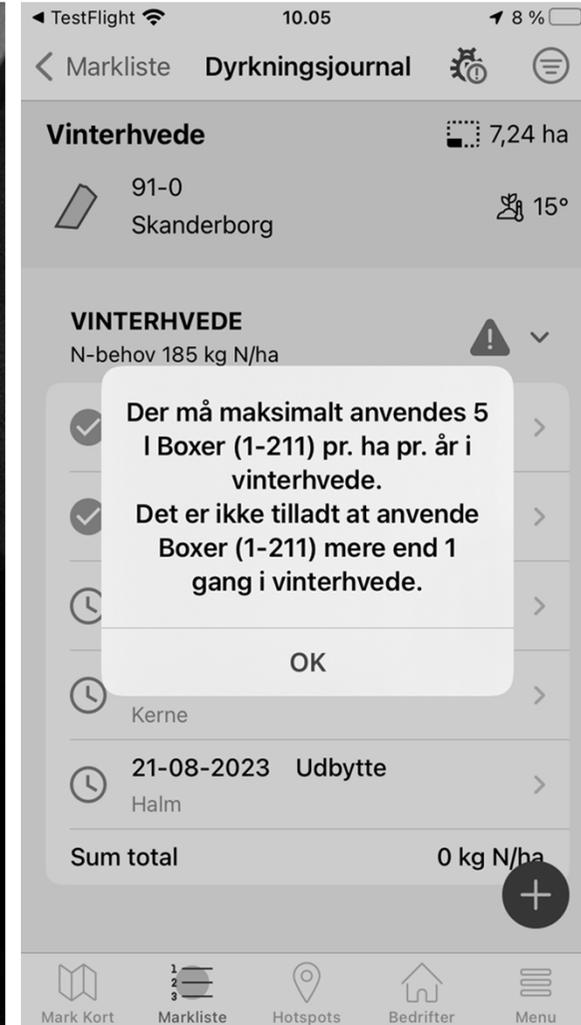


# 'Pesticide Check' in FarmTracking and Mark Online

Digital label info from Pesticide Database

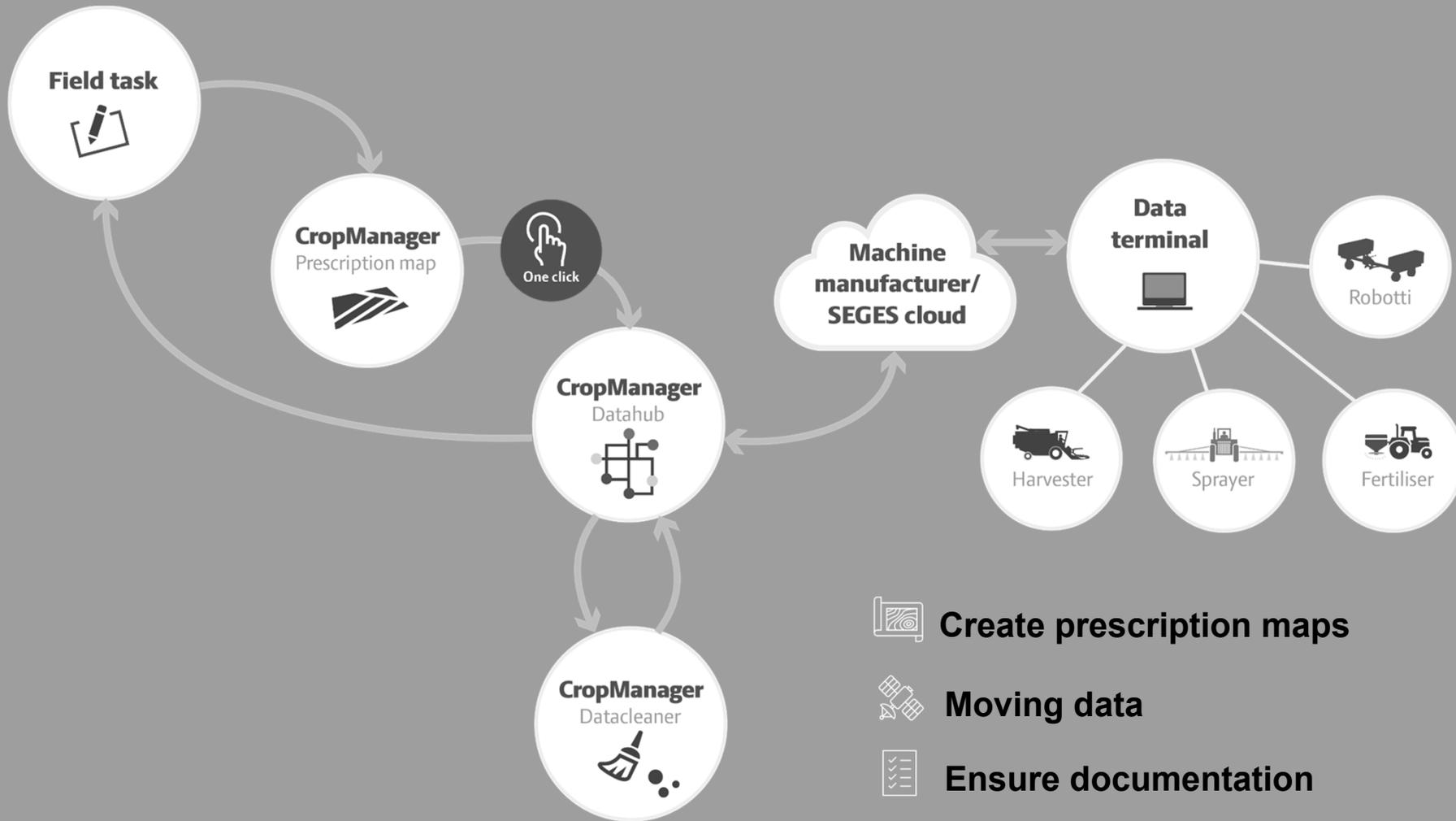


Test compliance before spraying starts

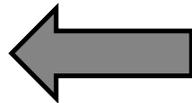
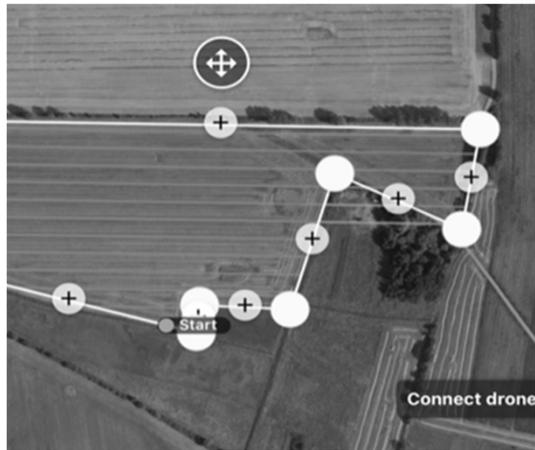


Details on slide no. 15

# CropManager – supporting precision farming



# Thistle Tool – mapping and patch spraying made easy!



# Lodging risk prognosis



‘Traffic light’ model: Green: Low risk, Yellow: Medium risk, Red: High risk of lodging

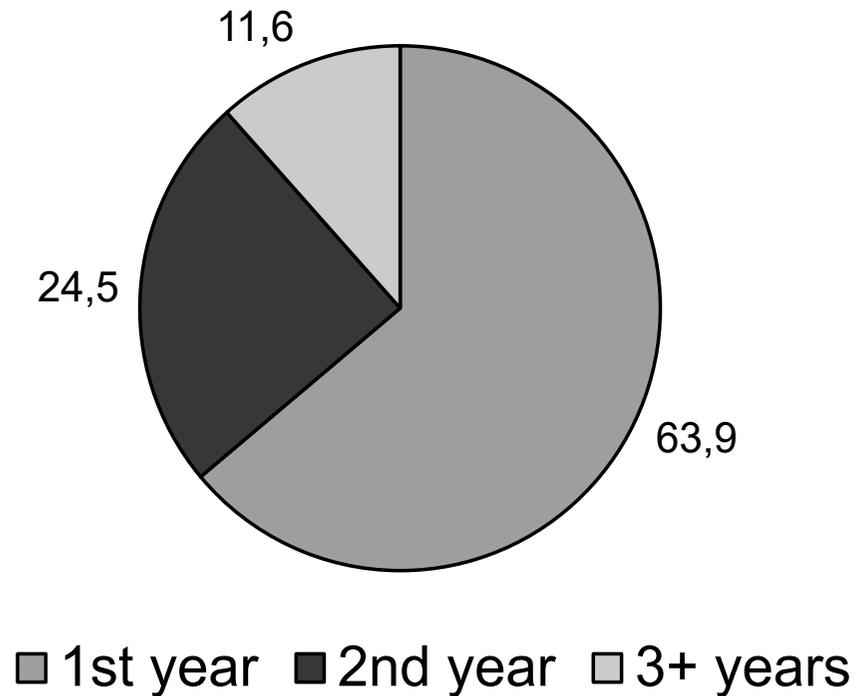
# KemiTjek

- App based on an idea from a farmer
- Barcode scanner + data from pesticide database
- Clear information on current registration status
- High turnover in registrations in Denmark – even more value to this app
- When scanning products, they may be added directly to electronic storage in Mark Online

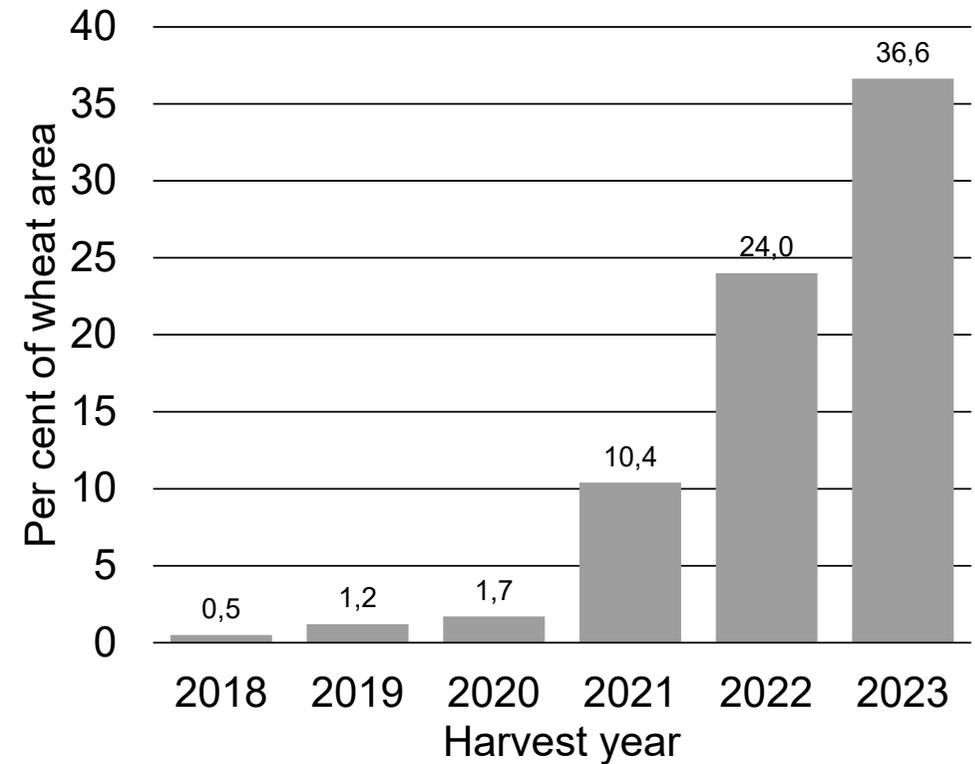


# Data mining in Danish Field Database, examples

## Per cent wheat in rotation

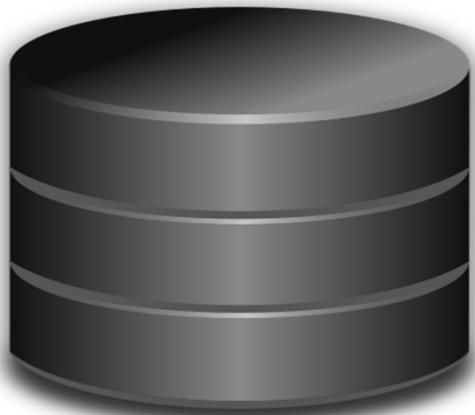


## Use of variety mixtures in wheat



## Data ownership and management principles

- The farmer/grower and the farm/enterprise is in focus
- Farmers/growers own the data
- Farmers/growers can authorize advisers and other stakeholders around the farm to access data
- SEGES may use data for statistics / reporting of aggregated data
- TRUST and RESPONSIBLE data use key to success!



Danish Field Database



**Slides with additional information**

## ‘Pesticide Check’ in FarmTracking and Mark Online

- Product registered in crop
- Max. dose per treatment in crop
- Max. number of treatments in crop
- Max. dose per cropping year
- Time between repeated treatments, e.g. potato fungicides
- Restrictions across products with similar active ingredients, e.g. triazole fungicides and sulfonylurea herbicides
- Application season and crop growth stages (BBCH)
- Pre-harvest intervals
- Distance to water courses / surface water
- Distance to natural areas
- Distance to roads, residential areas, institutions etc.
- Drift-reducing nozzles – reduced distance to vulnerable areas

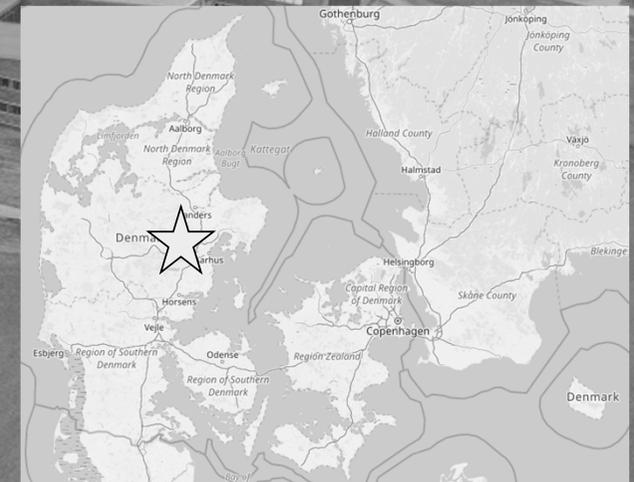


Details regarding  
‘Pesticide Check’  
on slide no. 7

# Where I work - SEGES Innovation!



Agro Food Park ~100 companies / institutions and ~1500 employees  
SEGES Innovation biggest company with ~550 employees





# Meet SEGES Innovation

We are a private, independent, non-profit research and development organisation

We are the leading agricultural knowledge and innovation centre in Denmark

We collect data and service Danish agriculture as market leader

We offer sustainable solutions for the agriculture and food sector of tomorrow

# Thanks – get in touch if you need more

**SEGES**  
INNOVATION



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