

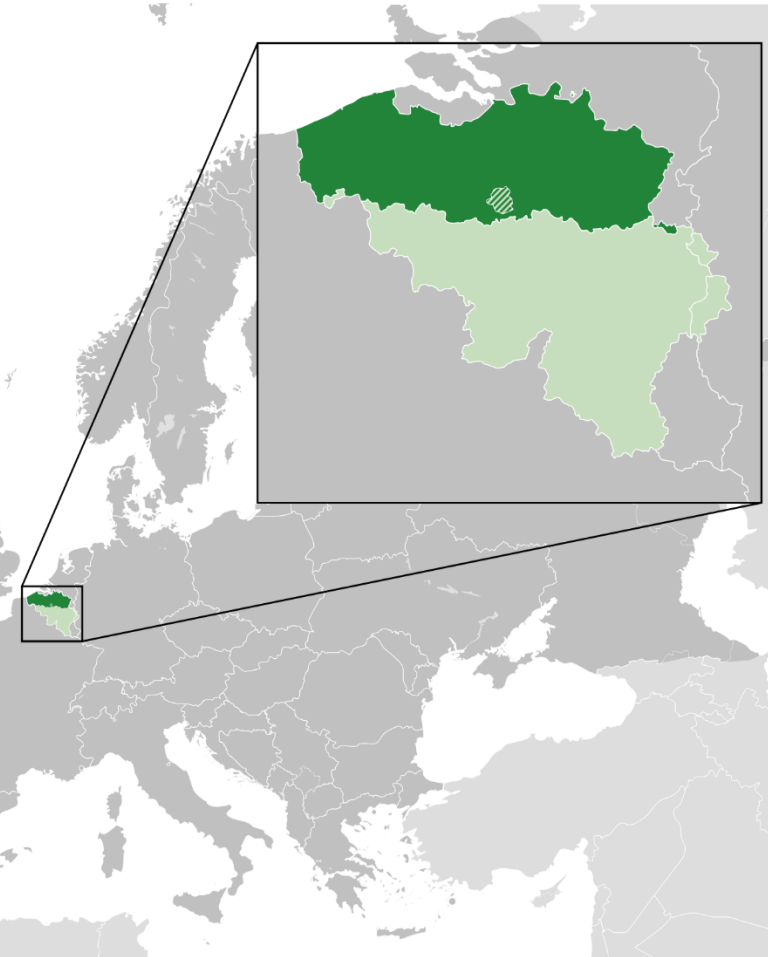
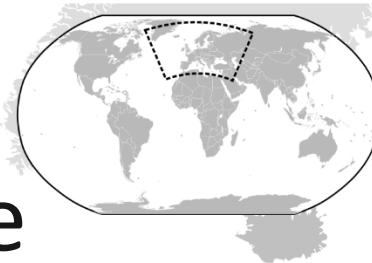
EURAGRI CONFERENCE 2018 - Oslo

**24 & 25 sept 18 Cross sectional Opportunities
in the Bio-economy**

Flanders?

SMALL COUNTRY...

- 5.000.000 people
flat / fertile / temperate maritime climate
- 600.000 ha for agriculture
 - 1/2 Flanders' surface
 - minus 3%/year
 - Organic farming 5000 ha
- 25.000 farms (3/4 professional)
 - minus 4%/year & remaining farms grow in size (25 ha. av.)
 - Organic farming 5000 ha
- Ag? Intensive & high quality levels



...GREAT FOOD ! (slogan of food sector)

- 21% of turnover of Flanders' industries
- 62.000 direct jobs
- Innovation investments
 - Chocolate (2,1 Bn €), sweets, ...
 - Potato products (1,4 Bn €),
Frozen vegetables (1,1 Bn €),
Fruit ..
 - Beer (1,1 Bn €)
 - Meat (beef, porc...)

- Exporting

- 1/2 or + 19 Bn €
- + 8% of total Belgian export
- + 2% of Belgian BBP



This is ILVO

“Flanders research institute for agriculture, fisheries and food”

Multidisciplinary, independent, specialized services,
Integrated, cross sectional, transdisciplinary



600
employees

200 ha
experimental

More than 40
labs
(accredited)

Pilot plant
for agro-food

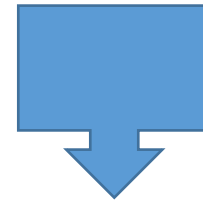
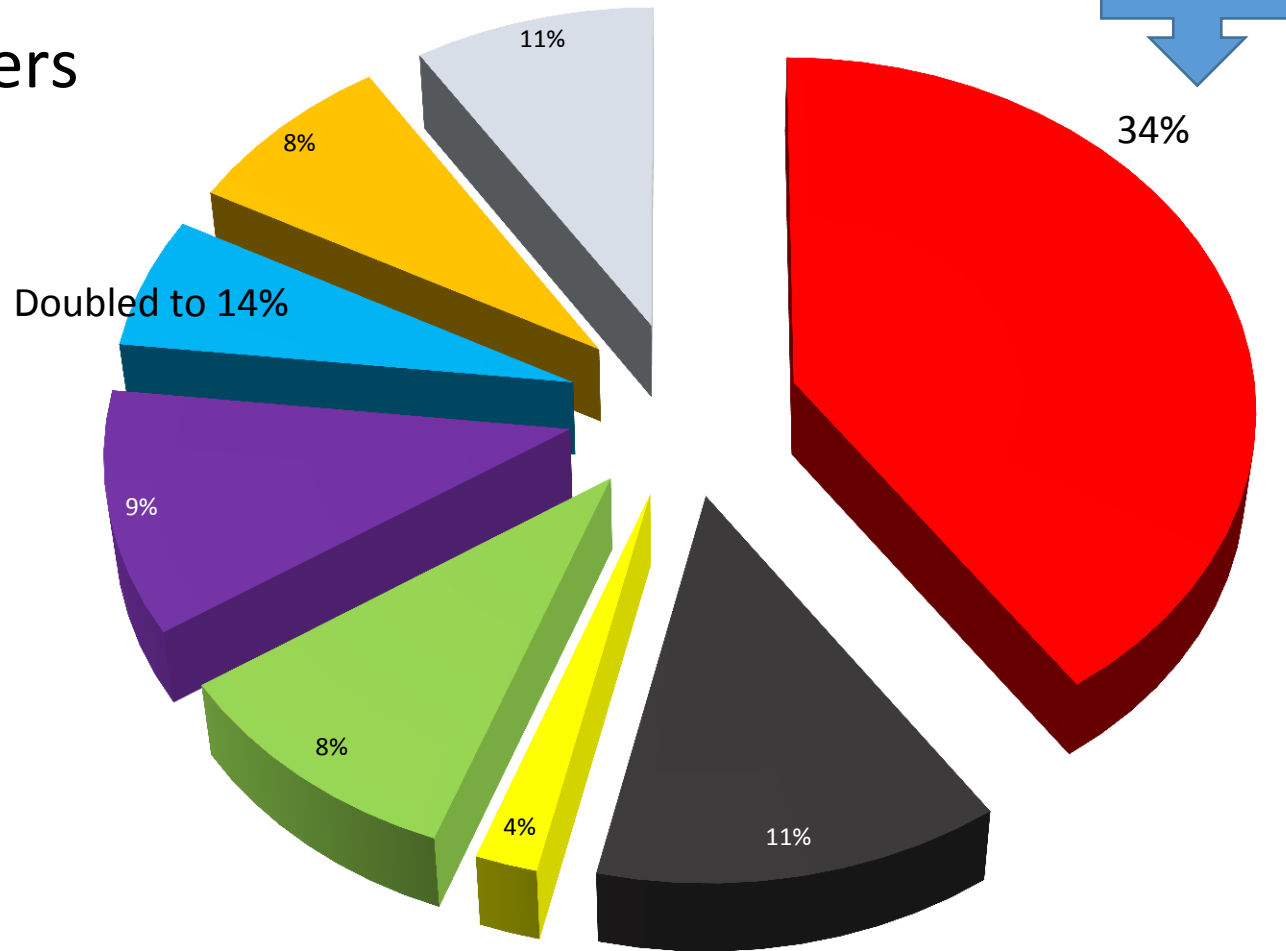
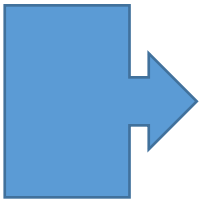
> 15.000
m²
experimental
green
houses



> 20.000 m² experimental

ILVO: division of operational turnover (45 mio €/year)

“Part” of the Government of Flanders



- Basic funding from Govt of Flanders Ag & Fisheries Policy Area
- Endowment from Govt of Flanders Ag & Fisheries
- Policy Areas if the Govt of Flanders
- IWT
- Federal government agencies
- EU

SDG's @ ILVO

2017

External consultant

- participation
- bottom up

Taskforce: in + one year

- selection
- action plan

Work in progress



SDG's @ ILVO: 3 questions

1. Added value?

Difference with existing mission?

Discovering blind spots

Holistic & systemic thinking

More globally looking?

Real acceleration ?



SDG's @ ILVO: 3 questions

2. (Far) beyond easier levels ?

Low hanging fruit?

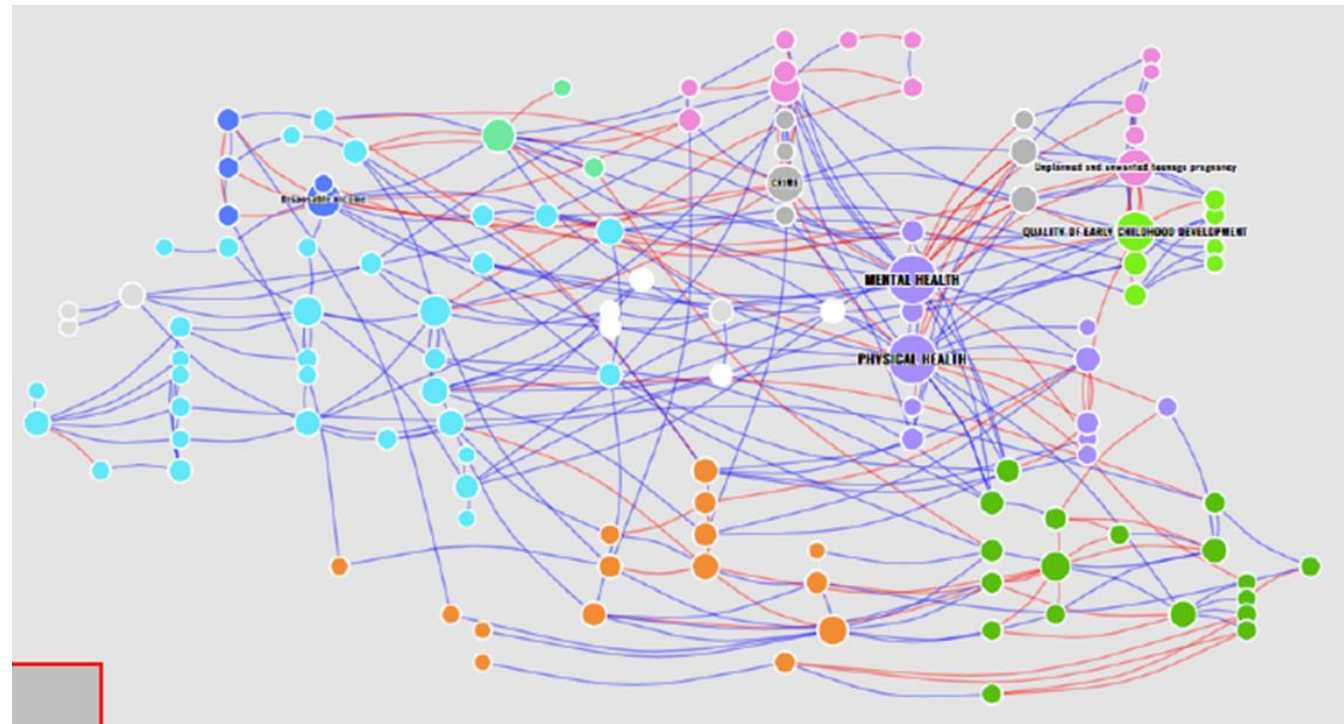
Strategic research topics?



SDG's @ ILVO: 3 questions

3. Impact monitoring?

- rather moral, qualitative, approximate evaluation
- over-weighty quantification of ... indicators: no thanks



BIO-ECONOMY @ ILVO

Principles:

Cascade of added values

Focus on SMEs

Mediumsized, local streams

Regional (cross-border & cross-sectional) chains

System thinking: ec/ecol/soc trade-offs
& win-wins? LCA?

Circular economy/ closing the loop

Research & Innovation: identifying opportunities

Van grond tot bord!

Van grond tot
industriële product
en terug?



Bio-economie @ **ILVO**

[https://www.ilvo.vlaanderen.be/Portals/68/documents/Media
theek/Brochures/Brochure_bio_economie.pdf](https://www.ilvo.vlaanderen.be/Portals/68/documents/Media%20theek/Brochures/Brochure_bio_economie.pdf)

Primary production of biomass

Calendula/ taraxacum/ miscanthus/ larvae

... •

- New crops
- New techniques (Agroforestry - Multi use)
- Breeding / New **Breeding Technologies**
- Adaptation of crops to different conditions or soil (e.g. salinity)
- New



Case: The heart of the CAULIFLOW

Problems:

- Systematic loss of edible goods (society)
- Washing out of too much postharvest nutrients (farm)
- Processes of harvesting and in the factory needed adaptation
- Risks and marketing challenge in frozen food SME (processor)
- R&D / funding / investment

- Bottom line:
 - sustainable / local / SME / cross sectional / win-win / multi-actor
 - rocket science? / optimizing values in a chain where each others problems are tackled together
 - VOUCHER system: 'Circular Flanders' (technical developments)



Accelerate the transition? Lessons & hints

Solving the problem of fair sharing of added values between partners

Solving the value dilemma 'food versus renewable energy'

Optimizing the capricious chain of research

Living labs to reduce the risk of targeting 'irrelevant' virtual bio-economy chains.



Thank you.

Food PILOT: A busy point of contact

In 2017:

- Many projects, 1-on-1 and collective
- 23.677 food analyses for 224 companies
- 332 pilot tests for 104 companies (40% KMO)
- 104 advisory services
- 73 intake meetings
- 5 network events





piloottesten

op semi-industriële apparatuur

-  Vleeslijn
 -  Saplijn
 -  Pasteurisatie- UHT-sterisilatielijnen
 -  Drooglijnen
 -  Extrusielijn
 -  Mengen en vermalen
- en andere ...



kennisoverzicht



Studie van (wetenschappelijke) literatuur

recept- en proces-ontwikkeling



Advies op maat

Van idee tot product

testen en analyseren van een nieuw recept of verbeteren van een verwerkingsproces

opschaling naar (semi-)industriële productie

kennismaken met de nieuwste technologieën

www.foodpilot.be



laboanalyses

disciplines:

-  Houdbaarheid
-  Smaak- en geuronderzoek
-  Allergenendetectie
-  Reiniging en desinfectie
-  Inhoudsstoffen bepaling
-  Microbiologische, fysische, chemische kwaliteit
-  Activiteiten voor kwaliteitsborging



begeleiding



Gratis intake gesprek
Analyse probleemstelling en eerste advies



Opvolging
Stapsgewijs richting een oplossing



Confidentialiteit

ILVO
Instituut voor Landbouw-
en Visserijonderzoek

FF
FLANDERS'
FOOD

LIVING LABS

Open house - open innovation - society

- Food Pilot (KRATOS innovation - advice for small farmers)
- Animal Husbandry (Dairy farm, Pig campus, poultry)
- Precision farming
- Agro-ecological farming

- Diagnostic Centre for Plants
- Bio-economy
- ...