Webinar: Value creation of cross border cooperation for field trial experiments

Participant list:

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Thanks to all members for participation on the network webinar.

Program:

- Introduction to the topic (Maxie Skalshøi – Seges Innovation)
- Interactive mapping
- Presentations:

Speaker	Organisation	Presentation title
Jon Pedersen	Seges Innovation	Value creation of cross border cooperation for field trial experiments - Minor crops
Kenneth Sørensen	Agrolab AS	cross border cooperation -From a regulatory field trial perspective
Alex Lenkoski	Norwegian Computing Cetner (NR)	NordFosk - FoodBalSec
Andris Lapans	Institute of agricultural recourses and economics in Latvia (AREI)	Important bioeconomy industry research and leading field plant breeding institute - NOBAL Wheat project
Morten Nygaard	TS Agro	Value creation – cross border in field applied science

- Summary and input from participants
- Interactive brainstorm: future of trials, technologies and cooperation

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Introduction to the topic:

NFTN network activities aim to initiate co-operation across the Nordic countries resulting in joint development of methods, planning, execution, and statistical analysis with focus on field trials.

The activities in the network are coordinated in a collaboration between the Danish Technological Institute, SLU field research from Sweden, NIBIO from Norway and SEGES Innovation from Denmark.

The topic of Value creation of cross border cooperation for field trial experiments is extremely relevant and challenging at the same time. Field trials conducted in the Nordic countries deliver data foundations used in a wide range of fields such as agriculture itself, technological development of machines and robots, digitisation and precision agriculture, plant breeding and adaptation of varieties, but also climate modelling.

Globalisation and climate can change challenge the crops and farming practices we are used to today as future climate can shift boundaries for what is possible and necessary in the Nordic countries to secure future food production systems. New concepts of field trials can support and explore this development.

One frequently met barrier for projects wanting to investigate new cultivation methods, or the adaptation potential of different varieties of crops and different crops not grown on large areas today is funding possibilities. Crops which will gain in importance in the future food production in the Nordics are at risk of not being investigated sufficiently to their full potential and end up in a waiting spot to be overtaken by today's major crops.

Research in cross border collaboration models shows that resource sharing and administration load of big European funds are major barriers for smaller research projects to succeed [European Open Science Cloud project (EOSC); https://www.eosc-nordic.eu/kh-material/d2-2-cross-border-collaboration-models-the-nordic-experience/].

Within the field trial collaboration an important question is whether methods need to be streamlined to make collaboration possible? Certain types of trials for specific purposes might require this, however, the network supports the opinion that any type of collaboration creates value and the slightest data that can be shared should be seen as a great contribution to the concept.

The US if our future. This is where we develop new methods and technologies that allow us to continue conducting and improving field trials in the Nordics.

Value creation of cross border cooperation for field trial experiments - Minor crops

Minor crops have a special focus at they seem to face greater challenges compared to major crops when it comes to financing of projects. The more reason to cooperate as this might open new and unencountered possibilities.

Bigger data is bigger success. We need to me open minded and explore the research already done by neighbouring countries that today might have a more fitting climate to specific crops. We must explore the benefits of common testing also in variety trials. An example from collaboration work between organisations in Denmark and Skåne (Sweden) testing cereal varieties achieved data covering a broader spectrum of conditions and can be considered highly valuable.

Cross border cooperation -From a regulatory field trial perspective

Agrolab AS is focussing on field trials for the industry. The company is working in Denmark, Sweden, Latvia and Lithuania and is collaborating with field trial stations in Estonia, Finland and Norway. A major point that also can influence the success of collaboration is cultural differences and understanding as well as expectations. Also, the definition of what is good agricultural practice can deviate between countries. Within GEP field trials alignment of methods is required to a different degree which on the other hand makes the system slow to adapt.

Prices for field trials are just as big a challenge in the commercial sector as it is in the non-profit sector. So her is a common interest in developing less time intense methods to meet the markets demands.

NordFosk – FoodBalSec

This project is highly dependent on field trial data as a foundation for climatic models and future predictions. To support food security in the Nordic countries this project is collaborating with breeding companies in Norway, Denmark and Finland. Long term trial results of variety trials in the Nordic countries are used to develop more local climate models to predict future climatic and growth conditions impacting food production. If we know tomorrow's climate we can start adapting in time. This project emphasises "bigger is better", the bigger and more diverse the dataset, the higher accuracy in predictions.

NordForsk is an organisation under the Nordic Council of Ministers that provides funding for and facilitates Nordic cooperation on research and research infrastructure. Key stakeholders comprise the national research councils, universities and other research-funding bodies. Together they work to identify common Nordic priorities and provide funding. Nordic cooperation involves Denmark, Finland, Iceland, Norway and Sweden as well as the three autonomous areas, the Faroe Islands, Greenland and the Åland Islands. [source: https://www.nordforsk.org/]

Important bioeconomy industry research and leading field plant breeding institute - NOBAL Wheat project

The Institute of agricultural recourses and economics in Latvia is involved in a variety of cross border cooperation projects on European level. The NOBALwheat aims to establish a spring wheat collection originating from the Baltic states and Norway. Developing new data collection methods and data processing by implementing innovative technological solutions the project is testing the genetic plasticity and adaptation capacity of these spring wheat varieties to the climate change for different countries. Within the project a breeding toolbox is developed to strengthen a sustainable food system of the Nordic Baltic region. This project works in strong collaboration with other project partners from Lithuania, Norway and Estonia.

Value creation – cross border in field applied science

To create value, you need to know who to create value for. In collaboration with HS Klostergården, TS Agro is developing an autonomous plot seeder, that can be equipped with a wide range of sensors. The project is looking for implementation of automated assessment by sensors and cameras on the go with automated transfer of data to a processing datacentre.