

# Ag-Analytics

## eMODIS API Documentation

### 2019

## Overview

This eMODIS API provides a Normalized Difference Vegetation Index (NDVI), which quantifies vegetation by measuring the difference between near-infrared (which vegetation strongly reflects) and red light (which vegetation absorbs). Overall, NDVI is a standardized way to measure healthy vegetation. When you have high NDVI values, you have healthier vegetation. When you have low NDVI, you have less or no vegetation.

### FARMCONDITIONSLIVE™ - NDVI DATA

Normalized Difference Vegetation Index, also known as NDVI, is a measure of the level of greenness inferred by the eMODIS Aqua satellite dataset from NASA. It is updated daily.

Apply Data Filter?

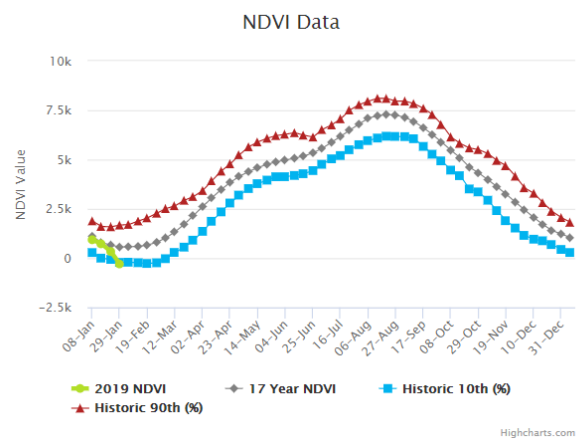
☒

Year Range End Value:

2019

Year Range Start Value:

2002



eMODIS NDVI API in FarmScope.

## API Specifications

### Header Parameters

**Ocp-Apim-Subscription-Key:** **Given upon purchase.**

*This key is necessary to access the API and should be passed as a Header.*

**Execute Type:** GET

### URL:

<https://ag-analytics.portal.azure-api.net/docs/services/emodis/operations/get-request-emodis>

### Request URL:

[https://ag-analytics.azure-api.net/eMODIS/get\[&year\]\[&startYear\]\[&shape\]\[&filtered\]](https://ag-analytics.azure-api.net/eMODIS/get[&year][&startYear][&shape][&filtered])

### Please Note:

You must pass ampersand in the request for every argument.

ex. get[&year]

## Request Parameters

**inputShape** (ESRI Polygon shape): The shape information for field in esriGeometryPolygon format. See example request below. Standard open source JavaScript front-end libraries (e.g., Leaflet) can be used to structure the shape.

**Start Year:** The year you would like the historical range to start. (e.g. 2002 -)

**Year:** The year of which you would like to receive data up to. (e.g. – 2018)

**Filtered:** True or False.

## Example

### Request

```
get?year=2019&startYear=2002&shape={"rings":[[[-93.12009,42.404569],[-93.118735,42.40455],[-93.118648,42.404514],[-93.118447,42.404469],[-93.118046,42.404446],[-93.115059,42.404472],[-93.114905,42.40437],[-93.114827,42.404278],[-93.114811,42.403924],[-93.114749,42.399452],[-93.114748,42.399091],[-93.116298,42.399101],[-93.116301,42.398657],[-93.115896,42.398657],[-93.115812,42.398533],[-93.115798,42.398419],[-93.115895,42.398264],[-93.115981,42.398174],[-93.115905,42.398099],[-93.115816,42.398043],[-93.115601,42.397959],[-93.115435,42.397975],[-93.115435,42.398192],[-93.115435,42.398378],[-93.115268,42.398441],[-93.114746,42.398383],[-93.114742,42.397313],[-93.11627,42.397319],[-93.116439,42.397319],[-93.122216,42.39734],[-93.122266,42.397387],[-93.12256,42.397456],[-93.122961,42.397455],[-93.123254,42.397444],[-93.123317,42.397775],[-93.123317,42.398073],[-93.123487,42.398324],[-93.123658,42.398633],[-93.123766,42.398953],[-93.123906,42.39925],[-93.124261,42.399513],[-93.125111,42.400004],[-93.12542,42.400278],[-93.125884,42.400575],[-93.126317,42.401135],[-93.126766,42.401717],[-93.127013,42.401969],[-93.127886,42.402402],[-93.128303,42.402676],[-93.128576,42.402909],[-93.128609,42.404616],[-93.12009,42.404569]]],"spatialReference":{"wkid":4326}}&filtered=false
```

### Response (Snippet)

```
[{"CurNDVI":{"NDVI Value":1791.82495117188,"Week":1},{"NDVI Value":-101.287498474121,"Week":2},{"NDVI Value":-56.9625015258789,"Week":3},{"NDVI Value":-275.6875,"Week":4},{"NDVI Value":1383.80004882812,"Week":5},{"NDVI Value":2126.86254882812,"Week":6},{"NDVI Value":2163.625,"Week":7},{"NDVI Value":2167.71240234375,"Week":8},{"NDVI Value":2081.42504882812,"Week":9},{"NDVI Value":1594.22497558594,"Week":10},.....
```

## Citation

Users who use these data in their Applications must use the button provided below.



Users who use in publications or data analysis must cite us in your publications as "eMODIS NDVI API obtained via Ag-Analytics.Org (Woodard,2016a; Woodard, 2016b)" or similar with the following references:

- 1.) Woodard, J.D., "Big data and Ag-Analytics: an open source, open data platform for agricultural & environmental finance, insurance, and risk," Agricultural Finance Review, (2016) 76(1):15-26.
- 2.) Woodard, J.D., "Data Science and Management for Large Scale Empirical Applications in Agricultural and Applied Economics Research," Applied Economic Perspectives and Policy, (2016) 38(3): 373-388.

Each county zip file contains a shapefile, with format clu\_public\_a\_SSFFF where SS is the State abbreviation and FFF is the 3 digit county fips code (e.g., clu\_public\_a\_il001 is Adams County, IL)

**Format:** vector polygon - Arc shapefiles

**Spatial Reference Information:** Universal Transverse Mercator (UTM) Dominant Zone, North American Datum 1983

**Please contact Joshua Woodard, [josh@ag-analytics.org](mailto:josh@ag-analytics.org) or [woodardjoshua@gmail.com](mailto:woodardjoshua@gmail.com), with any comments or questions.**