

Meeting of the SWG SCAR AKIS Strategic Working Group on Agricultural Knowledge and Innovation Systems

Good practices & challenges of
knowledge exchange activities in the
current period + plans for the **future** e.g. in
CAP AKIS Strategic plans

Kaunas, LT, 19-20/10/2019

Member State: **The Netherlands**

SCAR
Standing Committee
on Agricultural Research



AKIS in the Netherlands: a short introduction

The OECD characterised the Dutch AKIS as:

- a global frontrunner in production oriented technology and in innovation on input efficiency and sustainability (2015)

The strength of the Dutch AKIS is due to a long history of public private investments and cooperation in the 'Dutch Diamond' between knowledge organisations, businesses, governments and NGOs

- In which farmers are relatively highly educated

According to the EU PROAKIS project (2015) the Dutch AKIS is:

- strong and fragmented due to many AKIS sub-systems in diverse sectors and or regions

The challenge is to ensure these sub-systems are well connected to counteract gaps and blind spots



According to Dutch Regional Authorities

- Farmers are relatively highly educated - when it comes to agronomy
- But insufficiently educated on skills needed today such as:
 - (cooperative and/or cross-sectoral) innovation, negotiating, marketing, consumer communication, energy management, risk management and data management
- The challenge is also to create an underlying strategy, securing that all knowledge needed is being developed and transferred

NL involved in H2020 Thematic Networks

C: BEST4SOIL : Delphy (coordinator), WUR (partner)	C: NEWBIE: WUR (coordinator)
P: FERTINOWWA: Zwaagdijk; TNO, PRIVA, WUR	P: Disarm: ZLTO, WUR
P: AGRIFORVALOR: WUR	P: Innoseta: ZLTO
P: NUTRIMAN: EFFOST, ZLTO	P: SKIN: ZLTO
P: EU Fruit Network: WUR, Fruit Consult	P: ENABLING: ZLTO
P: PANACEA: WUR	P: SMART-AKIS: WUR, Delphy
P: Hennovation: WUR	P: AGRISPIN: ZLTO
P: EuroDairy: WUR, Dairy NL, ZLTO	P: EU Pig: ZLTO, WUR

- Dutch knowledge organisations are involved in 18 of the 29 ongoing TNs
- Knowledge organisations operate on own initiative in H2020 projects, independent from the MoA

NL involved in S3 networks & IE projects



Consumer Involvement
High Tech Farming
Nutritional Ingredients
Smart sensors for agri-food
Traceability & Big Data



NL involved in S3 networks & IE projects



Dutch NRN supports ENRD funded innovation by



- **Networking** - by
- Organising events
- Connecting project initiators
- Offering a project database
- Offering an online Community of Practice Area and meetings
- Maintaining a website
- Connecting stakeholders
- Advocating the countryside

According to the Dutch NRN

- **Coaching** of entrepreneurs, as part of M1 and M16 projects (knowledge transfer and innovation) is crucial
 - + 100 projects are being implemented
- The NRN brings project managers together who carry out similar projects for more **quality + efficiency**:
 - to prevent farmers being approached multiple time to avoid 'fatigue' among farmers
- Demo RDP projects are promising but not often **implemented** yet (15 out of 200 Ogs)
 - it is promoted more, a.o. in the NRN conference and through the FarmDemo TN
- Dissemination is particularly succesfull in **thematic and/or regional initiatives**, such as Potato Valley (Friesland), Food Families (South Holland) and Salinisation (Zealand)

Dedicated networking activities of the Dutch NRN

The NSU focuses on:

- equipping and supporting project managers for 'networking with energy' and peer consultation
- thematic connections between projects and connecting scientific knowledge to these projects
 - linkages with regional knowledge concentration contacts/hubs, e.g. precision agriculture
- interregional exchange e.g. with German regions and Flanders

Success factors in knowledge exchange, according to the Dutch NRN:

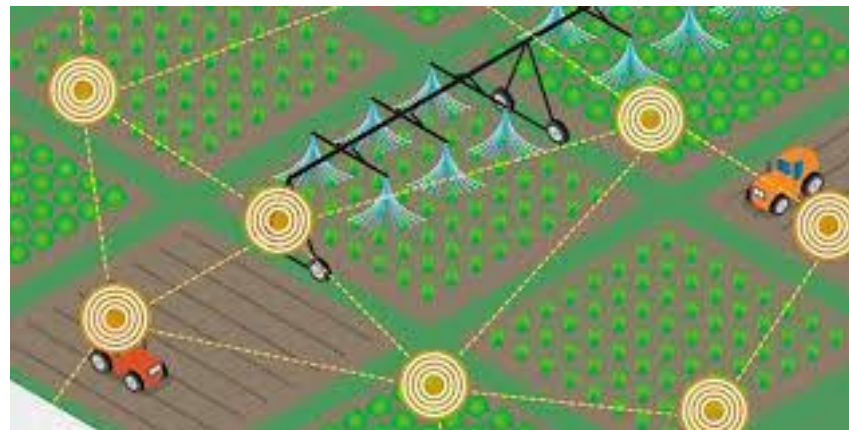
- passionate stories which touch the target group and to which they can relate
- intersectoral cross-over collaboration (e.g. water, energy, ICT, health) leads to interesting innovation

The Dutch RDP is considered rather one-dimensional which affects specific local developments

- this should be stimulated more in the next CAP Strategic Plan, e.g. the (region) Veenkoloniën and Delta Plan Agricultural Water Management

Examples of demo/experiment/knowledge centres

1. In the National Experiment Station Precision Agriculture (NPPL) experts support 16 farmers and growers in the application of PA
 - Aims: increasing yields, reducing costs and environmental impact and improving food quality
 - Partners: farmers, WUR, Aeres (UoAsc.), MISSET, Groenten en Fruit and Boerderij (media)
 - A good practice of a new way of both physically and virtually working on demonstration and innovation
2. The R&I Demonstration Centres in horticulture and World Horti Centre for knowledge and innovation ‘where business, research, demonstration, teaching and education converge’



Examples of demo/experiment/knowledge centres

3. Brightlands Campus Greenport Venlo: Food & Health, High Tech Farming, Circular Farming
4. R&I knowledge transfer centres: e.g. KTCs Zegveld and De Marke for demonstration on dairy farming R&I, the High Containment Unit (HCU) on contagious animal diseases, The Swine Innovation Centre (VIC) in Sterksel, Bio economy in Delft
5. Demo farms: e.g. De Rusthoeve for arable farming, Northern Arable and ZILT on growing crops in salt or brackish water, beets in Dinteloord



Knowledge Exchange and Education

- **Green Pact:** ‘Dutch Diamond’ cooperation to attract and commit talent and to stimulate learning and innovation in the green sectors (agriculture, horticulture, food and nature)
- Partners: Vocational Education (mbo), Universities of Applied Science (hbo), WUR, sector representatives, NGOs, MoA, (Dutch Diamond) Topsectors A&F and H&SM
- Focus areas: human capital, **knowledge exchange**, internationalisation, digitalisation & technology
- Knowledge exchange:
 - Centres of Expertise (hbo) and Centres of Innovative Entrepreneurship (mbo) in which Diamond partners collaborate on innovation in practice and education
 - Programme on matching knowledge to practice: projects and interaction (Floor Geerling-Eiff)
 - Green Knowledge Net (3.0): for open access knowledge, user friendly interface, ‘living tool’ for interactive exchange such as wiki’s
 - Digitalisation to improve knowledge flows, ways of working and education (e.g. MOOCS, blended learning)

Other examples of knowledge exchange in AKIS.nl

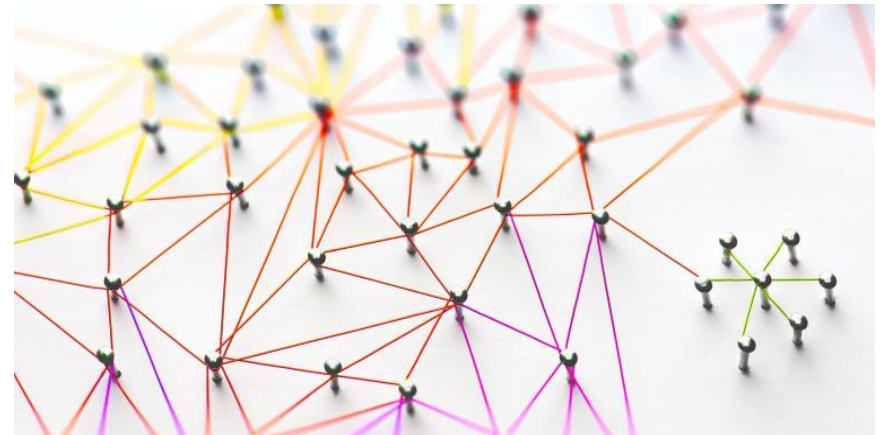
- Sectoral centres/initiatives for knowledge exchange and innovation: e.g. Greenports in horticulture, Sector Organisation Arable, Dairy Campus, etc.
- Farmer-to-farmer exchange / study groups: organised in sectoral chains (e.g. by Friesland-Campina), in regions and cross-regional e.g. by (Z)LTO
- Farmer-to-government exchange: experimental space in 5 regions to implement circular agriculture
 - advisors translate farmers' results and recommendations to policy makers
- H2020 multi actor projects: e.g. WUR coordinates Internet of Food and SMART Agri Hubs
- Repositories: Green Knowledge Net, WUR Library and diverse other public, private and PP reps.
- Websites and interactive platforms e.g. on sustainable animal husbandry and biodiversity (monitor for dairy farming) by diverse knowledge institutes, advisors and agri-business (together)
 - Private websites + platforms for knowledge exchange are offered by e.g. Friesland-Campina, AVEBE, The Greenery, etc.
- (Private) media: Boerderij, Nieuwe Oogst, Agri Holland, etc.

Diversity in EU AKISs - EU PRO AKIS Project



Observations in Dutch AKIS Knowledge Flows

- In general, Dutch farmers are close with many advisors but the challenge in AKIS is to stimulate more interconnected societal (public) and business (private) balanced knowledge implementation
- Many knowledge flows occur **non-formally in R&I** and other types of knowledge exchange projects
- Farmers are highly educated and have their own networks for obtaining the knowledge they need
- Next to public initiatives, there are many private initiatives from advisory organisations, the RABO bank and chain companies for knowledge exchange regularly
 - Much is organised in sectors/chains and/or regional level



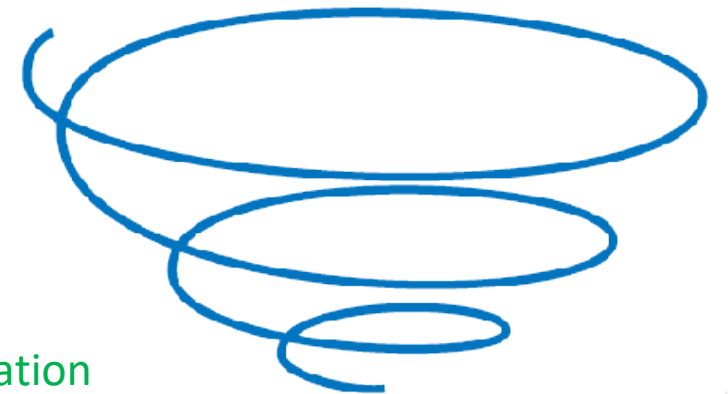
Observations in Dutch AKIS Knowledge Flows

- One advantage of private knowledge exchange is the competition and capacity to 'fly in' the most excellent expertise
- One disadvantage is the lack of grip on societal public challenges, integrated in AKIS knowledge flows
 - This problem will be tackled in the new CAP NSP
- Despite the intermediary role of the Paying Agency, **no one central entity in the NL is responsible for the AKIS infrastructure of knowledge flows**

Knowledge transfer

Knowledge exchange

Co-creation



Interventions improving knowledge flows in AKIS.nl

Letter of Parliament: Measures 'Innovation at the farm' towards circular and climate proof agriculture

- Towards one national interactive digital platform: Green Knowledge Net (3.0) with direct involvement of end-users and other AKIS actors (advice, education, research, etc.)
 - 1 mln. € - 300 K€ annually to transform GKN into a sustainable national platform for knowledge flows
- Including a knowledge counter to match knowledge supply and demand (interactive Q&A)
- More emphasis on independent advice – corresponding to the CAP Strategic Plans:
 - in study groups, practice networks and 1-on-1 farm coaching
- More focus on knowledge exchange related to Operational Groups
- Enhancing practical masterclasses and trainings
- More streamlining of (practical) project calls and reduction of administrative burdens



Challenges

Main challenge:

- Adjust the AKIS, to ensure that it provides the range of tools needed to create and spread the skills and knowledge for a SDG-proof agriculture

Subchallenges:

- To balance the primary interests of private and public stakeholders
- To broaden the range of entrepreneurial skills
- To speed up the sharing of knowlegde and uptake of innovation



To be discussed:

- Should fragmented AKIS systems organise an AKIS Board with all actors represented, for the next CAP period?

[Any questions?](#)

Thank you for your attention!

