

# Department of Agroecology staff meeting

20 and 21 March 2019

by

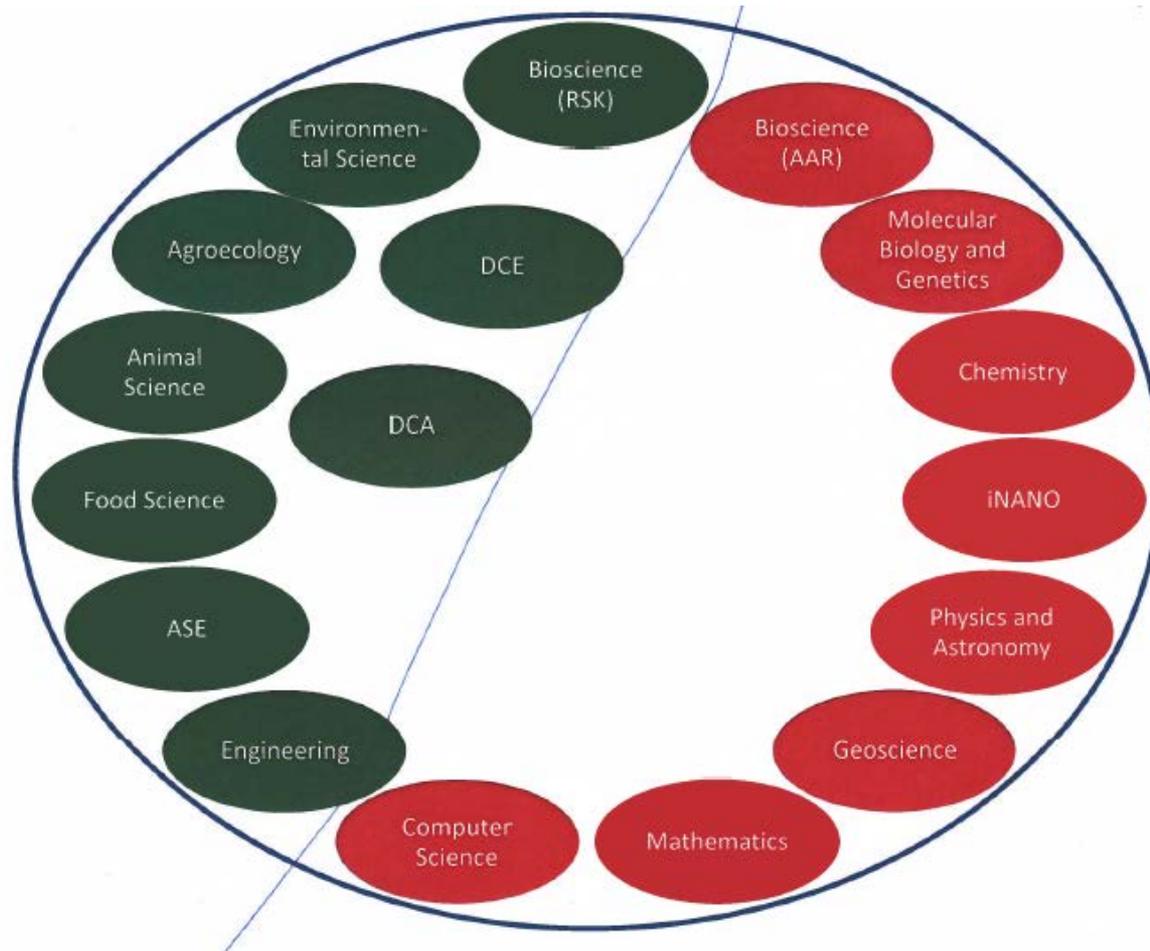
Erik Steen Kristensen

## **Agenda**

1. Plan for division of ST into two faculties
2. Self-evaluation report
3. Plan for strategy process
4. Finances 2018
5. Budget 2019 and new financial model
6. Status regarding projects and financial management
7. Plan for moving closer together in Foulum



# Anticipated division of the faculty



# Self-evaluation report for AGRO

## Contents

### Remarks and terms of reference

I. The department's current status

I.A. Research environment

I.A.1. Overview

I.A.2. Research areas (sections) (ToR 1 and 2):

I.A.3. Interdisciplinary collaboration (ToR 1, 2)

I.B. Research-based education, public sector consultancy and industry collaboration

I.B.1. Education (ToR 4a)

I.B.2. Public sector consultancy (ToR 4b)

I.B.3. Industrial collaboration (ToR 4c)

II. Vision: the department in 2025 (ToR 5 and 6)

II.A. What to aim for - definition of goals

II.B. How to get there - definition of appropriate measures

III. References

Appendix 1: Quantitative data

Appendix 2: CVs and key publications of scientific staff

Appendix 3: Ten representative high-impact research papers



# UN's 17 Sustainable Development Goals



# International megatrends

- Digitalisation
- Circular bioeconomy
- Climate change mitigation and adaptation
- Integrated pest management
- Preserving soil as a vital resource
- Agroecology and sustainable intensification
- Microbiomes
- Biotechnology

# The food industry is setting ambitious goals

## DANISH CROWNS BÆREDEYGTIGHEDSPÅN

Målet er, at den totale udledning af CO<sub>2</sub> pr. produceret kilo svinekød skal reduceres med 50 procent inden 2030.

Målsætningen omfatter alle led i produktionen - dvs. foderproduktionen på marken, alle led i produktionen af grise i stalden, transporten til slagteriet og selve slagteprocessen samt forarbejdning af kødet.

Udgangspunktet for målsætningen er tal fra 2005, hvor den totale udledning var 3,79 kg CO<sub>2</sub> pr. produceret kilo svinekød.

Målet er, at udledningen skal reduceres til 1,89 kg CO<sub>2</sub> i 2030. Beregninger fra Aarhus Universitet viser, at udledningen allerede var reduceret til 2,82 kg CO<sub>2</sub> i 2016.

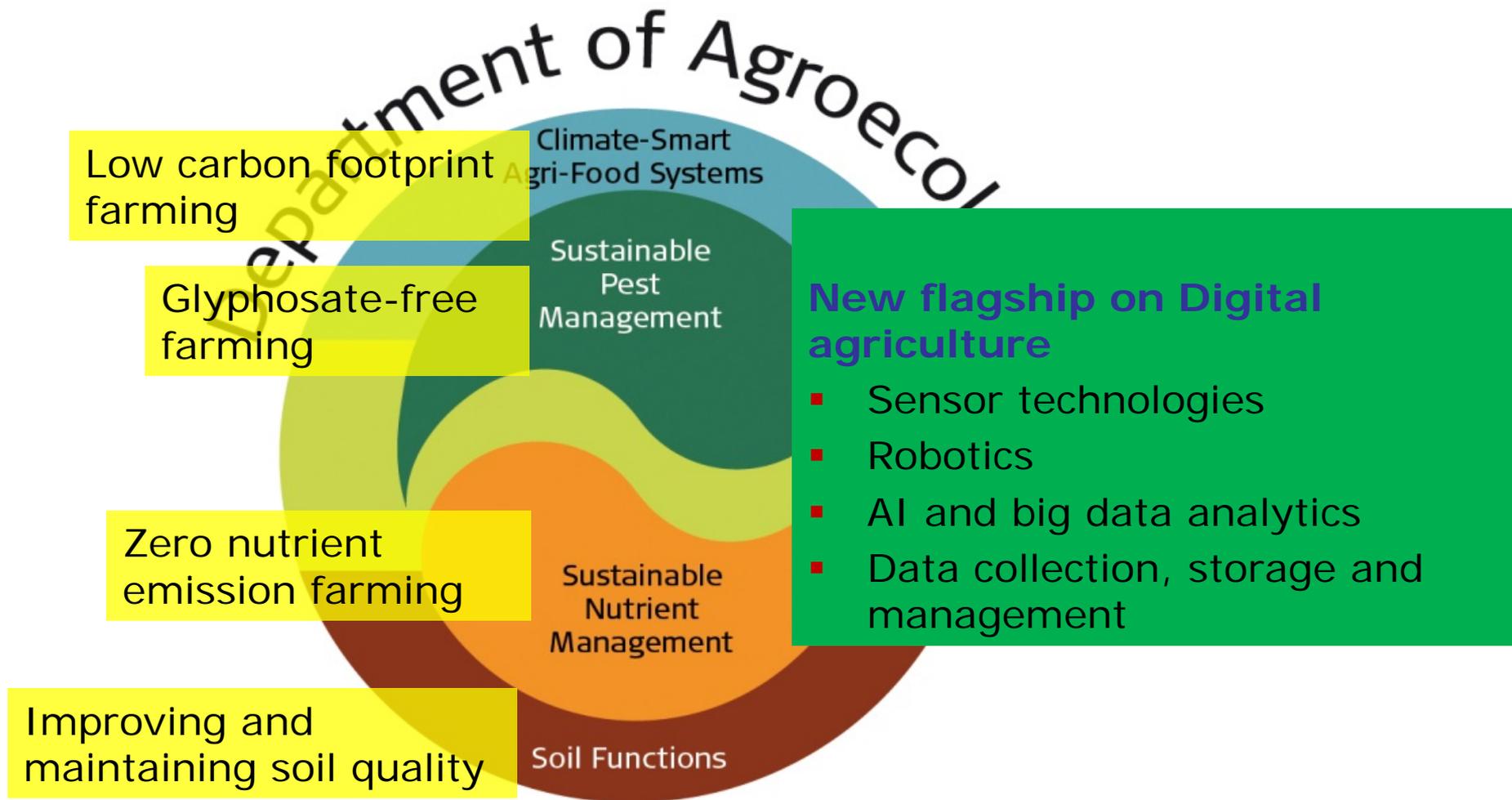
Udledningerne på landbrugsbedrifterne tegner sig for 91 pct. af den totale CO<sub>2</sub>-udledning, der er forbundet med produktion af svinekød.

Danish Crown har også vedtaget en mere luftig vision - ikke et klimaneutralt i 2050.



Arla Foods og virksomhedens 10.300 andelshavere i 7 lande lancerer deres hidtil mest ambitiøse mål for at fremskynde omstillingen til bæredygtig mejeriproduktion med øget fokus på gardene. Hovedmålet er at reducere udledningen af drivhusgas med 30 procent pr. kilo mælk i løbet af det næste årti og arbejde hen imod netto-nuludledning inden 2050.

# Future roles of the department's flagships



# Engaging staff

- Recruit more top-notch students and early career scientists
- Enhance level of international publications stemming from public sector consultancy by engaging early career scientists to a greater extent
- Staff who are aware of, committed to, and engaged in common departmental understandings of concepts such as sustainability and agroecology
  - Mandatory PhD course in agroecology. In 2019, this course will also be offered to postdocs in the department

**The course is planned to take place in Foulum on June 18-19, 2019**

# Walking the talk

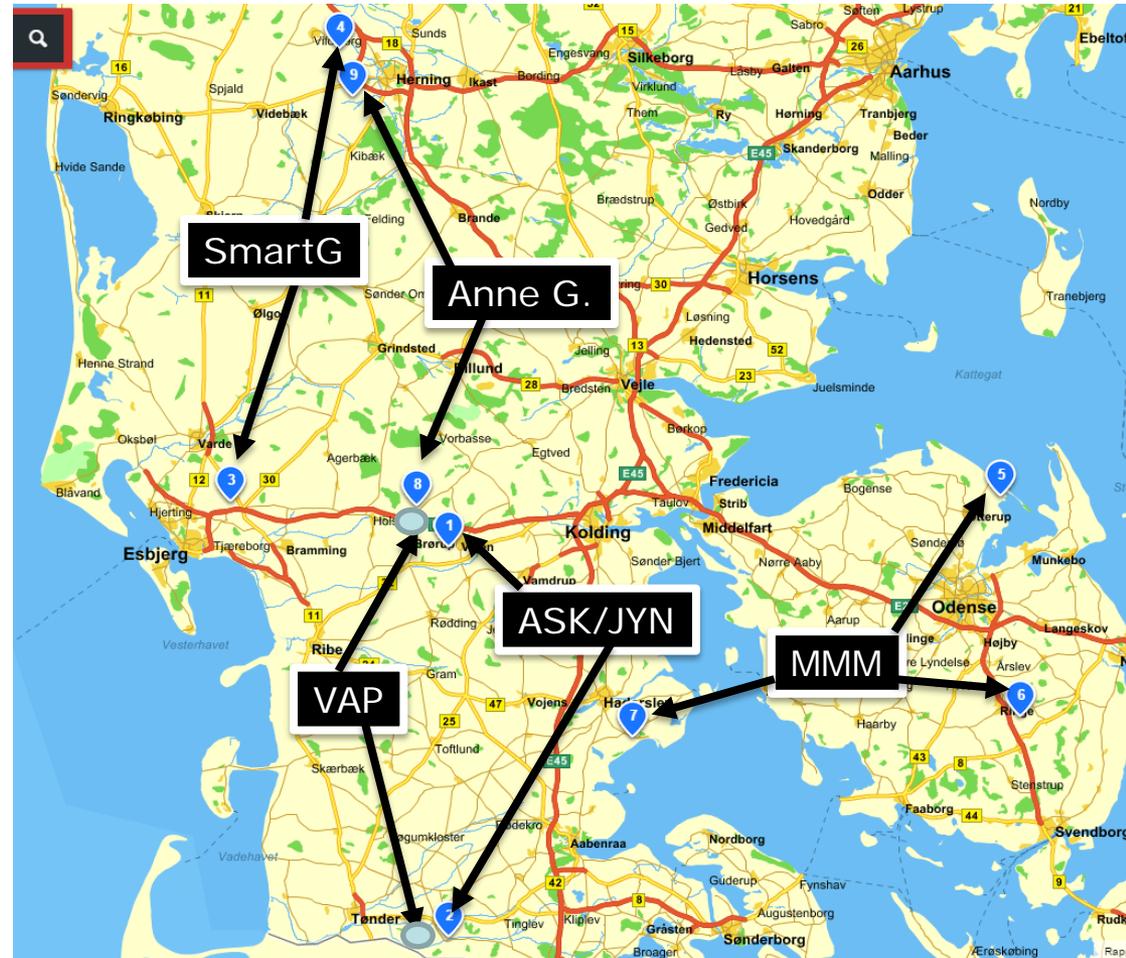
- Carrying out sustainable research by ensuring that the research activities have a low climate and environmental impact
- Ensuring that all department transportation is either low emission or offsetting
- Developing efficient CO<sub>2</sub>-offsetting mechanisms in Denmark
- Promoting daily sustainable food choices in the AU canteens
- Calculating impacts through green accounting
- Managing our common green areas to promote biodiversity of flowers, insects and birds, and to minimise the need for fossil energy driven maintenance
- Demonstrating agroecology in practice at the department's own locations and on the campus in Aarhus

# Plan for the strategy process

- April-? Discussion of " II Vision... 'Walking the talk'" in the sections and other fora
- April-May Making of video(s) about research facilities and selected projects
- 26-28 May Visit from the evaluation panel and preparation of the advisory report
- 18-19 June Course in agroecology. Will be repeated in the autumn
- March-? Development of procedures and techniques for digital collection of field trial data
- March-? Description of research platforms
- August "Office in the cloud"
- 2020-22 Plan for recruitment of permanent VIP
- June Decision regarding division of ST
- December Decision regarding appointment of new deans

# Examples of facilities in AGRO-MARK-Southern Denmark

Data collection at 11 locations





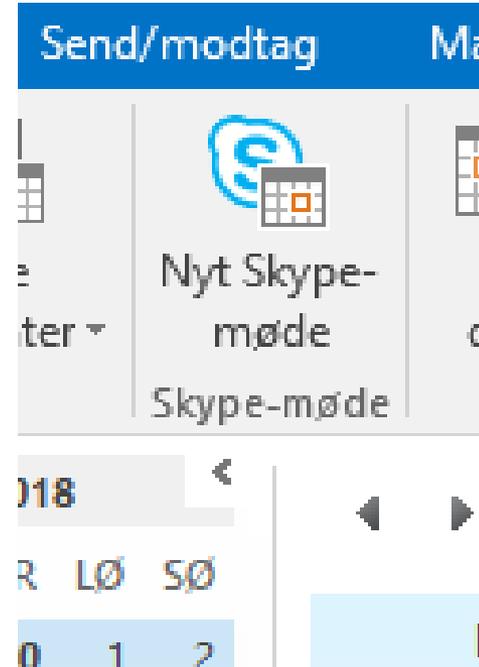
# Communication and automation



Morning meetings

FaceTime-opkald

FaceTime camera "help" with various tasks



# Research platforms – Update

## FP1 – De langvarige gødningsforsøg

(The Askov Long-Term Experiments on Animal Manure and Mineral Fertilizers)

Name of location (s)	Askov Experimental Station
Latitude, longitude and altitude for each location	55° 28' N, 09° 07' E, 63 meters above sea level 
Soil type(s) (Soil class and/or verbal description, e.g. texture and/or geological origin for each location)	Lermarken: Morainal deposits from the earlier Saalean glacial period. Classified as an Argudoll. Topsoil: 11% clay, 12% silt, 42% fine sand and 36% coarse sand, pH(CaCl2)=5.6. Underground: 22% clay, 14% silt, 35% fine sand and 30% coarse sand, pH(CaCl2)=4. Sandmarken: A coarse sand soil (4% clay, silt 5%, fine sand 35% and coarse sand 57%)
Start of experiment (year)	1894
Expected duration (year) or ND for not yet decided	ND
Size of treated plot (Length x width and area)	Lermarken: E1: 7.33x9.40 = 69 m <sup>2</sup> E2, E4, E5: 11.68x9.40 = 110 m <sup>2</sup> Sandmarken: G1, G2: 7.53x7.30 = 55 m <sup>2</sup> G3: 8.78x6.25 = 55 m <sup>2</sup> G4: 10.03x5.48 = 55 m <sup>2</sup>
Total number of plots	Lermarken: 174 Sandmarken: 96
Number of treatment replicates	1-6 depending on treatment, but typical 2-4. Basically 1-factorial design, but some treatments may be regarded in the view of a 2-factorial design.
Overall objective(s) (2-5 lines)	The experiments were established to test the nutritive value to crops of farmyard manure and to compare the effect of the manure with that obtained after addition of similar amounts of N, P, and K in mineral fertilizers. Unmanured plots were included to serve as reference treatments. The effect of individual nutrients was studied in separate plots dressed with N, P, and K containing salts added individually or in combinations of two or three.
Background information	In the early years, emphasis was on crop responses in terms of harvest yields and economic returns, and on demonstrating to farmers and advisors the beneficial effects of nutrient management in crop production. At that time, a general change in agricultural production towards animal husbandry increased the volume of animal manure available on many farms and an increasing number of pigs and cattle required a larger and more reliable production of forage and grain. From this development emerged a need to establish more precisely the value of animal manure given to various crop rotations. At the same time, there was a growing interest in the use of

## FP1 – De langvarige gødningsforsøg

(The Askov Long-Term Experiments on Animal Manure and Mineral Fertilizers)

	mineral salts ("artificial manures") as a source of plant nutrients. Scientists had already recognized the potential of mineral fertilizers but the use of mineral fertilizers in crop production was insignificant and many practical issues remained unsolved.  One major concern was the consequences for soil fertility when animal manures were completely substituted by inorganic salts. The traditional farmyard manure rich in bedding material contributed to the maintenance of soil organic matter levels. Although it soon became clear that crops grew well following adequate and balanced additions of mineral fertilizers, their longer-term effects on soil fertility remained of great concern.  This concern widened the scope of the experiments, and since 1923 soil has been sampled systematically at 4 to 5 years intervals and analyzed for chemical properties, including total-C and total-N. Systematic analyses of crops for nutrient content were not introduced until 1949.
Main experimental treatments (please tick appropriate boxes). For "Other" please provide key words	<input checked="" type="checkbox"/> Mineral fertilizers <input type="checkbox"/> Crop <input checked="" type="checkbox"/> Animal manures <input type="checkbox"/> Crop residues <input type="checkbox"/> Sewage sludge <input type="checkbox"/> Crop rotation <input type="checkbox"/> Compost <input type="checkbox"/> Soil Cultivation <input type="checkbox"/> Lime <input type="checkbox"/> Other: Combinations of mineral fertilizers (NPK, NP, NK, PK as well as single elements)
General agricultural practice not included as experimental variables (please tick appropriate boxes). For "Other" please provide key words	<input checked="" type="checkbox"/> Cereal Crops <input type="checkbox"/> Monoculture <input type="checkbox"/> Grass <input type="checkbox"/> Crop rotation <input checked="" type="checkbox"/> Grass/Clover <input type="checkbox"/> Other: The Lermarken is maintained in a four crop rotation, while the Sandmarken is permanent pasture. <input type="checkbox"/> N-fixing crops
Systematic recordings (please tick appropriate boxes)	<input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic <input checked="" type="checkbox"/> Annually <input checked="" type="checkbox"/> By crop rotation Soil analysis <input type="checkbox"/> Annually <input checked="" type="checkbox"/> By crop rotation Soil water <input type="checkbox"/> Bi-weekly <input type="checkbox"/> Monthly Suction cups <input type="checkbox"/> Annually <input type="checkbox"/> By Crop rotation Weeds <input type="checkbox"/> Annually <input type="checkbox"/> By Crop rotation Plant analysis <input type="checkbox"/> Annually <input type="checkbox"/> Weekly/monthly Plant assessments <input type="checkbox"/> Annually <input type="checkbox"/> Weekly/monthly
Other of different sampling intervals (2-5 lines):	
Sample archive (please tick appropriate boxes)	Plant <input type="checkbox"/> Yes <input type="checkbox"/> No Soil <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Crop Rotations in experiment	Write out the crop rotations for the fields, including changes in the rotations made over the years.
Changes in the experiments over the years	Since 1923 soil has been sampled systematically at 4 to 5 years intervals and analyzed for chemical properties, including total-C and total-N. Systematic analyses of crops for nutrient content were not introduced until 1949.  At the Lermarken site, the experimental plan of the E4-field was changed in 1996. One main objective was to allow for a comparison of equivalent amounts of nutrients given either in cattle slurry or in cattle farmyard manure plus liquid manure.

## FP1 – De langvarige gødningsforsøg

(The Askov Long-Term Experiments on Animal Manure and Mineral Fertilizers)

	In 1997, the Sandmarken site was converted into permanent grassland. The nutrient additions were stopped and the site was sown to grass in March 1997. The grass is cut once or twice each year, the cut grass being left on the plots. Soil samples are taken from each of the previous treatments every 4th year.
Supplementary detail, optional	The celebration of 100 years of continuous research in Askov took place in September 1994. A report providing details on the layout of the experiments, on changes introduced into the experimental plan during 1894-1994, and including a selection of yield results, nutrient offtakes by crops, and of previous publications was presented at the celebration event (Christensen et al., 1994). The contributions to the 100th Anniversary Workshop were published subsequently along with workshop syntheses and recommendations (Christensen & Trentemøller, 1995).  Adjustments of the experimental layout have been made in accordance with recommendations presented at the Anniversary Workshop.
Key references describing the layout, history and other basic results of the experiment	Christensen, B. T., Petersen, J., Kjellerup, V. K. & Trentemøller, U. (1994) The Askov Long-Term Experiments on Animal Manure and Mineral Fertilizers: 1894-1994. Danish Institute of Plant and Soil Science (Statens Planteavlsvforskning), SP-report no. 43, 85pp.  Christensen, B.T. & Trentemøller, U.T. (1995) The Askov Long-Term Experiments on Animal Manure and Mineral Fertilizers. 100th Anniversary Workshop at Askov Experimental Station, 8th-10th September 1994. Danish Institute of Plant and Soil Science (Statens Planteavlsvforskning), SP-report no. 29, 188pp.
Data availability	Where and in what format is the general raw and analysed data available?  120 references are listed in: Christensen, B.T., Petersen, J. & Trentemøller, U.T. (2006) The Askov Long-Term Experiments on Animal Manure and Mineral Fertilizers: The Lermarken site 1894-2004. Danish Institute of Agricultural Sciences (Danmarks JordbrugsForskning), DIAS report Plant Production no. 121, 104 pp.
Supplementary information (optional)	Research professor Bent T. Christensen University of Aarhus Department of Agroecology Blichers Allé 20 P.O. Box 50 8830 Tjle  Bent.T.Christensen@agrsci.dk



# Office365 – the complete office “in the cloud”

**- In 2019 only the e-mail system will be transferred**

Phase 1: Transfer of Exchange server to the cloud – mainly a technical exercise (spring/autumn 2019)

Phase 2: Transfer of files to the cloud (to Onedrive) – personal file sharing (winter/spring 2019/2020)

Phase 3: Access to teams and Sharepoint – sharing in groups and collaboration (spring 2020)

Phase 4: Access to other apps (in the future)



# Two-step authentication

Two-step authentication requires login to the network and that we either use an AU mobile phone, a private mobile phone, a landline phone or, as a last resort, a token.

Future tasks:

- The secretariat will go through AU's mobile phone list for AGRO.
- The secretariat will speak to employees without an AU mobile phone about a solution.

Read more here:

<https://medarbejdere.au.dk/en/administration/it/mail-og-kalender-o365/totrinsbekraeftelse/>

# Plan for recruitment of VIP per year

- 2-4 Tenure track
- 2-4 Senior advisors
- 2-4 Professors



# AGRO evaluation panel

**Professor Tim R. Wheeler, University of Reading, UK**

**Professor Lin Field, Rothamsted, UK**

**Professor Johan Six, ETH Zürich**

**Director-General Martin Kropff, CIMMYT, Mexico**



# Evaluation committee programme

Sunday, 26 May 2019		Location
5:30–06:15 p.m.	Dean welcomes panel chair	Golf Hotel, Viborg
6:30–8:30 p.m.	Department representatives welcome panel – joint dinner	Golf Hotel, Viborg
Monday, 27 May 2019		Location
9:00 – 10:00 a.m.	Reviewers' closed session (incl. coffee) Panel plus panel secretary	AU Foulum, meeting room 1
10:00 a.m. – 11:00 a.m.	Plenary session: overview of the department's scientific activities (ToR 1 and 2)	AU Foulum, meeting room 2
11:00 a.m.-12:00 noon	Plenary session: presentation of two research sections (ToR 1 and 2) <ul style="list-style-type: none"> <li>• <a href="#">Agricultural Systems and Sustainability</a></li> <li>• <a href="#">Climate and Water</a></li> </ul>	AU Foulum, meeting room 2
12:00 noon –1:00 p.m.	Lunch	AU Foulum canteen
1:00–2:00 p.m.	Plenary session: presentation of two research sections (ToR 1 and 2) <ul style="list-style-type: none"> <li>• <a href="#">Crop Health</a></li> <li>• <a href="#">Entomology and Plant Pathology</a></li> </ul>	AU Foulum, meeting room 2
2:00–2:30 p.m.	Coffee break	AU Foulum, meeting room 2
2:30–3:30 p.m.	Plenary session: presentation of two research sections (ToR 1 and 2) <ul style="list-style-type: none"> <li>• <a href="#">Soil Fertility</a></li> <li>• <a href="#">Soil Physics and Hydropedology</a></li> </ul>	AU Foulum, meeting room 2
3:30–4:15 p.m.	Reviewers' closed session Panel plus panel's secretary	AU Foulum, meeting room 1
4:15–6:15 p.m.	Focus on infrastructure	AU Foulum meeting room 2 and more
6:15–7:00 p.m.	Break and pit stop at hotel	Golf Hotel, Viborg
7:00–8:30 p.m.	Dinner	t.b.d.



<b>Tuesday, 28 May 2019</b>		<b>Location</b>
<b>9:00–10:00 a.m.</b>	Plenary session: public sector consultancy (ToR 4b)	AU Foulum, meeting room 2
<b>10:00 –11:30 noon</b>	Reviewers' closed session (incl. coffee) Panel plus panel's secretary	AU Foulum, meeting room 1
<b>11:30 a.m.–12:30 p.m.</b>	Lunch Panel, panel secretary, department representatives (t.b.d.)	AU Foulum, canteen or meeting room 2
<b>12:30-1:15 p.m.</b>	Plenary session: recruitment and talent management (ToR 3)	AU Foulum, meeting room 2
<b>1:15–2:00 p.m.</b>	Plenary session: early career scientists (ToR 3)	AU Foulum, meeting room 2
<b>2:00–2:30 p.m.</b>	Plenary session: education (ToR 4a)	AU Foulum, meeting room 2
<b>2:30-3.00 p.m.</b>	Plenary session: industry collaboration (ToR 4c)	AU Foulum, meeting room 2
<b>3:00–4:15 p.m.</b>	Reviewers' closed session (incl. coffee) Panel plus panel's secretary	AU Foulum, meeting room 1
<b>4:15–6:15 p.m.</b>	Plenary session: department's strategy (ToR 5 and 6)	AU Foulum, meeting room 2
<b>6:15–7:00 p.m.</b>	Break and pit stop at hotel	Golf Hotel, Viborg
<b>7:00–9:00 p.m.</b>	Reviewers' closed session incl. working dinner Panel plus panel's secretary	Golf Hotel, Viborg, seminar room
<b>Wednesday, 29 May 2019</b>		<b>Location</b>
<b>8:00-9:00 a.m.</b>	Transportation from hotel to Aarhus University in Aarhus	
<b>9:00–10:00 a.m.</b>	Plenary session: reviewers' remaining questions	Meeting room XX in Aarhus
<b>10:00–12:00 noon</b>	Reviewers' closed session Panel plus panel's secretary	Meeting room XX in Aarhus
<b>12:00-12:15 p.m.</b>	Panel (except chair) changes location	
<b>12:00–1:00 p.m.</b>	Panel (except chair) eats lunch in the canteen	Canteen at AU
<b>12:00 noon–12:30 p.m.</b>	Panel chair informs head of department about key results	Meeting room XX in Aarhus
<b>12:30-12:45 p.m.</b>	Panel chair and dean change location	
<b>12:45–1:30 p.m.</b>	Panel chair has lunch with the dean Panel chair, Acting Dean Lars Henrik Andersen	Dean's office

# Department of Agroecology staff meeting

20 and 21 March 2019

by

Erik Steen Kristensen

## Agenda

1. Plan for division of ST into two faculties
2. Self-evaluation report
3. Plan for strategy process
4. Financial result for 2018
5. Budget 2019 and new financial model
6. Status regarding projects and financial management
7. Plan for moving closer together in Foulum



# Conclusions September 2018



AGRO is doing very well in research-based advice to the Ministry of Environment and Food

We have in 2017-18 made good progress, but we have invested too much in PhDs and in the establishment/operation of research-based advice.

Therefore, there is a need for a better and earlier control of staffing and budgets through:

- Budget planning for 2019 from August 2018
- Internal projects are multi-annual and all activities are described and reported into SIGURD and NAVISION
- Tightened procedure for hiring of new employees
- Tightened procedure for transfers from one year to the next
- Checking up on co-financing for externally financed projects
- Checking up on advance financing through internal funding
- Co-financing of PhD projects
- Cost savings on existing projects

## How did it go?

### AGRO's finances in 2017, 3rd round and 2018 result, mill. kr./year

	Result 2017	Budget 2018 ØR3	Result 2018
<b>Income</b>			
Policy support, MFVM	57.7	55.3	55.3
Basic funding, ST (education)	5.4	12.1	12.2
Special grants (PhD etc.)	10.1	15.4	15.3
External projects	120.7	128.9	121.8
<i>Total</i>	<i>194.1</i>	<i>211.7</i>	<i>204.6</i>
<b>Expenses</b>			
Internal contributions	39.6	38.7	38.7
Salaries	120.1	131.2	129.6
Operating costs (E+I)	34.4	48.0	44.2
Depreciation	3.2	3.0	2.9
<i>Total</i>	<i>197.2</i>	<i>221.5</i>	<i>215.4</i>
<b>Result</b>	<b>-3.1</b>	<b>-9.8</b>	<b>-10.7</b>

# AGRO's economy in 2017 and 2018 plus budget 2019 mill. kr./year

New  
financial  
model

	Financial result 2017	Financial result 2018	Budget 2019
<b>Income</b>			
Policy support, MFVM	57.7	55.3	82.3
Education grant	5.4	12.2	10.2
Research, etc.	10.1	15.3	25.2
External grants	120.7	121.8	130,3
<i>Total</i>	<i>194.1</i>	<i>204.6</i>	<i>248.0</i>
<b>Expenses</b>			
Internal contributions	39.6	38.7	78.0
Salaries	120.1	129.6	126.5
Operating costs (E+I)	34.4	44.2	36.9
Depreciation	3.2	2.9	3.0
<i>Total</i>	<i>197.2</i>	<i>215.4</i>	<i>244.4</i>
<b>Result</b>	<b>-3.1</b>	<b>-10.7</b>	<b>3.6</b>

# Where does AGRO's funding come from?

- Educational funding. calculated from number of graduates
- Research funding from AU, calculated from education, external funding, number of peer review publications with BFI and PhD production
- Funding from MFVM, based on historical principles of distribution
- External funding from Danish foundations and companies, EU and other international funding bodies



# Internal contributions to ST and AU (-78 mill.kr.)

- The faculty's indirect costs are:
  - administration (27 mill. kr.)
  - infrastructure and buildings (46 mill. kr.)
  - pooled funds (20 mill. kr.)
- Reallocations/transfers between units, e.g. educational funds based on no. of completed academic years (STÅ-funding), internal settlement between projects in AGRO
- AU common costs
- ST Administration Centre
- ST common costs
  - PhD school (~ 7 mill. kr. to and from AGRO)
  - ST Learning Lab
  - Science Museums

# AGRO's economy in 2017 and 2018 plus budget 2019 mill. kr./year

New financial model

	Financial result 2017	Financial result 2018	Budget 2019
<b>Income</b>			
Policy support, MFVM		55.3	82.3
Educational funding	57.7	12.2	10.2
Research, etc.	5.4	15.3	25.2
External funding	10.1	121.8	130.3
<i>Total</i>	120.7	204.6	248.0
	194.1		
<b>Expenses</b>			
Internal contributions		38.7	78.0
Salaries	39.6	129.6	126.5
Operatings costs (E+I)	120.1	44.2	36.9
Depreciation	34.4	2.9	3.0
<i>Total</i>	3.2	215.4	244.4
	197.2		
<b>Result</b>			
	-3.1	-10.7	3.6

# Employees (FTE) in AGRO

	Real 2017	Real 2018	Budget 2019 (Nov. 18)	Budget 2019 (Feb. 19)
<b>SeniorVIP</b>	<b>52.9</b>	<b>53.0</b>	<b>54.2</b>	<b>54.2</b>
Present positions			51.2	54.2
New positions			3.0	0
<b>VIP, other</b>	<b>39.2</b>	<b>33.1</b>	<b>31.8</b>	<b>31.8</b>
Present positions			17.9	17.9
New positions			14.0	7.5
<b>PhD</b>	<b>45.3</b>	<b>52.9</b>	<b>46.1</b>	<b>46.1</b>
Present positions			40.8	43.6
New positions			5.3	2.5
<b>TAP</b>	<b>111.0</b>	<b>117.9</b>	<b>114.3</b>	<b>114.3</b>
Present positions			102.0	113.3
New positions			5.3	1.0
<b>FTEs total</b>	<b>248.4</b>	<b>256.9</b>	<b>246.4</b>	<b>246.4</b>
<b>New positions, total</b>			<b>27.6</b>	<b>4.0-11.0</b>

# Plan for meetings with section managers

- Section manager, project finance administrator and head of department meet three times a year to go through:
  - Manning plans
  - Funding
  - Applications
  - etc.
- Next meeting will be in early April

# Status regarding finance and project management

## March 2019

### Management tools and governing of advisory projects

- Delays and lack of attention regarding update of project budgets and manning plans
- ReAp is not updated. Remember correction of P-value.
- Not enough attention regarding infrastructure and support services, e.g. MARK now services all of Denmark from the three units.
- Advisory projects exceed 27 mill. kr.
- Supporting research projects exceed 23 mill. kr. Unit is delayed in providing an overview.

### External grants

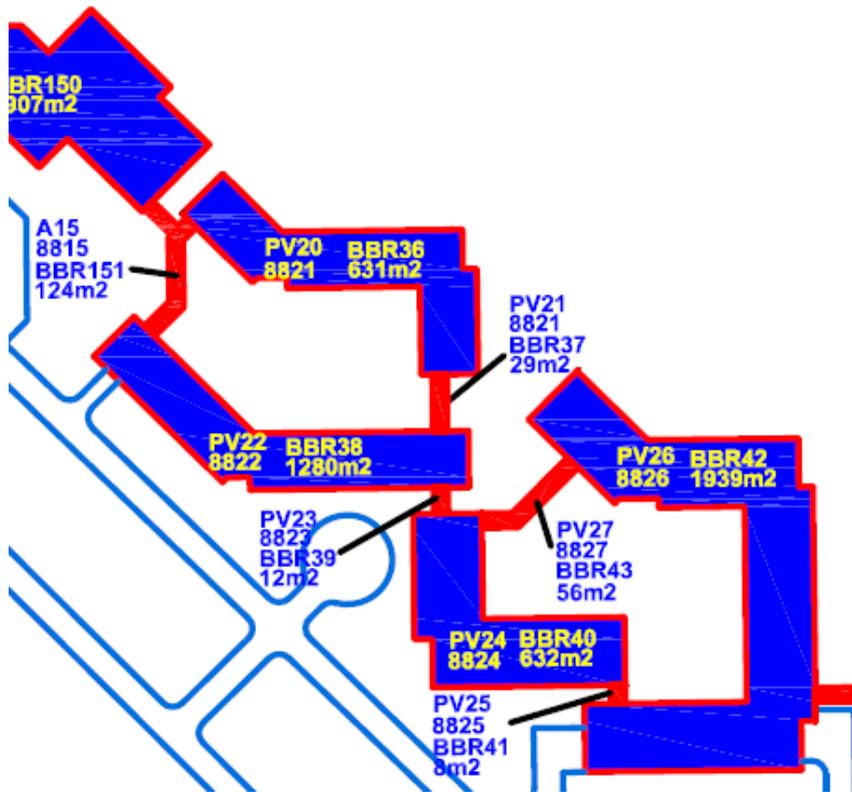
- We do not make enough use of external grants. We do not get enough research fund returns  
*Please remember to include external grants in the application process*
- Negotiations with external partners and organisations are poorer than planned.
- There is not enough synergy between advisory projects and external funding.

**Conclusion:** It is going much better than last year. However, it is still important that everyone contributes and that we get maximum synergy in the advisory projects.

# Plan for the strategy process

- April-? Discussion of " II Vision... 'Walking the talk'" in the sections and other fora
- April-May Making of video(s) about research facilities and selected projects
- 26-28 May Visit from the evaluation panel and preparation of the advisory report
- 18-19 June Course in agroecology. Will be repeated in the autumn
- March-? Development of procedures and techniques for digital collection of field trial data
- March-? Description of research platforms
- August "Office in the cloud"
- 2020-22 Plan for recruitment of permanent VIP
- June Decision regarding division of ST
- December Decision regarding appointment of new deans

# Relocation of AGRO



- JORNÆR in buildings PV20, PV24, PV26
- KLIMA i building PV20
- SYSTEM i building PV22, main floor
- JORD i building PV22 main and second floor, and PV26
- Secretariat in A14
- A few employees from all sections in the lower ground floor (parterre) in A14
- Meeting room in PV22 maintained
- Group rooms in PV20, (PV22?), A14 lower ground floor, A14 main floor, and A14 second floor

Missing:

- Laboratories
- Archives



# Moving closer together - Foulum

- Fitness room in M1
- Yoga og gym classes in the auditorium
- Changing rooms in the basement in A10
- Guest canteen in the main hall
- Lounge area in the main hall
- Staff kitchen in part of the existing canteen kitchen
- Massage room in A10
- Existing guest canteen transformed to meeting room with folding wall
- Allocation of area outside the canteen for raised beds, ball games, etc.

# Navision budgets 14-02-2019

	R- 2017	R- 2018	B- 2019	B- 2020
Advice to MFVM	24.3	32.5	26.8	11.4
Co-funding and internal projects	25.7	34.6	24.8	18.5
External research projects	83.7	84.8	82.7	47.0
Indirect costs. teaching and PhD	25.7	27.7	(34.8)	(57.0)
<b>Total</b>	<b>159.4</b>	<b>179.3</b>	<b>169.1</b>	<b>133.9</b>



# Internal applications 2019

1 Interne myndighedsprojekter i AGRO 2019 - fordelt på forskning, rådgivning og indirekte													
2	Sektion	sort	Projektleder	Titel	VIP	TAP	PhD	mærke	Indsats-område	opgave	Projekt nr.	Total projekt	
3	CROP	1.01	Birte Boelt	Plantegenetiske ressourcer, sameksistens, GMO afgrøder		7,5		12,0	rådgivning	1	1.02, 1.12, 1.17	28511	900.450
4	CROP	1.02	Lise Nistrup Jørgensen	Monitoring for resistance to Zymoseptoria tritici and developing control strategies which can minimise selection pressure for new resistance		4,7	3,5	12,0	rådgivning	1		25346	909.530
5	CROP	1.03	Peter Kryger Jensen	Integreret bekæmpelse af ægerævehale		0,2	1,5		forskning	1		25494	104.180
6	CROP	1.04	René Gislum	Teknologier til at reducere miljøbelastningen					forskning	5	5.07	STOPPET i 2018	0
7	CROP	1.05	Per Kudsk	Væselhale		1,0	2,5	12,0	forskning	1		25780	649.100
8	CROP	1.06	Inge S. Fomsgaard	Avancere procedurer til oprensning			3,0		forskning	1			134.400
9	CROP	1.07	Inge S. Fomsgaard	Labsupport til Nannas postdoc			3,0		forskning	1			134.400
10	PATENT	2.01	Michael H. Kristensen	Skadedyr: Regulering af skadevoldende insekter i henhold til biocid-direktivet		11,8	4,0		forskning	1		926159	933.025
11	PATENT	2.02	Mogens Nicolaisen	Trusselsbillede og beredskabsplaner ved skadegræsrudbrud		10,0	8,0	12,0	rådgivning	1	1.05, 1.17, 1.23	25849	1.428.600
12	PATENT	2.04	Per Kryger	Organisering og drift af den offentlige bekæmpelse og overvågning af bysygdomme		6,0	8,0		rådgivning	1	1.10	28549	1.217.800
13	PATENT	2.05	Per Kryger	Faste opgaver vedr. honningbier o.a. bestøvere, der ligger ud over den Offentlige bysygdomsbekæmpelse		5,0	4,0		rådgivning	1	1.01+1.09+1.11, 1.32,	28548	578.700
14	PATENT	2.06	Mette Vestergård	Nematoder		6,0	2,0	12,0	rådgivning	1	1.24+1.05	28546	940.200
15	PATENT	2.07	Mogens S. Hovmøller	Observationsparceller af korn		0,5	9,0		rådgivning	1	1.14		538.150
16	JORD	3.01	Goswin Heckrath	Evaluering erosionsmodel		1,0	1,5		rådgivning	5	5.12, 5.20	28534	227.100
17	JORD	3.02	Goswin Heckrath	Risikokort		8,5	0,6	16,0	forskning	5		25465	1.157.630
18	JORD	3.03	Lis W. de Jonge	Miljømillion: Monitoring of Agricultural Resources		5,0	1,0		forskning	7		19465	344.300
19	JORD	3.04	Mogens Greve	WP6-Forbedret kortgrundlag					rådgivning	3	3.04, 3.05	26742	0
20	JORD	3.05	Preben Olsen	WP3-VAP - teknologisk opdatering og renovering til sikring af den fortsatte drift		3,0			rådgivning	5			404.700
21	JORD	3.06	Preben Olsen	WP3-Effektivisering af og opdatering ved indsamling og håndtering af drænvandsprøver i AGRO					rådgivning	3	3.04, 3.05	28509	0
22	JORD	3.07	Bo Vangso Iversen	Monitoring af konstruerede minivådområder		3,0	12,0		rådgivning	7	7.19	27330	1.357.300
23	JORD	3.08	Lis W. de Jonge	Sampling og jordfysisk-kemisk karakterisering af jorde fra LOOP områderne					rådgivning	5	5.04	28030	0
24	JORD	3.09	Lars J. Munkholm	ISTRO		1,0			indirekte				59.900
25	JORD	3.10	Bo Vangso Iversen	IMSOGLO		7,0	1,0		indirekte				514.100
26	JORD	3.11	Amelie Boucher	Driftsmidler til forskningsstøtte					forskning	5			15.000
27	JORNØR	4.01	Bent T. Christensen	De langvarige gødningsforsøg, Askov-LTE		2,5	11,0		rådgivning	3	2.05, 3.24	915530	747.550



# Applied funds for advisory projects 2019 (1.000 kr.)

Focus area	Result 2017	Result 2018	Total salary	Operating costs	Acquisitions	Total project
1 Plant breeding	5.2	5,8	4.817	865		5.682
2 Climate-smart production	2,5	2.7	1.541	629		2.170
3 Fertilisers, norm	4.1	5.6	6.837	1.098		7.935
4 Technology – field	0.1	~	15			15
5 Soil and soil conditions	3.4	5.5	2.037	200	200	2.437
6 Green transition and biomass	1.2	1.7	1.383	65		1.448
7 Targeted land regulation	7.0	11.8	4.062	1.708		5.770
8 Agricultural reform	0.3	0.2	374	15		389
Other service agreements		0.4	359	15		374
<b>Total</b>	<b>23,8</b>	<b>33,8</b>	<b>21.425</b>	<b>4.594</b>	<b>200</b>	<b>26.219</b>



# Statement of revenue and co-funding in AGRO

14/2

	2019		2020		2021	
	Indtægt i alt	Medfinans	Indtægt i alt	Medfinans	Indtægt i alt	Medfinans

## Kendte Indtægter og indtægtsdækket virksomhed

CROP	44.895.797	1.542.696	33.957.465	0	23.592.519	0
PATENT	16.727.284	108.348	7.329.556	0	3.721.863	0
JORD	9.564.092	1.942.173	3.189.773	0	713.152	0
JORNÆR	8.997.552	1.078.620	7.402.194	0	647.147	0
KLIMA	18.026.166	1.067.927	10.296.677	0	3.993.228	0
SYSTEM	15.473.483	737.429	7.973.684	0	1.736.995	0
MARK	2.535.325	0	2.535.325	0	2.535.325	0
STAB/forventet TF, IV ect.	14.815.090	170.687	6.322.702	0	455.702	0
I alt kendte indtægter	131.034.789	6.647.880	79.007.376	0	37.395.931	0

## Interne bevillinger, GSST midler og brugerbetalinge fra andre institutter

CROP	836.600	5.591.769	440.000	0	440.000	0
PATENT	0	7.990.672	0	0	0	0
JORD	0	6.296.492	0	0	0	0
JORNÆR	169.300	12.164.099	169.400	0	0	0
KLIMA	0	8.798.984	0	0	0	0
SYSTEM	0	4.518.413	0	0	0	0
MARK	0	4.583.804	0	0	0	0
STAB	39.758.788	-58.984.062	135.510.150	0	135.930.266	0
I alt	40.764.688	-9.039.829	136.119.550	0	136.370.266	0



# New flagship on Digital agriculture

## New flagship on Digital agriculture

- Sensor technologies
- Robotics
- AI and big data analytics
- Data storage and management
- Data governance

