

Section	No.	Industry partner	Direct (million DKK)	Indirect (million DKK)
CROP	24	Agrochemical industry, cereal breeders, seed industry, FOSS, YARA, Videometer , Agrolntelli. Fieldsense, FaunaPhotonics	18,0	29,6
JORD	10	Agrolntelli, Orbicon, Rambøll, Grundfos, Sorbisense, Novozymes, Seges	5,6	13,9
JORN/ER	15	Seges, Thyregod, Ørsted (DONG Energy), Maabjerg Energy Center	4,3	15,5
KLIMA	10	Seges, Ørsted (DONG Energy), COWI, Arla, KMC, Hamlet Protein	1,8	8,8
PATENT	5	Cereal breeders, agrochemical industry, Videometer	0,4	13,5
SYSTEM	9	Seges, Arla, DLG, BIOMAR	2,2	6,3
TOTAL	73		32,3	87,6

BUSINESS COLLABORATION

BIRTE BOELT

WHAT ARE THE DRIVERS?

- Specific expertise
- Modern infrastructure and equipment
- Network and common understanding
- The success of research is based on high impact publications
- The success of the industrial partner is based on knowledge being transferred for growth



BUSINESS COLLABORATION BOARD

- Identify AGRO's strengths
- Provide overview of the department's business collaborations
- Stimulate expanded collaboration
- Communicate activities
- Birger Eriksen, CEO, Sejet Breeding: The collaboration is worth gold for us! We compete with international giants. AU has identified new sources of yellow rust resistance in wheat. Danish farmers spray less. Our new varieties find niches outside Denmark. Sejet has grown from 14 to 35 employees.



Børsen, Economy section, 04 October, 2016

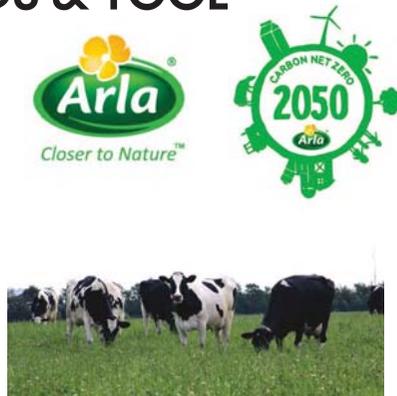
ARLA, DANISH CROWN AND THEIR PRODUCERS:

SUSTAINABILITY – METHODS & TOOL^c

Collaborative projects with Arla and Danish Crown

- CO₂ emissions from the production chain
- Overarching strategies for sustainability
- Industrial PhD

- Arla and Danish Crown – climate neutral food production by 2050



AGROCHEMISTRY AND THE SEED INDUSTRY



The agrochemical industry:

AGRO has generic expertise in this field – infrastructure and specific, international recognised expertise

The seed industry:

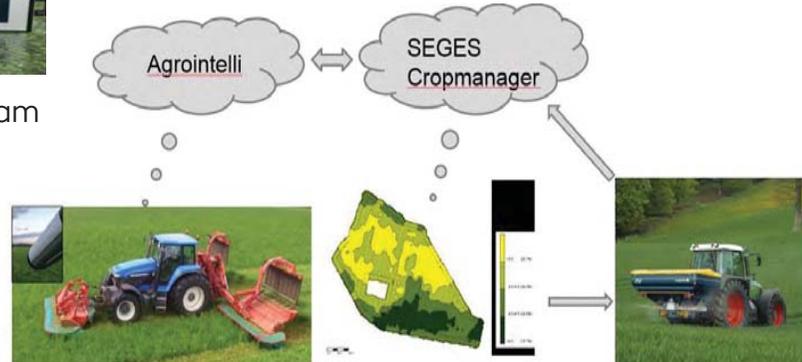
AGRO has specific expertise along the value chain. Collaborative projects develop strategies to maintain international leadership in industry and in research

SmartGrass 2017-2020

Fertilizing grass-clover mixtures based on botanical composition

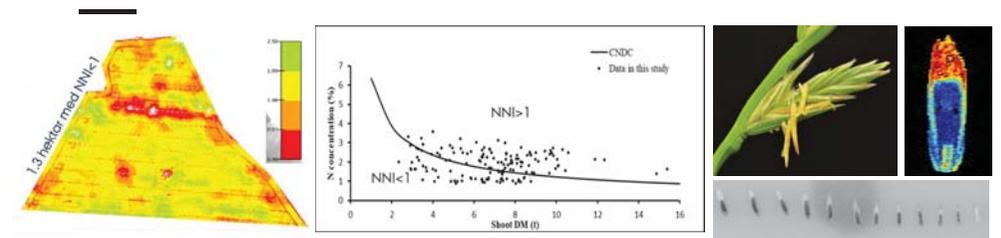


The Clovercam



SEED GROWERS, SEGES AND THE SEED INDUSTRY:

NITROGEN, PGR-MANAGEMENT FOR INCREASED SEED YIELD

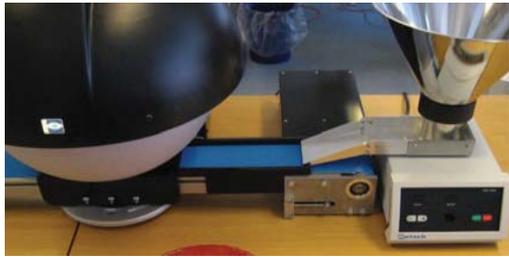


- Nitrogen application strategies based on nitrogen dilution curve
- Plant growth regulation strategies based on biomass monitoring

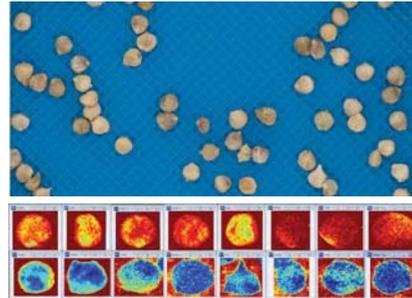
- Seed yield increases of 20-30%
- Activities carried out in collaboration with Seges, seed growers and the seed industry (GUDP)

NEW TECHNOLOGY PROVIDER – MULTISPECTRAL IMAGING: SEED QUALITY ASSESSMENTS

SpectraSeed 2012-2017
International Seed Testing Association



Vegetable seed industry uses the technology in seed processing (assessment of other seeds)



SAMSON AGRO: NEW TECHNOLOGY FOR MANURE APPLICATION TO MAIZE

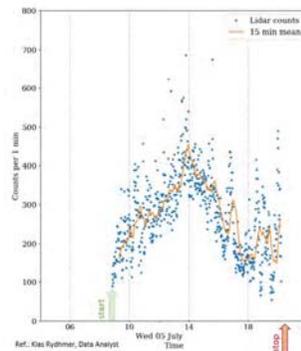
- Placement of liquid cattle manure to maize crops can replace mineral P fertilizer and increase nutrient utilization
- New manure injectors are developed and tested together with the Department of Engineering and Samson Agro



New prototype tested spring 2019



NEW TECHNOLOGY PROVIDER – LIDAR: FIELD ASSESSMENTS OF POLLINATING INSECTS



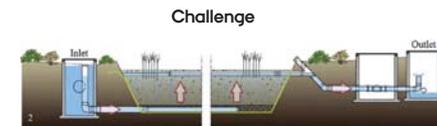
FaunaPhotonics



NOVOZYMES: IMPROVEMENT OF NITROGEN REMOVAL IN WOODCHIP BIOREACTORS AT COLD TEMPERATURES

novozymes
Rethink Tomorrow

Key words: Anoxic denitrification; Psychrophilic temperatures; Agricultural wastewater; Bioaugmentation



Season	Nitrate removal	Water temperature
Summer	>80%	8-15 °C
Winter	<20%	2-8°C

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Project plan

- Woodchips analysis (AU)
- Bacterial identification and selection (novozymes)
- Wood material and fungi degrader selection (novozymes)
- Identification of parameters for successful bio-augmentation (AU)



FUTURE ACTIVITIES

- Focus on maintaining expertise and good infrastructure
- Communicate our success stories

- Attract students and young scientists
 - Master projects in the industry
 - Industrial PhD
 - Industrial postdocs

- Facilitate network activities
- Expand international relations and collaborations