



NEXTLAND

GROW YOUR GAINS

VEGETATION INDICES

Digital crop monitoring

Monitor crop growth and health from space with simple plant descriptors. Within the Vegetation Indices service, NextLand offers:

NORMALIZED DIFFERENCE VEGETATION INDEX

The Normalized Difference Vegetation Index (NDVI) describes the general status of the crop and can be used as a relative metric to monitor the overall development of the crops, both **within a field**, or compared to other fields in the area.

BIOPHYSICAL PARAMETERS (LAI, FAPAR, FCOVER)

Biophysical parameters describe **physical attributes of the crop or the field**, such as the percentage of the crop cover (fCover), the Leaf Area Index (LAI), or the fraction of sunlight that is absorbed by the vegetation for photosynthesis (fAPAR).

CROPSAR TO ENSURE CLOUD-FREE OBSERVATIONS

As cloud cover has proven to be a major issue for timely crop monitoring, a cloud-filled product is also available for all of these products (except the LAI). Our AI module CropSAR ensures **cloud free observations at parcel level** on a daily basis.

"Estimates of FCover are a key input to our potato yield model. CropSAR allows us to scale up to daily estimates with accurate data. The API was easily integrated."

Dr Simon Smart
NIAB CUF

Key benefits

- ⊕ Get uninterrupted time series of vegetation indices for your fields thanks to our CropSAR technology
- ⊕ Go beyond the traditional NDVI and use biophysical parameters such as fAPAR, LAI and fCover which are more easily to understand
- ⊕ Access objective and up-to-date information about your crops
- ⊕ Take specific actions where and when needed



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Key specifications

Key specifications	NDVI, fAPAR, fCOVER	LAI	CropSAR
Spatial coverage	Global	Global	Global
Temporal coverage	Jul 2015 - current	Jul 2015 - current	Jul 2015 - current
File format	GeoTIFF	GeoTIFF	JSON encoded datastructure
Local overpass time	10 AM - 11 AM	10 AM - 11 AM	10 AM - 11 AM
Pixel size	10m (NDVI) / 10m & 20m	10m & 20m	Polygon
Satellites used	Sentinel 2	Sentinel 2	Sentinel 1 / Sentinel 2
Sensing depth	TOC	TOC	TOC
Temporal resolution	5 days	5 days	Daily
Timeliness	1-2 days	1-2 days	1-2 days
Unit	-	-	m2/m2 (LAI)
Data delivery	API	API	API

Collaborators

For anyone involved in crop monitoring!

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

