



"VanderSat is unique in it's ability to determine the vegetation characteristics with satellites on any given field in the world. It is the perfect parameter to measure biomass, with a high sensing depth and daily updates."

Vegetation Optical Depth Data

VanderSat is a leading global provider of global satellite-observed water and temperature data, products and services. Using our proprietary satellite technology, we work with the world's leading organizations to solve their water related challenges. From farmers to multinationals: we understand the crucial role water plays.

It's all about crop water

At VanderSat we have developed a new passive microwave based vegetation parameter named 'Vegetation Optical Depth' (VOD) that captures vegetation water content. It has the advantage that clouds and darkness are not a problem, and therefore one can always rely on this operational service at any place on Earth.

VanderSat is revealing a revolutionary data set that can be used to retrieve crucial information about the vulnerability of our water and food resources at field level. It is the most consistent and scalable technology available and it is extensively documented in scientific peer-reviewed literature.

It is currently showing promising results for crop yield prediction.

Key Features

Patented methodology to provide soil moisture content on field scale

- ✓ Global dataset
- ✓ Dynamic open water bodies are taken into account

Unique spatio-temporal resolution

- ✓ 100 x 100 meter
- ✓ Daily

Near Real Time (NRT) data

- ✓ Available within 6 hours after satellite overpass
- ✓ Cloud and darkness proof

Long term time series

- ✓ High resolution data from June 2002 onwards

High quality data

- ✓ Deeper signal penetration than NDVI, consistent and weather independent.

Benefits

- Key input for analyzing crop growth and yield prediction and drought proxies.
- Get insights on crops when other satellites do not have a clear view.
- Long term time series to put events in perspective. Ideal for data analytics.
- Crop height rather than just the top. VOD is strongly related to vegetation biomass over the entire canopy column.

Specifications

VanderSat Vegetation Optical Depth

Unit	Kg/m ²
Observed	Vegetation Water Content
Sensing range	0 - 20
Pixel resolution	100x100 meter // 25x25 km
Temporal resolution	Daily
Data availability 100m product	June 2002 - present
Data availability ¼ degree product	October 1978 - present
File format	GeoTiff (images), csv (time series)
Data delivery	VanderSat API
Data viewer	VanderSat Viewer