

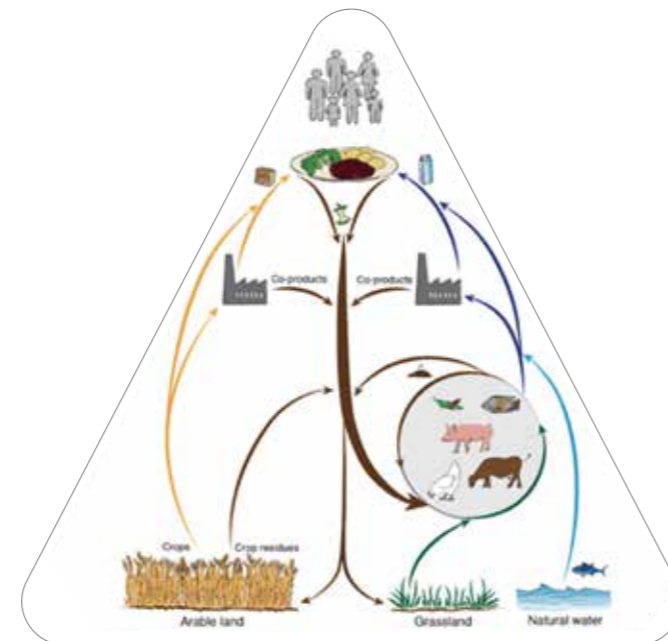
AGRICULTURE, NATURE AND FOOD: VALUABLE AND CONNECTED

- Policy vision presented September 8, 2018
- Shift from focus on reducing the cost of production, to reducing the use of raw materials through a more efficient use within cycles: circular agricultural systems

■ BACKGROUND

Rational: The sole focus on increasing productivity at the lowest costs possible is economically, socially and ecologically not sustainable. We need to shift the focus towards resource use efficiency.

Main goal: Transition to sustainable agri-food value chains with minimal unnecessary loss by closing cycles of raw materials and resources (reduce, reuse, recycle).



■ SECONDARY GOALS:

- 1) Strengthen the economic position of farmers, growers and fishermen
 - ▶ Improving earning capacity by:
 - Strengthening entrepreneurial skills
 - Strengthening the position of farmers in the value chain with a view to improve equitable distribution of the value added
 - Looking into ways to reward efforts by farmers for the purpose of public goods and sustainability
- 2) Re-appreciation of food
 - ▶ Avoid wastage and add value to waste
 - ▶ Reconnecting consumers with producers
- 3) Innovation of production methods
 - ▶ Precision farming, plant breeding, sensor technology, integrated pest management
 - ▶ Re-use of geothermal heat, waste heat and CO2 from other sectors in glasshouse horticulture
 - ▶ Nature-inclusive agriculture



■ RESPONSIBLE BODY:

The transition to circular agriculture is a multi-stakeholders process with joint responsibility of government(s), the private sector, civil society organisations and knowledge institutes.

Role of the government is to provide for an enabling environment, to facilitate, take the lead when needed and developing legislation and regulations if the transition is stagnating or moving too slowly.

■ EFFORTS IN DETAIL

- Multistakeholders' dialogues
- Digital portal for sharing initiatives
- Projects under way: restructuring of the pig sector, sustainable pesticides, sustainable livestock sector, review policy on leaseholds, common agricultural policy

■ WAY FORWARD:

Vision as benchmark for policy intentions, plans, proposals

- Do they help to close cycles, to reduce emissions and to reduce biomass wastage throughout the food system?
- Do they contribute to sustainable fish stock management without damaging the natural environment?
- Do they strengthen the socio-economic position of the farmer in the supply chain?
- Do they contribute to the climate task for agriculture and land use?
- Do they enhance the appeal and vitality of the countryside and contribute to a thriving regional economy?
- Do they benefit ecosystems (water, soil, air), biodiversity and the natural value of the farming landscape? Has animal welfare been considered?
- Do they contribute to the recognition of the value of food and to strengthening the relationship between farmers and citizens?
- Do they strengthen the position of the Netherlands as a developer and exporter of integrated solutions for climate-smart and ecologically sustainable food systems?

Further information:

<https://www.government.nl/ministries/ministry-of-agriculture-nature-and-food-quality/vision-anf>

MAINSTREAMING PRECISION FARMING

The National Program Precision Farming

■ POINTS OF THE CASE

- Despite potential of precision agriculture (PA) for a more circular and nature-inclusive agriculture, uptake of precision farming in the sector is slow. Some obstacles to introduction are :
- Limited number convincing PA-applications
- Uncertain/unbalanced business case
- Competing platforms with risks of vendor lock-in
- New dependencies and (ICT) risks
- No integral support on farm-level
- Limited knowledge and investment power of grower

The National Program Precision Farming



■ AIMS

- Introduction of PA-applications ready for practice at the farm. Intensive support by experts from Wageningen Research
- Inclusion of greening measures (eg. herb rich parcel borders, protection of meadow birds)
- Share knowledge and experiences in PA-communities
- Intensive communication of best practices through communication channels used by farmers (farm magazines, farm visits and workshops, Facebook groups and websites)
- Work experience for students of 'green education'
- Connect with local and regional field labs
- Build on a common agenda Precision farming

Farmers Participating in NPPL 2018



Pieter van Leeuwen



Nanne Sterenberg



Max Sturm



Bart van Loon



Martin de Meijer



Daniel Cerfontaine

■ PRACTICAL CASES PA-APPLICATIONS IN 2018

- ✓ Location specific granulate against nematodes
- ✓ Variable Nitrogen-fertilisation potatoes
- ✓ Location specific calcifying with soilscan
- ✓ Minimal dosing soil herbicides
- ✓ Variable dosing leaves haulm/fungicides
- ✓ Variable planting seed potatoes

Regional distribution 'role models'



- ★ selected growers
- connected growers
- green education

In 2019 ten more farmers - including the dairy and horticulture sector - and six more precision farming applications are added to the program



<https://youtu.be/ducxRPIB7cU>

All experiences of farmers – good and bad - are uploaded and communicated on a special website:

www.proeftuinprecisielandbouw.nl



Close collaboration with 'Green Education' on all education levels

<https://www.proeftuinprecisielandbouw.nl/app/uploads/2019/01/Onderwijsspecial-NPPL.pdf>

Ministry of Agriculture, Nature and Food Quality

■ WRAP UP

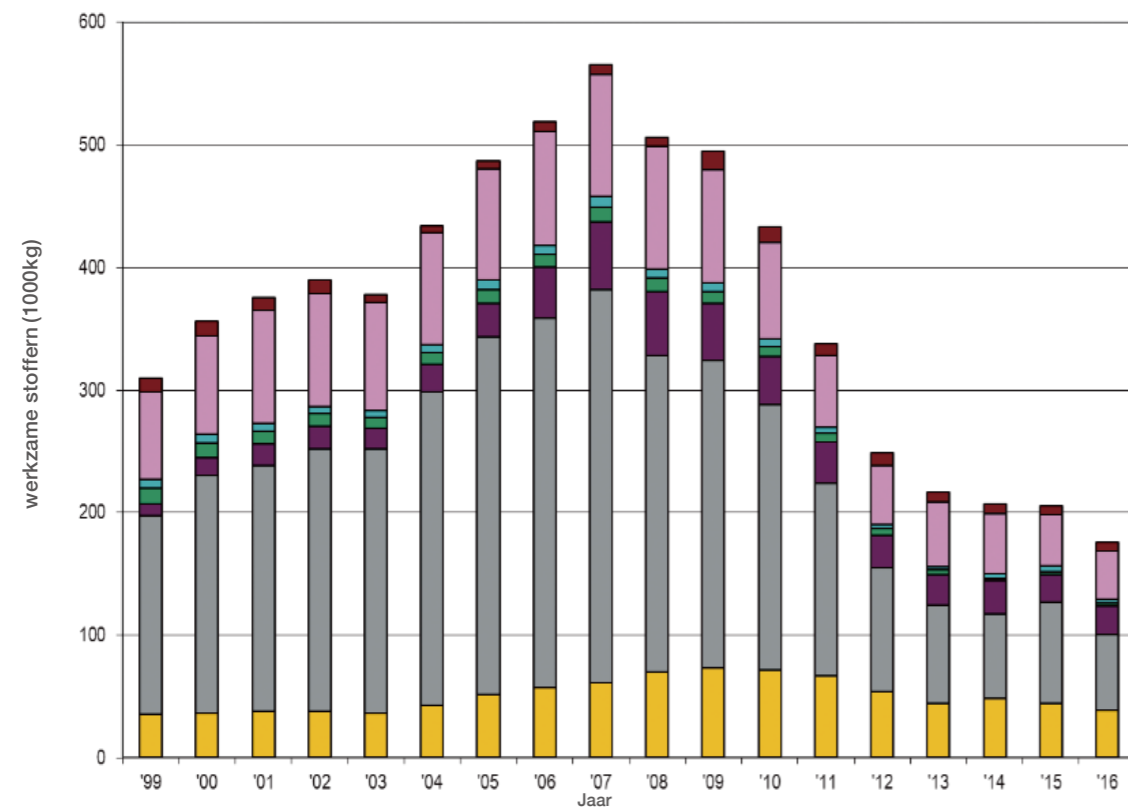
- Dutch Agriculture needs to transform to circular farming
- Precision farming can contribute significantly to this transformation
- Digital technology can enhance ecosystem services and natural values
- Support of precision farming at farm level is necessary
- Special attention is needed to address farmers' concerns
- For progress a systemic approach of precision farming is key

REDUCTION OF ANTIMICROBIAL USE IN LIVESTOCK: THE DUTCH APPROACH

- Antimicrobial resistance (AMR) is a risk to both human and animal health.
- Spread of untreatable antimicrobial resistant infections poses a threat to achievement of SDGs.
- Inappropriate and excessive use of antimicrobials accelerates emergence and spread of AMR.

POINTS OF THE CASE

- Dutch livestock sector reduced the use of antimicrobials by 64% in the years 2009–2016.
- As a result antimicrobial resistance levels decreased substantially.
- Farmers have mainly taken biosecurity and management measures that improved animal health.
- The decreased usage did not affect technical results or profitability of livestock farms.



Sales data of veterinary antimicrobials in The Netherlands between 2009 – 2016



- overige antibica
- timethoprim/sulfonamiden
- (fluoro)chinolonen
- aminoglycosiden
- macroliden & lincosamiden
- tetracyclines
- betalactam antibiotica