
NATIONAL AGRICULTURE IMAGERY PROGRAM

API Documentation 2020

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Service Overview

National Agricultural Imagery Program (NAIP), produced by the USDA, provides high-resolution aerial imagery for the United States. The data is collected in each state every 3-5 years during the agricultural growing season at 1 m resolution. The default spectral bands for NAIP is natural color (R, G, B). Since 2007, some states have been delivered with R, G, B, and NIR. For the data coverage, please check the ArcGIS NAIP Annual Coverage map.

The Ag-Analytics NAIP Service API provides users with easy and fast access to imagery from NAIP with user specifications including the calendar year of interests, coordinates of area of interests in GeoJSON format, projection, resolution, etc. and return either a GeoTIFF or a 64 based png as string based on the user's choice.



NAIP Service imagery

POST Request

POST Request Example – application/json

```
{ "aoi": '{"type": "Feature", "properties": {}, "geometry": {"type": "Polygon",
"coordinates":
[[[-88.78283500671385, 40.12822855142359], [-88.7733507156372, 40.12822855142359],
[-88.7733507156372, 40.135414271596325], [-88.78283500671385, 40.135414271596325],
[-88.78283500671385, 40.12822855142359]]]}'',
  "years": "['2017']",
  "display_option": "True_color",
  "result_type": "png",
  "Projection": "EPSG:4326",
  "Resolution": "0.00001"
}
```

Header Parameters

content-type: "application/x-www-form-urlencoded"

Ocp-Apim-Subscription-Key: Subscription keys are given upon purchase [Purchase APIs](#) 

Request Parameters

Parameter	Data Type	Required?	Default	Options	Description
file	GeoTiff or Shapfile in Zip	Yes (otherwise pass aoi)	-	-	A GeoTiff(.TIFF,.Tif,.etc) or a Shapefile in Zip (must include shp, shx, dbf, but others files such as .prj, .xml, .cpg are recommended for better processing)
aoi	GeoJSON String, .shp file, GeoTIFF	Yes (otherwise pass file)	-	-	Area of interest to return.
years	List of integers as String	Yes	-	"['2015','2016']"	Call will return CDL GeoTiffs from the given years.
result_type	String	No	"png"	"png", "tif"	The result type. Eiter a GeoTIFF saved Ag-Analytics server or a 64 based png as string in response.



Projection	String	No	See Request Handling Table	EPSG code ("EPSG:4326") WKT	Output projection of result GeoTIFF.
Resolution	Float	No	See Request Handling Table	-	Output resolution of result GeoTIFF.
display_option	String	No	"True_color"	"True_color", "False_color", "Red", "Green", "Blue", "NIR"	Color Composition of the result GeoTIFF or PNG. See examples below.

Request Handling

AOI Type	Projection Specified?	Resolution Specified?	Output Projection	Output Resolution
Any	Yes	Yes	Request projection	Request resolution
GeoTIFF	Yes	No	Request projection	GeoTIFF resolution
GeoTIFF	No	Yes	GeoTIFF projection	Request resolution
GeoTIFF	No	No	GeoTIFF projection	GeoTIFF resolution
Shapefile	Yes	No	Request projection	Native tile resolution
Shapefile	No	Yes	Shapefile projection	Request resolution
Shapefile	No	No	Shapefile projection	Native tile resolution
GeoJSON	Yes	No	Request projection	Native tile resolution
GeoJSON	No	Yes	GeoJSON projection	Request resolution
GeoJSON	No	No	GeoJSON projection	Native tile resolution

POST Response

POST Response Example – application/json

```
{
  "2017": {
    "file":
      "result_raster_NAIP_epsg4326_resolution_1e05_20200302213710668015_56006.tif",
    "image_date": ["20170703"]
  }
}
```



Response Parameters

Parameter	Type	Description
year (ex. 2017)	Key	The year of interest. Used as the key of the certain year response dictionary
file	String	The date of the sales information has been updated
image_date	String	Formatted as 'YYYYMMDD'. The source image date

Citations:

- USDA NAIP Information: <https://www.fsa.usda.gov/programs-and-services/aerial-photography/imagery-programs/naip-imagery/>



Please contact support@analytics.ag or josh@ag-analytics.org with any comments or questions.

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