NEXTLAND

GROW YOUR GAINS

CROP PHENOLOGY



Follow crop development from space, from planting till harvest

You're looking for information on the onset of the season or you want to know whether the crops are ready to be harvested? You're running yield prediction models or disease warning systems and need input on crop development stages? We can help you! We offer seasonality info (start, peak, end of season) and info on specific development stages (emergence, flowering, senescence, harvest) derived from Sentinel-2 satellite data.

"Extracting key development stages for individual fields will allow a better calibration of yield prediction models. You no longer have to rely on regionally-defined crop calendar information."

Laurent Tits
VITO Remote Sensing, Belgium





Key benefits

- ⊕ **Take timely actions where and when needed depending on the crop's development stage**
- ⊕ **Check if there are fields that are lagging behind**
- ⊕ **Support planning and logistics with timely information on which fields will soon be ready for harvest**
- ⊕ **Use phenological data derived from satellite images as input for crop yield or disease models and get more accurate predictions**

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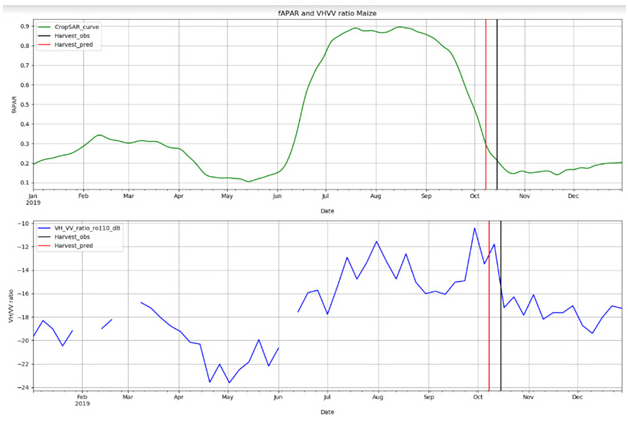
Collaborators

For anyone involved in crop monitoring!

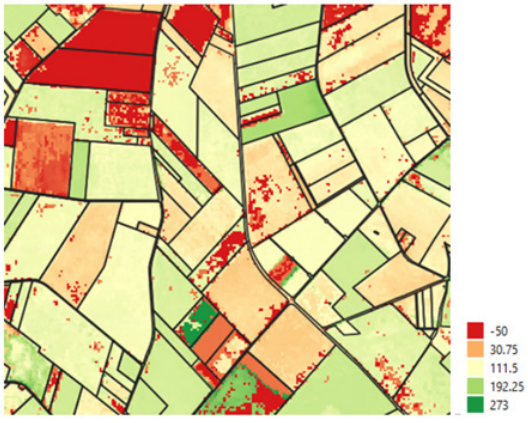
- Agricultural service providers
- Farmers and their associations
- Public authorities
- Insurance companies

Key specifications

Key specifications	Vegetation growth stages (SOS/EOS)	Phenological events (planting, emergence, harvest)
Unit	Day Of Year (DOY)	Day Of Year (DOY)
Pixel size	10 m	10 m
Sensing Depth	TOC	TOC
Temporal resolution	Seasonal (1-2 seasons/year)	Seasonal
Spatial resolution product	Pixel level (10 m)	Polygon (field level)
Local overpass time	10 AM – 11 AM	10 AM – 11 AM
Spatial coverage	Global	Global
Temporal coverage	Jul 2015 – current	Jul 2015 – current
Satellites used	Sentinel-2	Sentinel-1, Sentinal-2
Other data used	-	in-situ data
File format	GeoTIFF	GeoTIFF or JSON encoded datastructure
Data delivery	API	API



Harvest date detection: comparison of the predicted (red line) and observed (black line) harvest date for a maize field



Start of season (SOS) detection (day of year, DOY) for some agricultural fields in Belgium for the year 2019

vito remote sensing Belgium

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