

# Department of Agroecology

INTRODUCTION TO DEPARTMENT

We do research in agroecology – the interaction between plants, soil, animals, environment, climate and people.

We create societal impact through sustainable solutions based on agro-ecological principles.





DEPARTMENT OF  
AGROECOLOGY

# Ambition

We aim to be a leading international research environment for the green transition in agriculture, addressing global and local sustainability challenges driven by rising demands for food, energy, and biomaterials.

We create societal impact through research, innovation, education, policy support, and collaboration. Together, these efforts contribute to sustainable agricultural solutions that balance multiple objectives - while ensuring a healthy and supportive working environment.

# About the Department



# Key research areas

**Agriculture with a low  
carbon footprint**

**Climate-resistant cultivation  
systems**

**Agriculture with low  
pesticide consumption**

**Low nutrient emission  
agriculture**

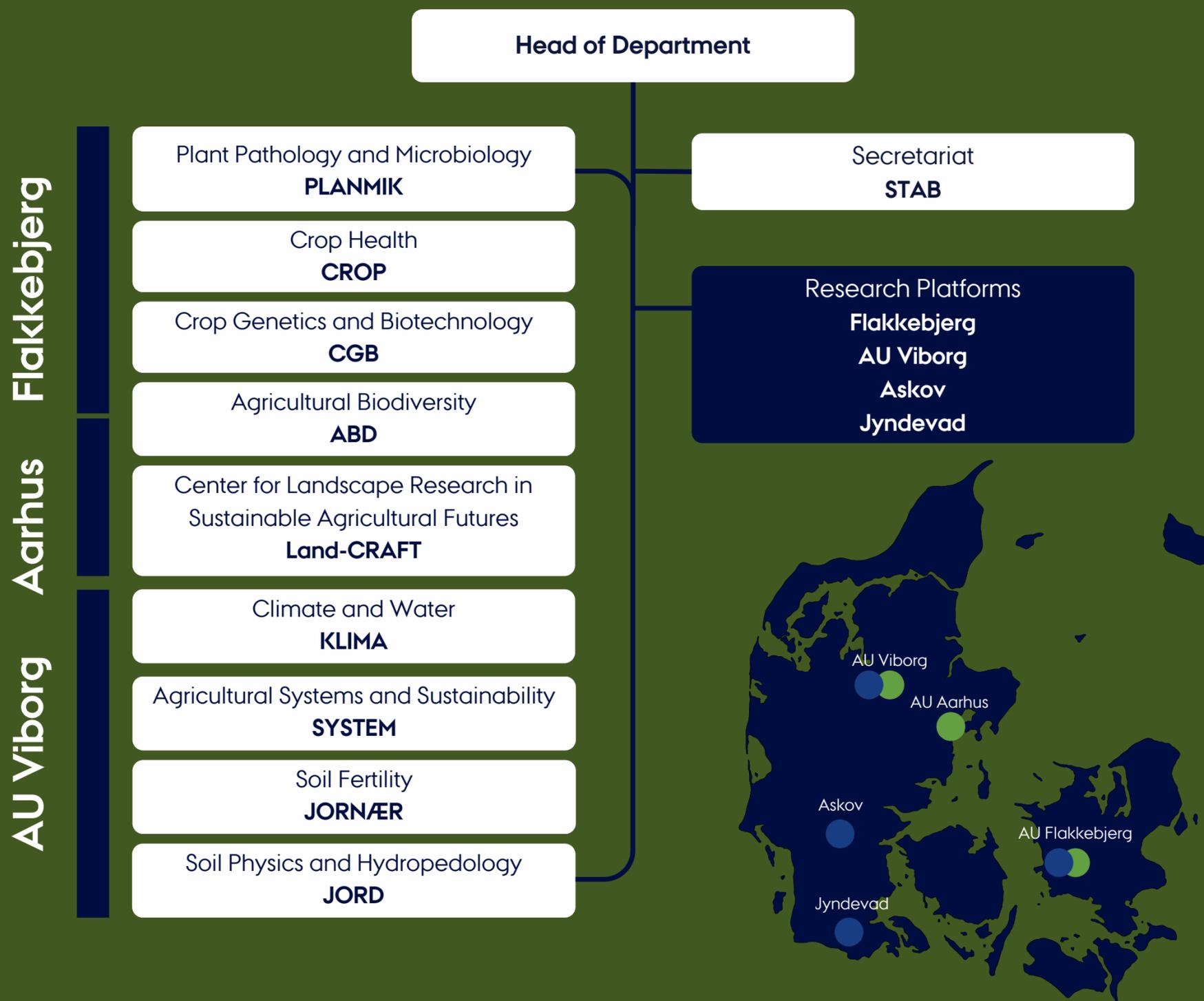
**Preservation and  
improvement of soil quality**

**Sustainable digital  
agriculture**

**Cultivation for biodiversity**

**Plant-based foods**





# Department structure

# Department management



**Jørgen E. Olesen**  
Head of department



**Ida Thoft Jensen**  
Head of Secretariat



**Jørgen Eriksen Henrik Brinch-Pedersen**  
JORNÆR



**Jim Rasmussen**  
KLIMA



**René Gislum**  
CROP



**Niels Holst**  
ABD



**Mette Vestergård**  
PLANMIK



**Mogens H. Greve**  
JORD



**Marie Trydeman  
Knudsen**  
SYSTEM



**Klaus Butterbach-Bahl**  
Land-CRAFT



**Anders Vestergaard**  
MARK Flakkebjerg



**Christian Bjerg  
Mogensen**  
Foulumgård



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### Plant Pathology and Microbiology: PLANMIK

- The Global Rust Reference Center
- Microbiome aided plant resilience
- Nematodes
- Molecular characterisation and diagnosis of pests

 AGRO Flakkebjerg

### Crop Health: CROP

- Seed science and technology
- Herbology and application technique
- Pesticide resistance
- Disease and pest management
- Natural product chemistry and environmental chemistry
- Phytobiome studies
- Ecosystem services
- GMO

 AGRO Flakkebjerg

### Crop Genetics and Biotechnology: CGB

- Plant breeding
- New plant breeding techniques
- Genetics
- Biotechnology
- The quality of crops as feed, food and biomass

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### ABD – Agricultural Biodiversity

- Ecological modelling lab
- Entomology
- Social-ecological systems simulation
- Animal, landscape and human simulation
- Honeybee diseases, genetics and pollination

 AGRO Flakkebjerg

 AGRO Aarhus

### Land-CRAFT - Center for Landscape Research in Sustainable Agricultural Futures

- Landscape experimentation
- Digital landscape analyses
- Landscape modelling framework
- Socio-economy and stakeholder dialogue

 AGRO Aarhus

# Our Sections

IN FLAKKEBJERG & AARHUS





### **KLIMA – Climate and Water**

- Agrohydrology
- Bioenergy
- Climate change and biomass production
- Water quality
- Agrosystems modelling
- Informatics and GIS
- Agriculture's climate impact

 **AGRO Foulum**

### **JORNÆR – Soil Fertility**

- Biochar
- Grassland ecosystem services
- Microbial ecology of soil and manure
- Cover crops
- Emission of greenhouse gases
- Nutrients in wastes and fertilisers

 **AGRO Foulum**

### **SYSTEM – Agricultural Systems and Sustainability**

- Sustainable resource management
- Life cycle assessment of food and other bio-based products
- Organic animal production
- Organisation of food systems
- Productivity and profitability in farming

 **AGRO Foulum**

### **JORD – Soil Physics and Hydropedology**

- Soil quality
- Soil spectroscopy
- Water and contaminant transport
- Digital soil mapping
- Soil mechanical behaviour
- Sustainable soil management
- Arctic soils

 **AGRO Foulum**

# Our Sections

IN FOULUM



# Locations



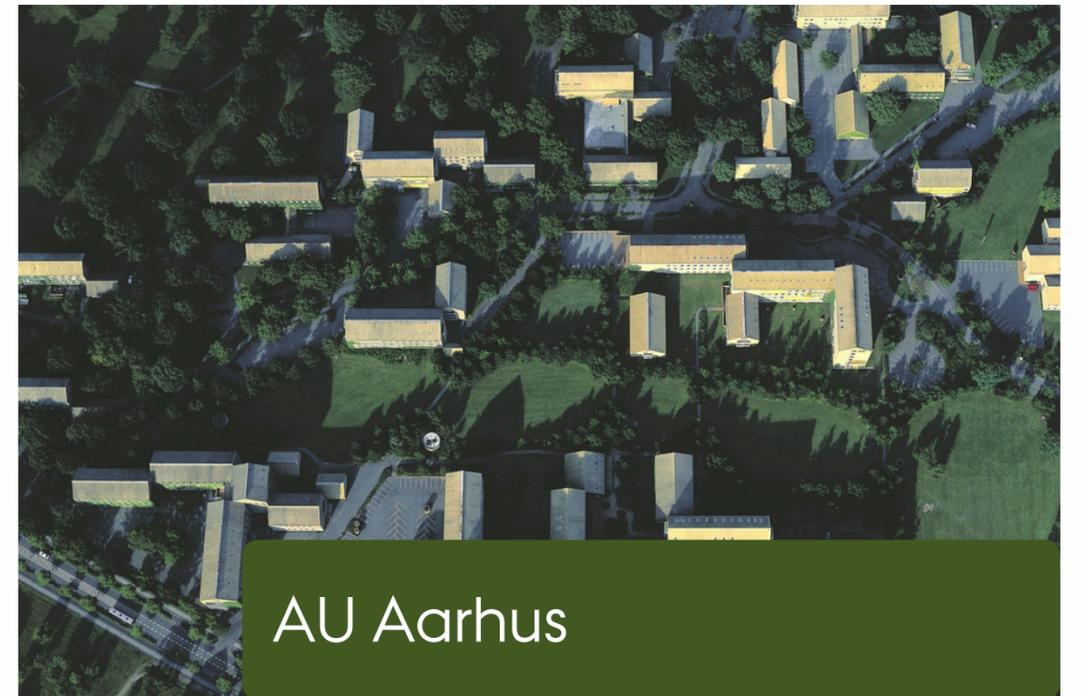
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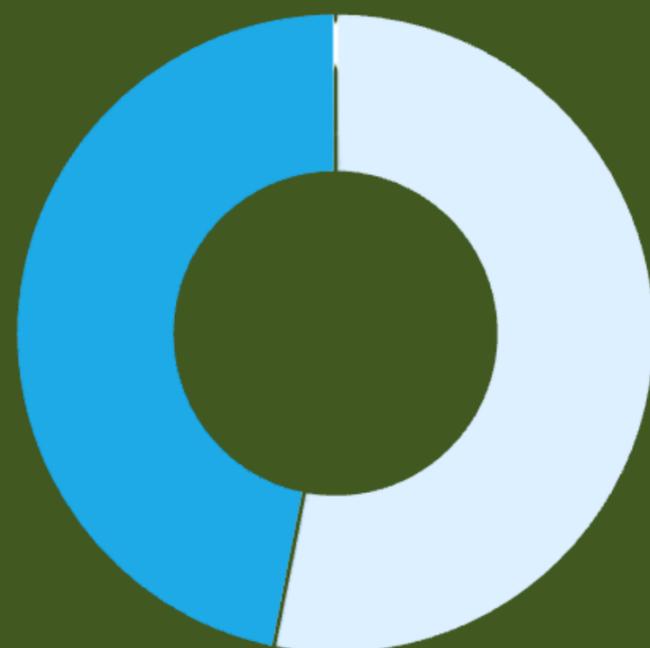
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Experimental station Askov

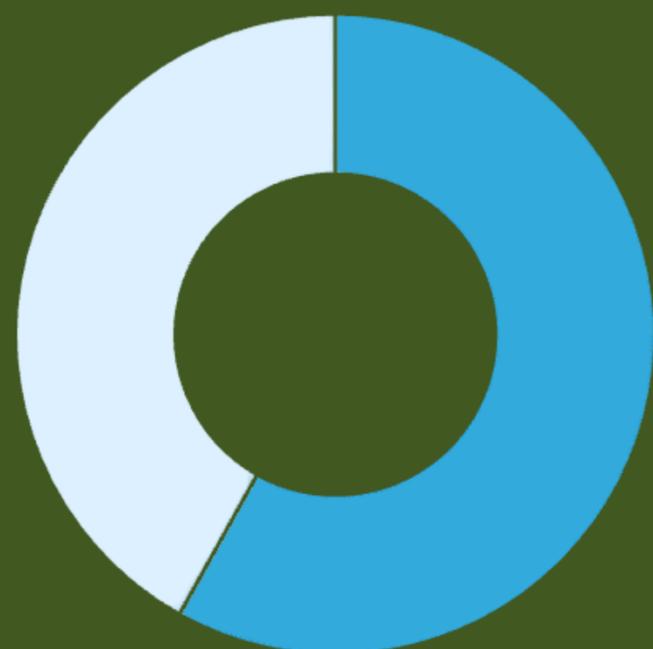


AU Aarhus



■ Female ■ Male

**GENDER**



■ Danish ■ International

**NATIONALITY**

Staff



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AGROECOLOGY

**State-of-the-art  
laboratories**

**Greenhouses, semifield  
facilities and lysimeter  
units**

**Climate chambers**

**Climate stations**

**Drones**

**Solar panels**

**World's largest  
experimental biogas plant**

**Biorefinery**

**~300 hectares of farmland  
for field trials**

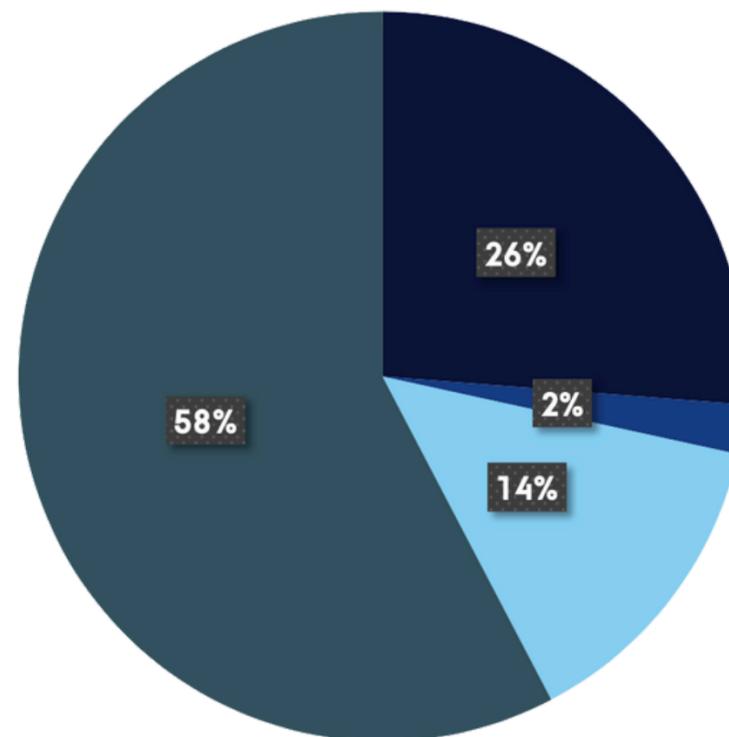
**Global Rust Reference  
Center**

**Access to onsite research  
farm animals**

**Research  
facilities**

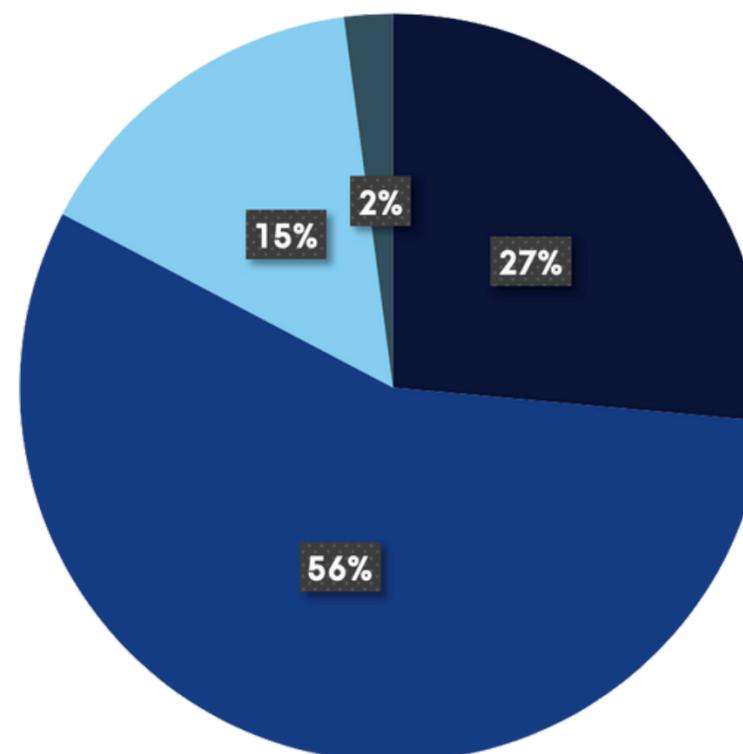


# Economy



## INCOME

- Policy support
- Educational grant
- Research, etc.
- External grants



## EXPENSES

- Internal contribution
- Salaries
- Operating costs
- Depreciation



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