We got to keep an eye on our Crops

Steven Krekels - Manager VITO Remote Sensing
We believe in the power of technology, economic dynamics and the creativity of people to leverage things.

ACCELERATING the transition to a SUSTAINABLE world

Sustainable Energy Supply, (Re)use Of Raw Materials, Food Security, Circular Economy, Quality Of Life

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VITO AROUND THE GLOBE

- HQ in Mol, Belgium
- Subsidiaries in
  - China (Beijing)
  - Middle East (Emirates & Qatar)
  - Q1 2019 India

Countries benefiting from VITO projects

remotesensing.vito.be
Technology to make a transition to a more sustainable world

Energy

Materials

Chemistry

Health

Land use
Platforms
- UAV
- AIRBORN
- HALE UAV
- SATELLITE

Sensors

Value Added Services & Information Products

Markets
- Agriculture
- Landuse & Biodiversity
- Climate
- Water & Coast
- Infrastructure
- Security

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Copernicus: Europe’s eyes on Earth
Agricultural stress index (ASI) at the end of 2008. The ASI is defined as the percentage of crop area within each administrative unit with a mean Vegetation Health Index (VHI) over the growing season below 35%.
PROBA-V data for monitoring West-African cattle herders
Index Based Insurances
This map was created by VITO Remote Sensing (Belgium), IIASA (Austria) and Wageningen University (the Netherlands) under assignment of the European Commission DG Joint Research Center (Italy) and in co-operation with DLR (Germany). The data used is PROBA-V 100 m for the reference year 2015. The bathymetry is derived from the Blue Marble next generation.

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What grows where & how much?

Few fields with known crop type

Training a satellite-based automatic crop detection procedure

Region-wide area estimation, months before harvesting

Crop classification in the Champagne region

- Winter wheat
- Winter barley
Mapping Crops at country level
Belgian potatoes are monitored from space!

- Crop development
- Field heterogeneity
- Risk assessment at production and quality losses
- Yield forecasts
- Digitization of agriculture for all actors in the potato value chain: farmers, traders, food processing industry, agroconsultants....

More info https://watchitgrow.be/en
CROPSAR – getting around the Clouds!

VITO developed a unique algorithm that combines Optical & Radar data.

→ measurements for cloudy days possible!

Every 5 days a measurement point (e.g. FAPAR)
MAPEO
Drone based phenotyping

https://remotesensing.vito.be/case/mapeo