USDA CropScape Data Resources

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What Is CropScape?

- An online GIS application for agricultural geospatial data visualization, analytics and dissemination
- Serves the NASS Cropland Data Layers (CDL), CropMask, and Crop Planting Frequency Data Layers (Crop-Specific)
- Web based interactive maps to provide capabilities of on-line geospatial crop information access, geospatial query, retrieval and analytics
- OGC standards-compliant geospatial web services for disseminating all data to the decision makers and users via real time retrieval, processing and publishing over the web

http://www.nassgeodata.gmu/CropScape
What Are the Cropland Data Layers?

- Annual geospatial Land cover (CONUS)
- Annually cover major program crops and regions
- Derived from satellite images
- Geo-referenced
- Raster formatted
- Thematic maps
- Provide timely, accurate, useful estimates

2010 Cropland Data Layers

Major Land Cover Categories:

Agriculture:
- Pasture/Grass
- Corn
- Soybeans
- All Wheat
- Other Hay
- Fallow/Idle Cropland
- Alfalfa
- Cotton
- Other Crops
- Vegetables/Fruits/Nuts
- Sorghum
- Other Small Grains
- Rice

Non-Agriculture:
- Woodland
- Shrubland
- Urban/Developed
- Wetlands
- Water
- Barren
- Perennial Ice/Snow

www.nassgeodata.gmu/CropScape
Crop Planting Frequency Data Layers

- Derived from CDL
- Crop specific, 30m resolution, geo-referenced
- computed from 2008-2014 CDLs.
CropMask

- A CDL derivative product
- A map of national cultivated crop land cover.
- 30m resolution, geo-referenced
CropScape Browser Based Client - User Interface

www.nassgeodata.gmu/CropScape
Service Oriented Architecture

- Open Architecture
- Comprehensive Standard API
- Accessible through HTTP
- Scalable, Robust, and Reusable
- Implement standard web services and geoprocessing web services

- Raster data
- Vector data
- Attribute Data
Functional Diagram Blocks Implemented in Web Services
CropScape Tools
Select an Area of Interest (AOI)

www.nassgeodata.gmu/CropScape
Pixel counting is usually downward biased when compared to official estimates. Counting pixels and multiplying by the area of each pixel will result in biased area estimates and should be considered raw numbers needing bias correction. Official crop acreage estimates at the state and county level are available at http://www.nass.usda.gov/.
CropScape Change Analysis

![Image of CropScape Change Analysis]

www.nassgeodata.gmu/CropScape
CropScape Download & Export

Specify Years and Projection

Preview and Download

www.nassgeodata.gmu/CropScape
Export CDL Area of Interest to Google Earth
Import Area of Interest Boundary and Customer Data Layer
Automatically Created On-the-Fly Map in PDF
CropScape Web Service Examples

a)  http://nassgeodata.gmu.edu/CropScape/GetCDL?year=2009&fips=19015
   (Get CDL County data)

b)  http://nassgeodata.gmu.edu/CropScape/GetCDLStatData?year=2009&fips=19015
   (Get CDL County Statistics Data)

Value Category Acreage
1  Corn  156661.3
5  Soybeans  100869.2
12  Sweet Corn  1.5
24  Winter Wheat  13.2
28  Oats  389.8
36  Alfalfa  327.8
37  Other Hays 436.7
59  Seed/Sod Grass  2.3
61  Fallow/Idle Cropland  0.8
62  Grass/Pasture/Non-Ag  3315.6
63  Woodland  13.9
87  Wetlands  41.8
111 NLCD - Opcn Water  2064.4
112 NLCD - Developed/Open Space  29350.2
122 NLCD - Developed/Low Intensity  3873.8
123 NLCD - Developed/Medium Intensity  708.3
124 NLCD - Developed/High Intensity  206.1
131 NLCD - Barren  93.0
141 NLCD - Deciduous Forest  34563.8
142 NLCD - Evergreen Forest  7.0
143 NLCD - Mixed Forest  0.8
152 NLCD - Shrubland  19.4
171 NLCD - Grassland Herbaceous  10842.7
181 NLCD - Pasture/Hay  21097.2
190 NLCD - Woody Wetlands  1896.2
195 NLCD - Herbaceous Wetlands  285.9
CropScape Usage Statistics
(From July 1, 2014 to Oct. 14, 2015)

• Total Visits: 55,188
  • 59.1% New Visitor, 40.1% Returning Visitor
• Total users visited: 33,492 (92% from US)
• Total user countries: 113
CropScape – An Award Winning Application

- CropScape won 2014 URISA Exemplary Systems in Government (ESIG™) Award
- CropScape Application & CDL won 2011 USDA Secretary’s honor awards.
Publications


Question?

Thank you!

Contact: Zhengwei.Yang@nass.usda.gov

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