Agriculture, nature and food: valuable and connected

The Netherlands as a leader in circular agriculture
Agriculture in 2019

- Maximum yields from limited resources
- Innovation
- Triple helix approach
The challenges we face

• Depletion of soil, freshwater supplies and raw materials
• Decline in biodiversity
• Climate change
• Wastage of food and residues
• Fair income for farmers and growers
Towards circular agriculture

• Respecting the Earth’s limits: food production to the benefit of nature, environment and climate
• From a linear system to a circular system
• From reducing costs to reducing use of raw materials and environmental impact
• Closing nutrient cycles at as low a level as possible (regional, national, international) and preventing waste
• Cooperation in food production chain
• Cutting costs
What is circular agriculture?

• Arable farming, livestock farming and horticulture primarily use raw materials from each other’s supply chains and waste flows from food industry and food supply chains
• A healthy soil is key: low input - use nutrients and the soil in such a way that the soil system can recover and regenerate
• Optimisation/valorisation of residual biomass: feed, organic fertiliser
• Food waste = feed
• Animal manure first
• Energy: as little as possible, renewable
• New technology
What is circular agriculture?

Crop farming

• Soil!
• Precision farming, new plant breeding techniques
• Strip cropping, pixel cropping, agroforestry
• Integrated crop protection / pest management
What is circular agriculture?

• No emissions into soil, water and air
• As little water as possible
• Strive to be climate-neutral
• Renewable and residual energy
• Closed systems close to consumers
What is circular agriculture?

Livestock farming

• Cattle fed primarily with grass, feed crops, crop residues or food industry residues (from own farm or immediate vicinity)

• While taking account of food safety issues, work towards full use of all these residues for animal feed or as fertilizer for indoor horticulture

• Replacing artificial fertilizers by (extracts from) animal manure
Conditions for a successful transition

1. The economic position of farmers, growers and fishermen in the supply chain should be such that they are able to earn a good income in circular agriculture, can innovate and can maintain and pass on healthy businesses.

2. We need to appreciate food more. This goes for individual consumers, large-scale users and the catering industry. Wastage should be avoided. The distance between primary producers and citizens must become smaller.

3. The Netherlands must retain a leading role in the innovation of production methods, both nationally and in global food markets. With our knowledge and products, we can be an example for other countries when it comes to efficient production of food in circular processes, thus preventing and repairing damage to the ecosystem (water, soil, air).
From vision to implementation

• Substantial part of Ministry’s budget allocated to the transition, plus additional funds (pig industry restructuring, nature and water quality)
• Continuous consultation of stakeholders on putting the vision into practice
• Setting environmental, food safety and animal welfare goals with stakeholders
• Adjust legislation where necessary
• Strategic national plans under Common Agricultural Policy 2021-2027
• Research Agenda ’19–’23: circular agriculture, small robots, soil management, etc.
• Annual Soil Summit, monitoring of soils
• Precision Farming Agenda
From vision to implementation

- Experimental zones run by farmers
- Trialing agroforestry, strip cropping, catch crops, cover crops
- Unfarmed land made available to develop 40 nature-friendly businesses
- Reduction of artificial fertilizer use: support for trials, change EU rules
- Efforts to adjust EU biotechnology legislation, e.g. making way for gene editing
- Agreement with industry on full re-use of food waste by 2020
From vision to implementation

• Research into the setting of prices across the supply chain
• Research into true costs and true cost accounting
• Dispute settlement scheme for price setting
• Legal ban on a number of unfair trading practices
• Consumer and Markets Authority will enforce that primary producers receive a higher price from buyers who make demands that go beyond the regulatory baseline, e.g. on animal welfare
• Incentivise longer tenancies
• Succession fund for new entrants who want to invest in sustainability
Benchmarks for measures

• do they help to close cycles, to reduce emissions and to reduce biomass wastage throughout the food system?

• 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 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?

• Food safety!
From vision to implementation

• International knowledge development and sharing: 
  gather examples and ideas from abroad
• Exporting of innovative production methods
• The Netherlands leader in circular agriculture by 2030