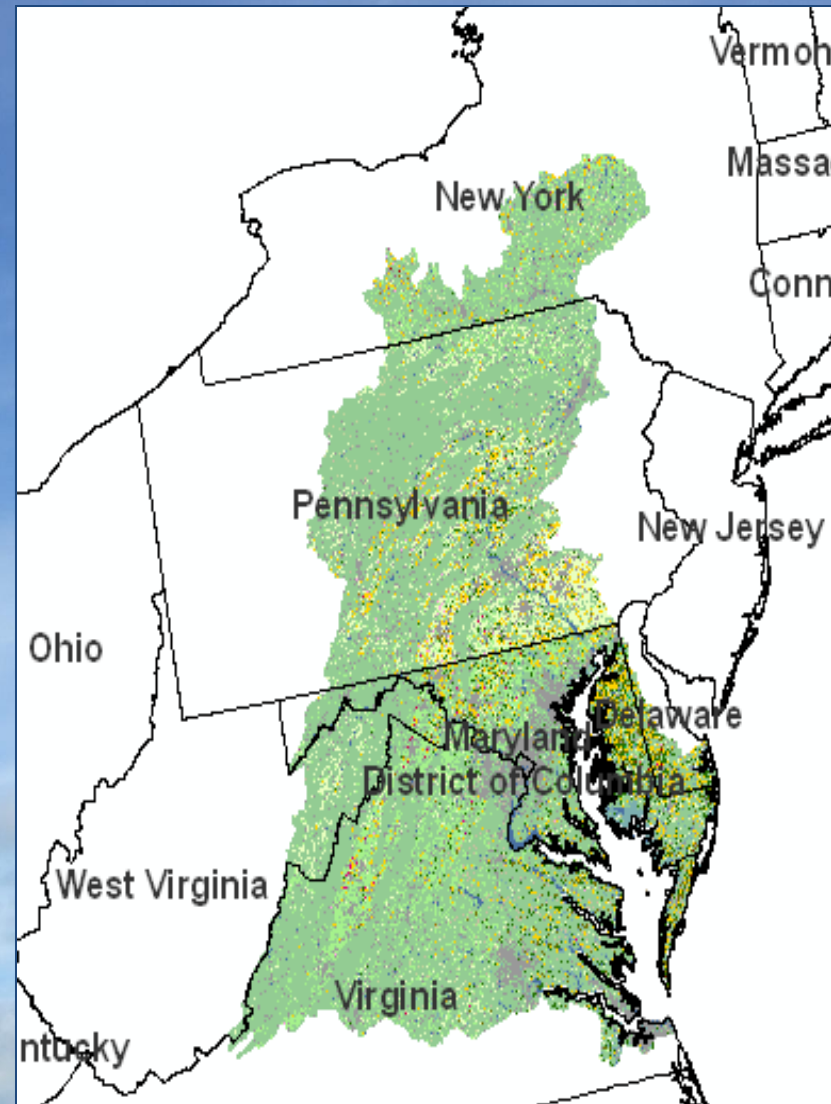


Chesapeake Bay Watershed Cropland Data Layer, 2009

Claire G. Boryan, Geographer
AAG 2010, April 17, 2010



NASS Overview

Provider of timely, accurate, and useful statistics in service to U.S. agriculture

NASS - Data and Statistics - Microsoft Internet Explorer

Address: http://www.nass.usda.gov/Data_and_Statistics/index.asp

USDA United States Department of Agriculture
National Agricultural Statistics Service

The 2002 Census of Agriculture is the most comprehensive source of statistics portraying our nation's agriculture

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- Economics
- Environmental
- Livestock and Animals
- Charts and Maps
- Education and Outreach
- Statistics by State
- Select a State

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Data and Statistics

Quick Stats (Agricultural Statistics Data Base)

NASS publishes U.S., state, and county level agricultural statistics for many commodities and data series. Quick Stats offers the ability to query by commodity, state(s) and year(s), providing the most up-to-date statistics including all revisions. The query dataset can be downloaded for easy use in your database or spreadsheet.

- Query our Quick Stats Data Base

Additional Crops County Resources

Maps of crops county estimates for acreage and yield are available from NASS as both CSV data files and maps. County data from Quick Stats data is also available in pre-extracted data sets by year and by crop.

Census of Agriculture

To query Census of Agriculture data, choose from the Census years below. To view the Census publications, click here:

- Data Queries for 2002, select below:
 - Select a Census Query
- Data Queries for 1997, 1992, 1987

Interactive Data

NASS provides a variety of tools for interacting with our Census datasets.

Interactive Statistical Maps

Interactive Census Maps for 2002 Census Highlights

Table Lens Application for 1997 Census Data

Last modified: 12/30/05

NASS Home | USDA.gov | FEDSTATS | Economics Statistics System (ESS) | Site Map
FOIA | Accessibility Statement | Privacy Policy | Non-Discrimination Statement | Information Quality | FirstGov | What's New

2001 Wildlife Damage Survey

7.7 Percent of Crop Value Lost to Deer and Geese

Maryland farmers lost \$17.2 million of corn, soybeans and wheat to deer or geese during 2001, translates to Maryland farmers losing 7.7 percent of the crop value to deer and geese. Soybeans account for the greatest economic loss, totaling \$9.1 million, 11 percent. Corn losses were \$6.6 million, 5.8 percent and wheat \$1.5 million, 5.6 percent. Deer damage resulted in losses of \$13.6 million, 6.1 percent, while geese losses were \$3.6 million, 1.6 percent.

Production losses totaled 6.0 million bushels. Corn losses were 3.2 million bushels, soybean losses are 2.2 million bushels and wheat accounted for 0.6 million bushels. Production losses to deer were 4.7 million bushels and geese 1.3 million bushels.

In terms of yield, losses to deer were most severe in Central and Western Maryland, while geese damage greater on the Eastern Shore. Corn yield losses of 9.6 bushels per acre and 7.4 bushels per acre were reported in Central and Western Maryland, respectively. The Lower Eastern Shore reported the highest soybean loss of 6.1 bushels per acre.

Sixty-two percent of farms reported deer or geese damage to one or more crop. Damage was reported on percent of farms raising corn, 58 percent of farms growing soybeans and 27 percent of farms with wheat.

Maryland 2001 Crop Loss from Deer

Region	Crop	Acres Harvested	Harvested Yield (bushels)	Average Yield Loss (bushels)	Production Loss (bu)	Economic Loss (\$)
Western Maryland	Corn	5,500	174	7.4	40,700	83
	Soybeans	300	36.7	-	-	-
	Wheat	200	45.7	2.3	460	1
Central Maryland	Corn	174,200	562	9.6	1,601,200	2,478
	Soybeans	92,000	34.2	3.9	360,750	1,478
	Wheat	38,200	63.3	3.3	126,390	318
Southern Maryland	Corn	25,800	132.9	4.9	146,200	295
	Soybeans	43,200	39.0	3.0	142,650	314
	Wheat	16,000	57.0	0.9	14,400	16
Upper Shore	Corn	157,000	159	3.1	800,700	1,241
	Soybeans	33,000	38.8	3.3	114,450	231
	Wheat	-	-	-	-	-

NEWS RELEASE

NATIONAL AGRICULTURAL STATISTICS SERVICE
United States Department of Agriculture - Washington, DC 20250
Ag Statistics Hotline: (800) 727-9540 • www.nass.usda.gov

Contact: Ellen Dougherty, (202) 690-8122
Jeff Geuder, (202) 720-2127

USDA FORECAST

Washington, Aug. 10, 2007

history in 2007, according to Agriculture's National Ag 13.1 billion bushels, 10.6 percent.

Based on conditions: per acre, up 3.7 bushels from behind the 160.4 bushels per million acres of corn for grain.

Yield forecasts are dry Delta. Meanwhile, hot, dry and eastern Corn Belt, Ohio

2002 Dairy Producer Opinion Survey

November 2002

Wisconsin Milk Production To Recover

Milk production is expected to increase in Wisconsin during the next few years according to a survey conducted by the Wisconsin Agriculture Statistics Service. This statewide survey of producers asked for their plans with the assumption that milk prices for the next five years will be at the same level as the past five years. The survey was conducted during May and June 2002.

Based on the survey, 60 percent of producers expect to keep the same herd size, 20 percent plan to increase herd size, and 20 percent intend to discontinue milking by 2007. Actual results will depend on future milk prices, input prices, financing availability, crop yields, and other factors.

The number of herds projected for 2007 shows that the diversity of small to large herds will continue. The most prevalent herd size will remain at 50 to 99 cows.

http://www.nass.usda.gov:8080 - 2002 Census of Agriculture - SVG Interactive Mapping - United S - Microsoft Internet Explorer

National Agricultural Statistics Service 2002 Census of Agriculture

United States | All data items are from Chapter 2 - Table 1. Area Summary Highlights: 2002
Selected crops harvested - Land in orchards (acres)

State: United States - County Level | Data Item: Selected crops harvested - Land in orchards (acres)

United States Total: 5,330,439

State: Total: County Total: County Total:

Download data as CSV | XML | PDF

Help | Print | Return to

Legend

Scale: National | Zero or Data Withheld <= 20,000

(Changes the data range based on National or State level)

Comparisons: 6 | 20,001 to 40,000 | 40,001 to 60,000 | 60,001 to 80,000 | 80,001 to 100,000 | 100,001 >=

Color: Green

Source: USDA-NASS 2002 Census of Agriculture ©USDA-NASS 2005-2006

Navigate: Mouse-over a specific state/county to view the state/county level data. Right click to zoom (option-click for MAC users). Hold the Alt key and click+drag to pan. For additional assistance with this application, click here to view the support page.

All Milk Price, Wisconsin Annual Average, 1985 - 2002

Wisconsin Dairy Herds by Herd Size

Milk cow herd size	May 2002 herds	May 2007 herds (projected) %	Change 2007/2002
1-29	2,800	1,440	-45
30-49	4,700	3,440	-27
50-99	7,400	5,600	-24
100-199	1,900	2,080	+40
200-499	700	900	+29
500+	200	440	+120
Total	17,500	19,900	+20

1/7/07 The May 2007 projection is based on farmers' opinions May-June 2002, with the assumption that milk prices for the next five years will be at the same level as the past five years.

Wisconsin Dairy Farmer Plans for May 2007 1/ by Herd Size

Milk cow herd size	Herds	Keep same herd size	Increase herd size	Discontinue milking
9	2,600	47	17	98
49	4,700	71	9	20
99	7,400	65	19	18
199	1,900	53	37	10
499	700	33	59	8
200+	200	22	78	0
Total	17,500	62	29	20

1/7/07 The May 2007 projection is based on farmers' opinions May-June 2002, with the assumption that milk prices for the next five years will be at the same level as the past five years.

Percent of Herds by Size Group 2007 Projection

Cropland Data Layer Program Objectives

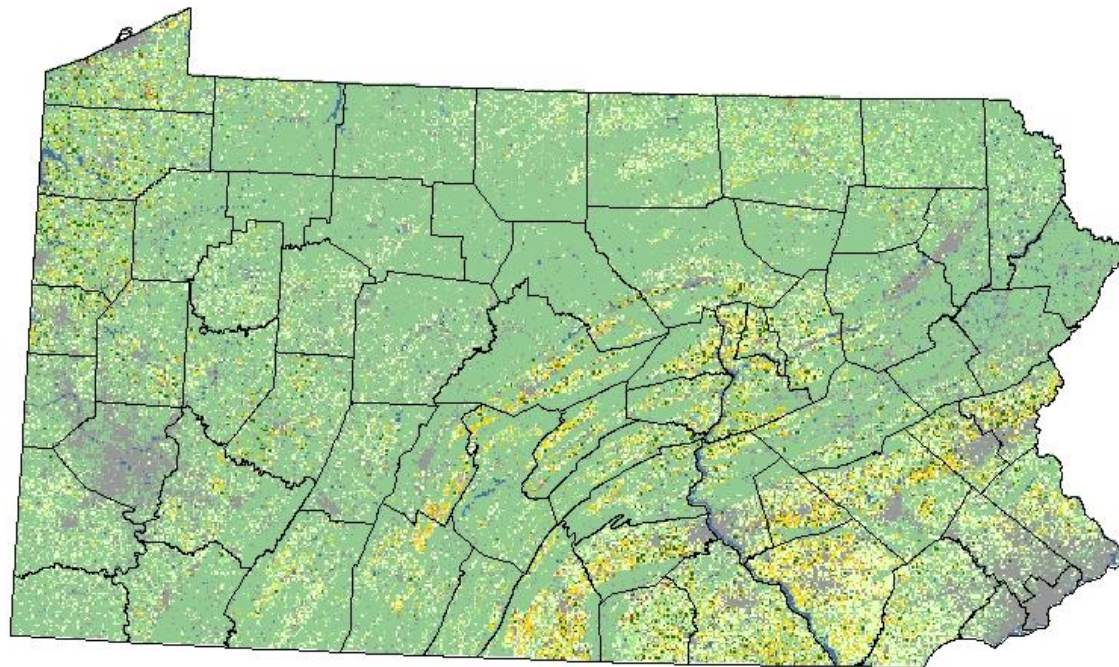
- “Census by Satellite”
 - Without area duplication
 - National coverage

- Provide timely, accurate, useful independent estimates
 - Measurable error
 - State , County, and Agricultural Statistics District level

- Output crop specific Cropland Data Layer
 - Distribute free to public [NRCS Geospatial Data Gateway](#) or <http://www.nass.usda.gov/research/Cropland/SARS1a.htm>
 - Publish accuracy statistics/metadata/confidence layer












2009 Pennsylvania Cropland Data Layer









Land Cover Categories (by decreasing acreage)

AGRICULTURE

-  Pasture/Grass
-  Other Hays
-  Corn
-  Soybeans
-  Fallow/Idle Cropland
-  Winter Wheat
-  Alfalfa
-  W. Wht./Soy. Dbl. Crop
-  Oats
-  Seed/Sod Grass
-  Other Crops
-  Other Small Grains
-  Apples
-  Misc. Veggies. & Fruits
-  Christmas Trees

NON-AGRICULTURE

-  Woodland
-  Urban/Developed
-  Water
-  Shrubland
-  Wetlands
-  Barren

0 20 40 60 80 100 Miles



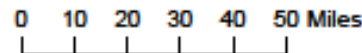
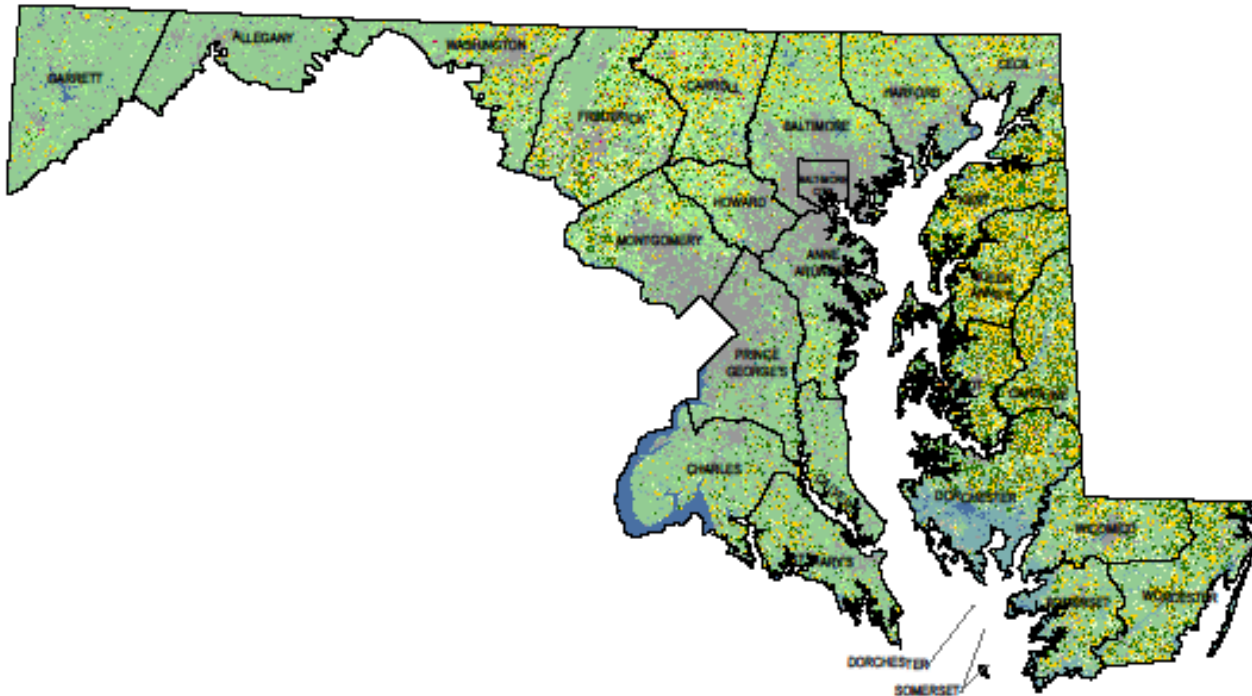
Land Cover Categories (by decreasing acreage)

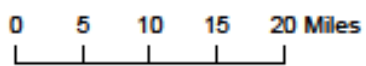
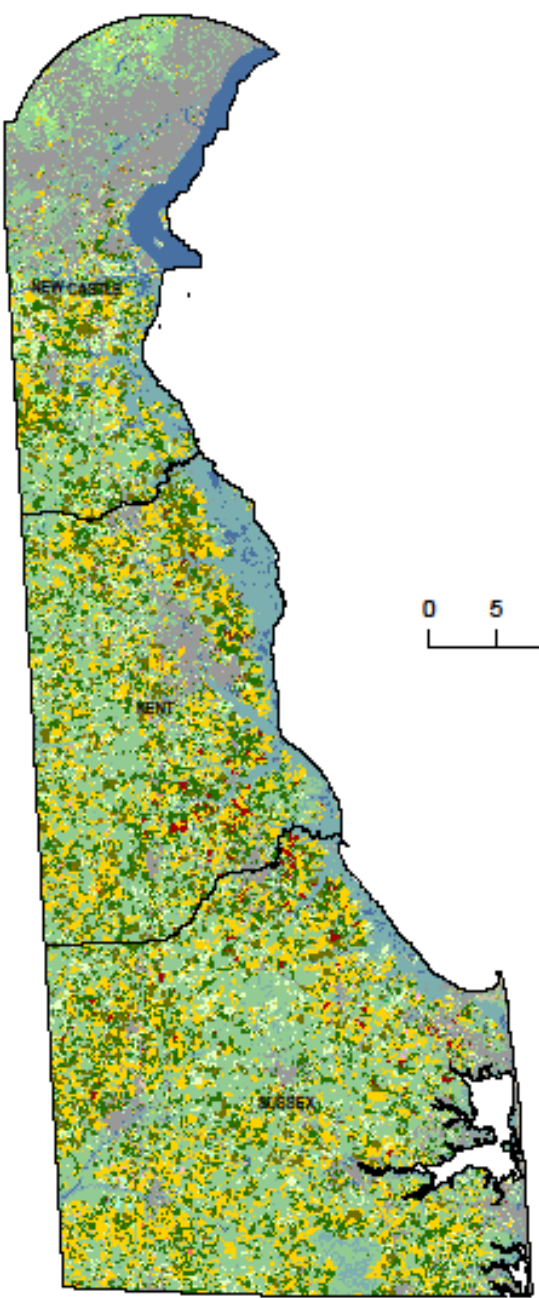
AGRICULTURE

- Other Hays
- Corn/Db. Crop. Corn
- Soybeans/Db. Crop. Soy.
- Pasture/Grass
- W. Wht./Soy. Db. Crop
- Fallow/Idle Cropland
- Winter Wheat/Db. Crop. WW
- Alfalfa
- Other Crops
- Seed/Sod Grass
- Sorghum/Db. Crop. Sorg.
- Barley
- Christmas Trees
- Potatoes
- Apples/Other Tree Fruit
- Melons
- Dry Beans
- Oats
- Misc. Veggies. & Fruits
- Other Small Grains

NON-AGRICULTURE

- Woodland
- Urban/Developed
- Wetlands
- Water
- Barren
- Shrubland





Land Cover Categories (by decreasing acreage)

AGRICULTURE

- Corn/Db. Crop. Corn
- Soybeans/Db. Crop. Soybeans
- W. Wht./Soy. Db. Crop
- Pasture/Grass
- Other Hays
- Fallow/Idle Cropland
- Dry Beans
- Winter Wheat
- Alfalfa
- Seed/Sod Grass
- Potatoes
- Melons
- Other Crops
- Misc. Veggies. & Fruits/Tree Fruits
- Sorghum
- Other Small Grains

NON-AGRICULTURE

- Woodland
- Urban/Developed
- Wetlands
- Water
- Barren
- Shrubland

Cropland Data Layer Program Components



- Advanced Wide Field Sensor (AWiFS) data
- Ground truth: FSA/CLU + 578 & NLCD
- Ancillary data sets
- Commercial Software Suite
- See5 Decision Tree Methodology
- Estimation

IRS Resourcesat-1 AWiFS Imagery

740 km swath width

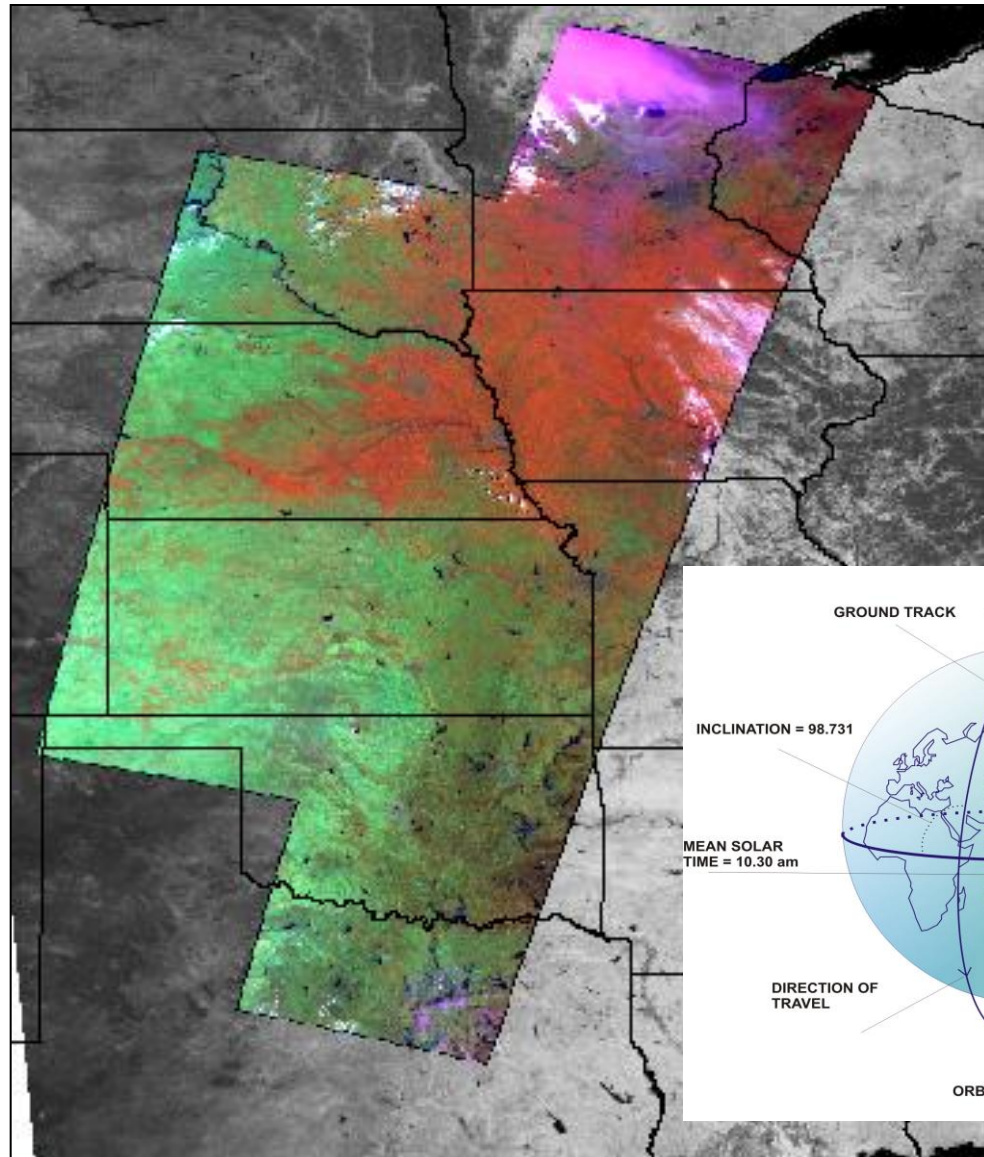
5-day revisit

4 spectral bands

- B2: 0.52 - 0.59
- B3: 0.62 - 0.68
- B4: 0.76 - 0.86
- B5: 1.55 - 1.7

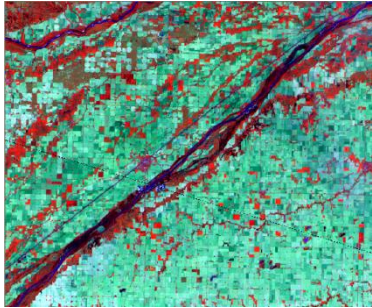
56 m nadir/70 m field edges

Data provided through USDA
Foreign Agricultural Service (FAS),
Satellite Image Archive

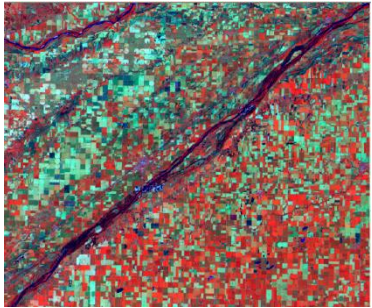


13 Aug 2007

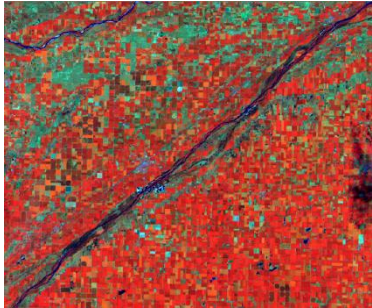
AWiFS Imagery Time Series



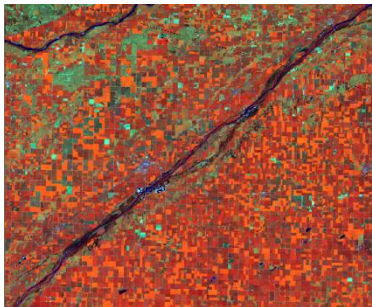
May 18



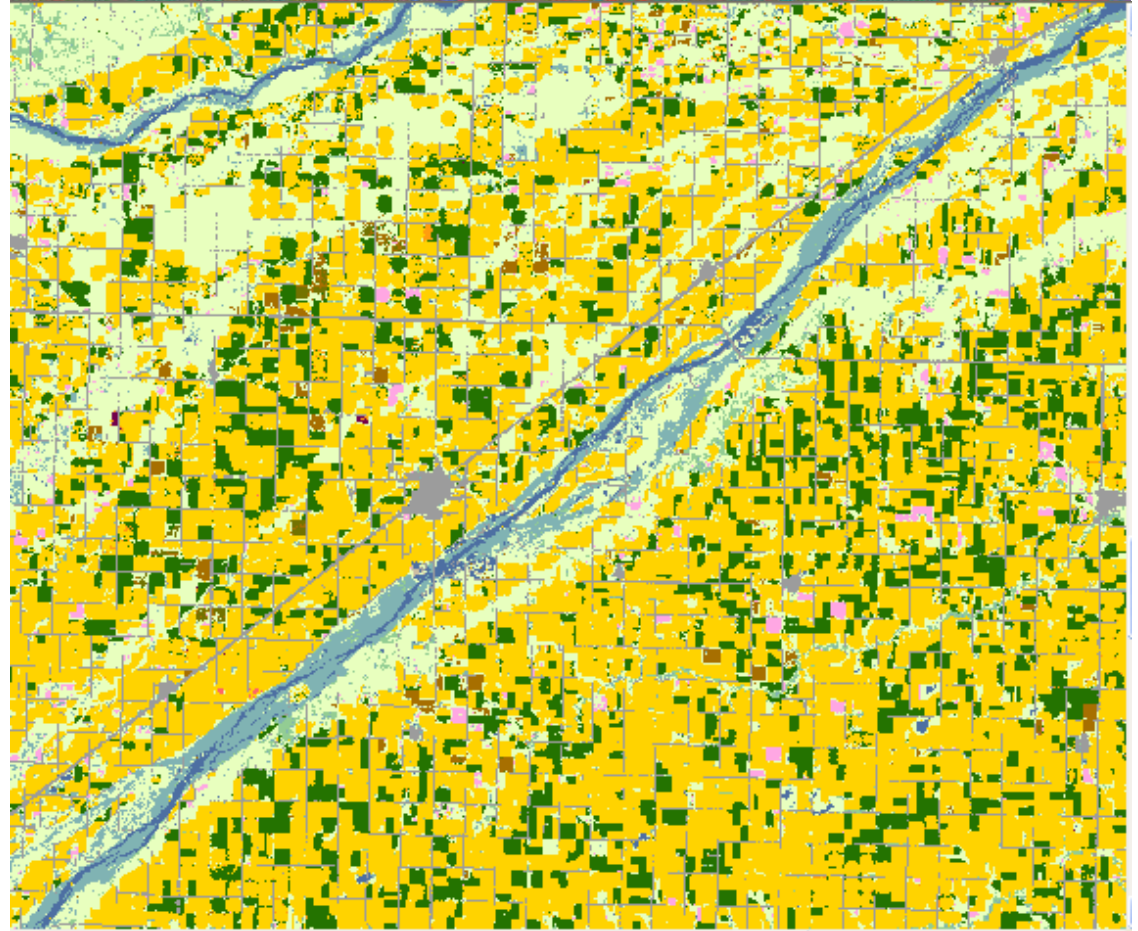
June 21



July 15



Aug 27



Agricultural Ground Truth

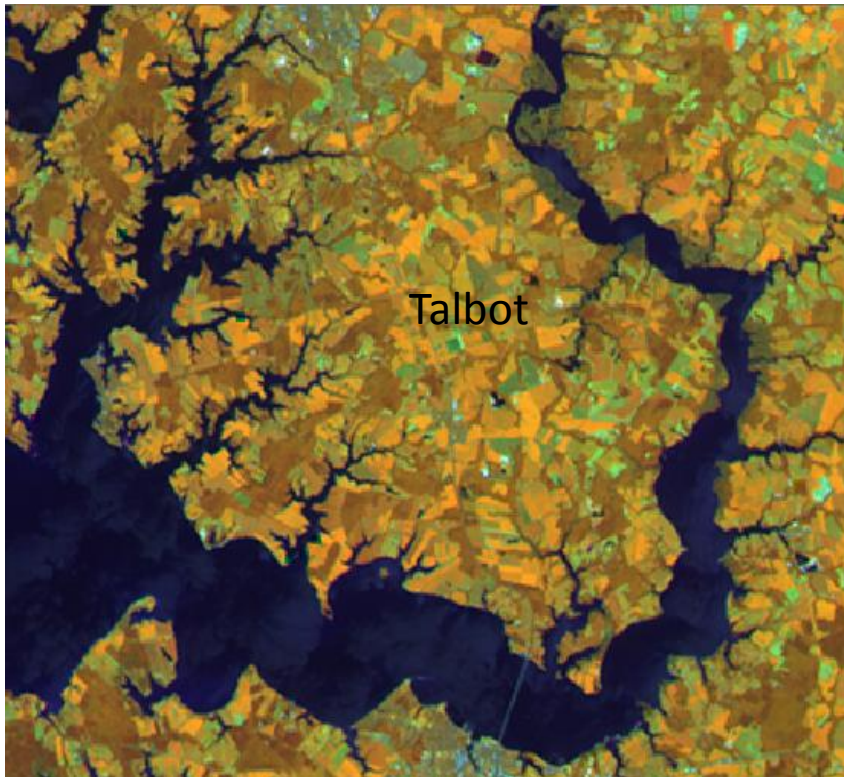


- Common Land Unit (CLU)
- 578 attributed reporting data

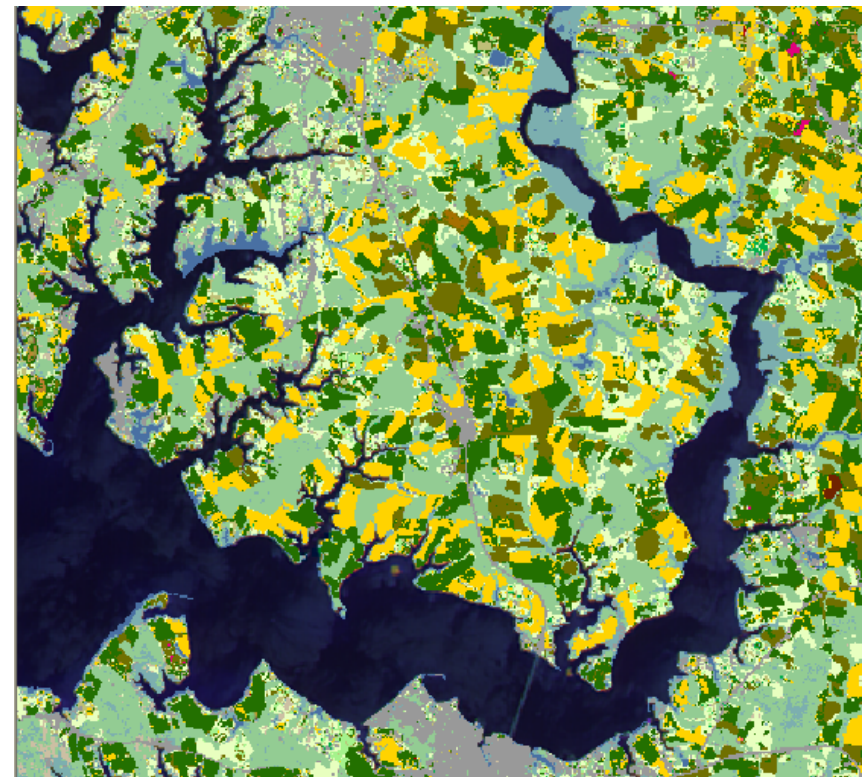


Maryland

AWiFS, 8/25/09
Bands 4/3/2 in RGB



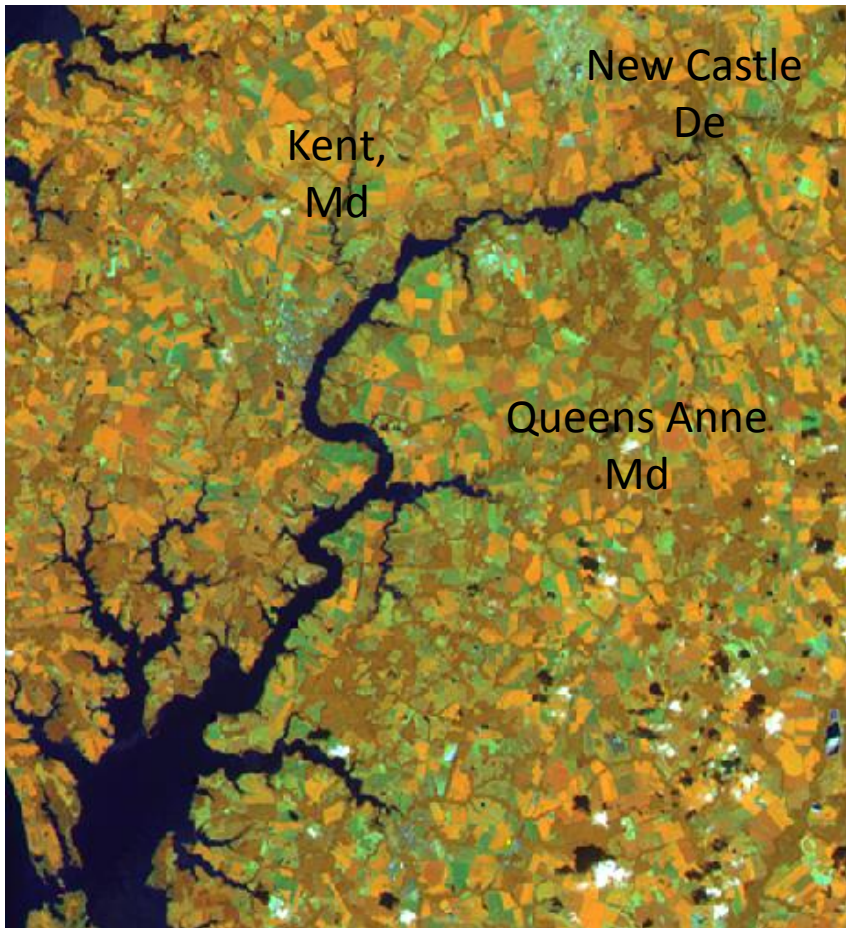
NASS Cropland Data Layer
Land Cover Classification



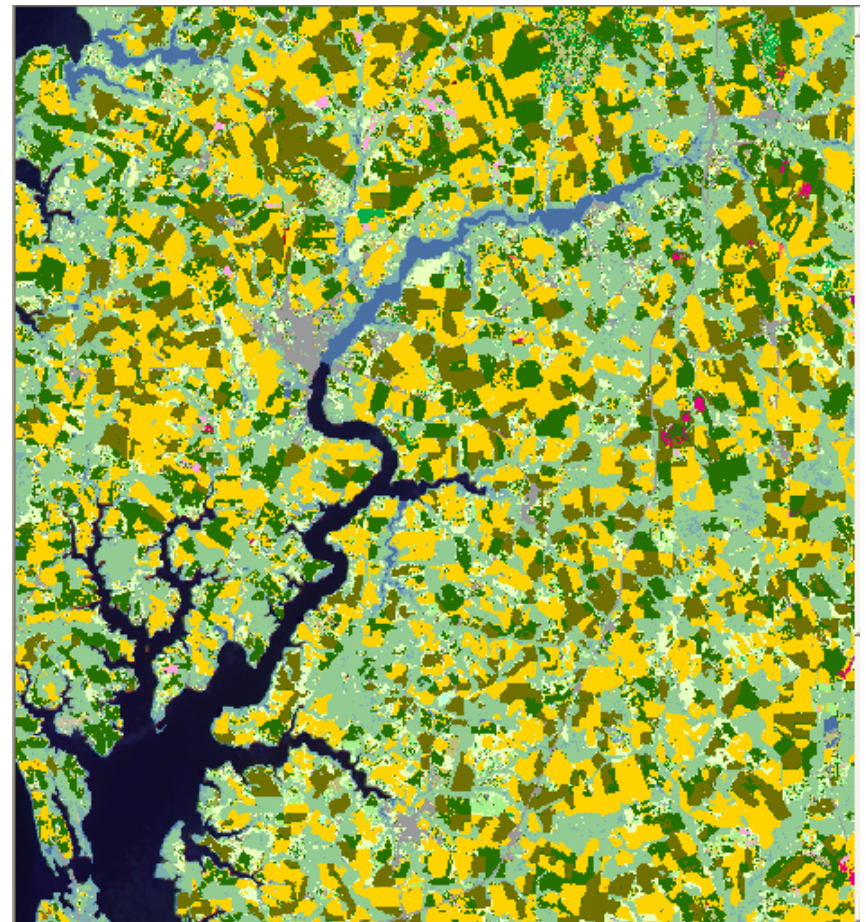
■ Corn ■ Soybeans
■ W. Wht./Soy. Dbl. Crop

Maryland/ Delaware

AWiFS, 8/25/09
Bands 4/3/2 in RGB



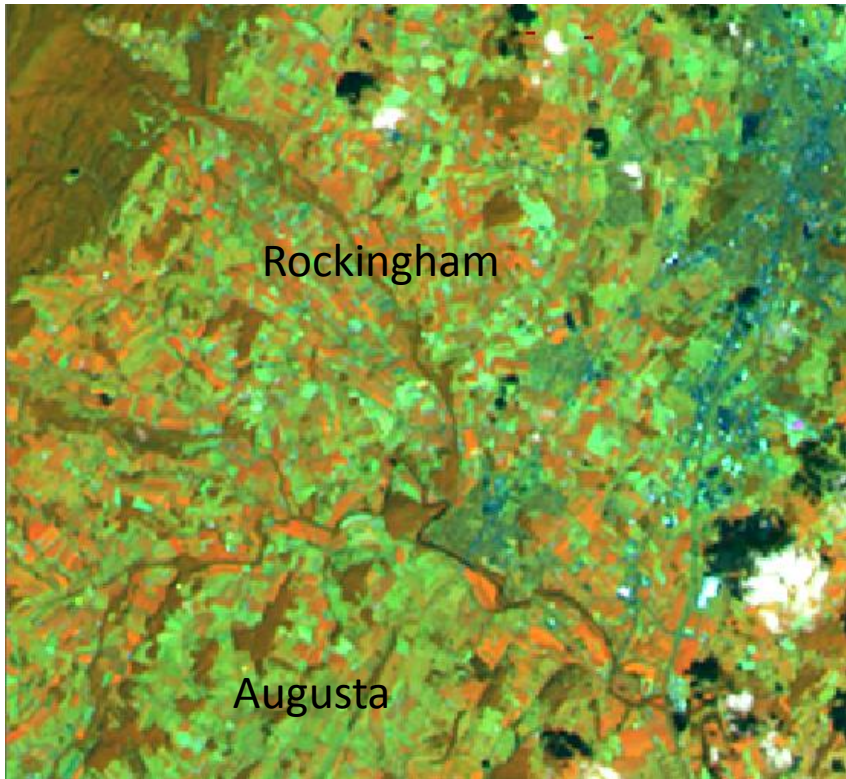
NASS Cropland Data Layer
Land Cover Classification



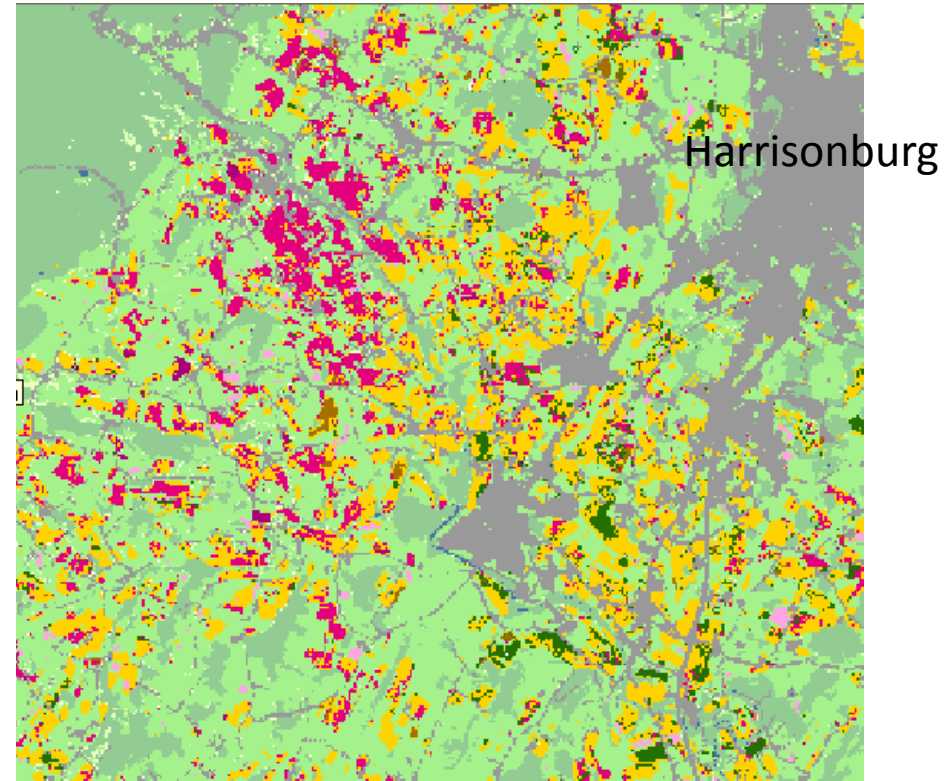
 Corn  Soybeans
 W. Wht./Soy. Dbl. Crop

Virginia

AWiFS, 9/03/09
Bands 4/3/2 in RGB

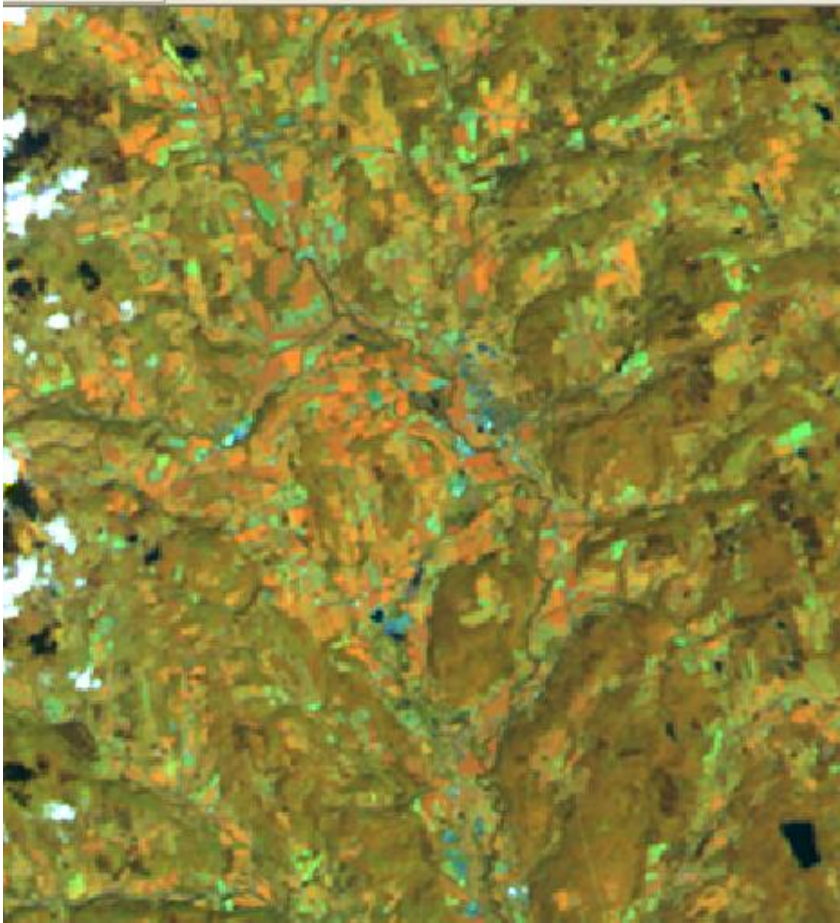


NASS Cropland Data Layer
Land Cover Classification

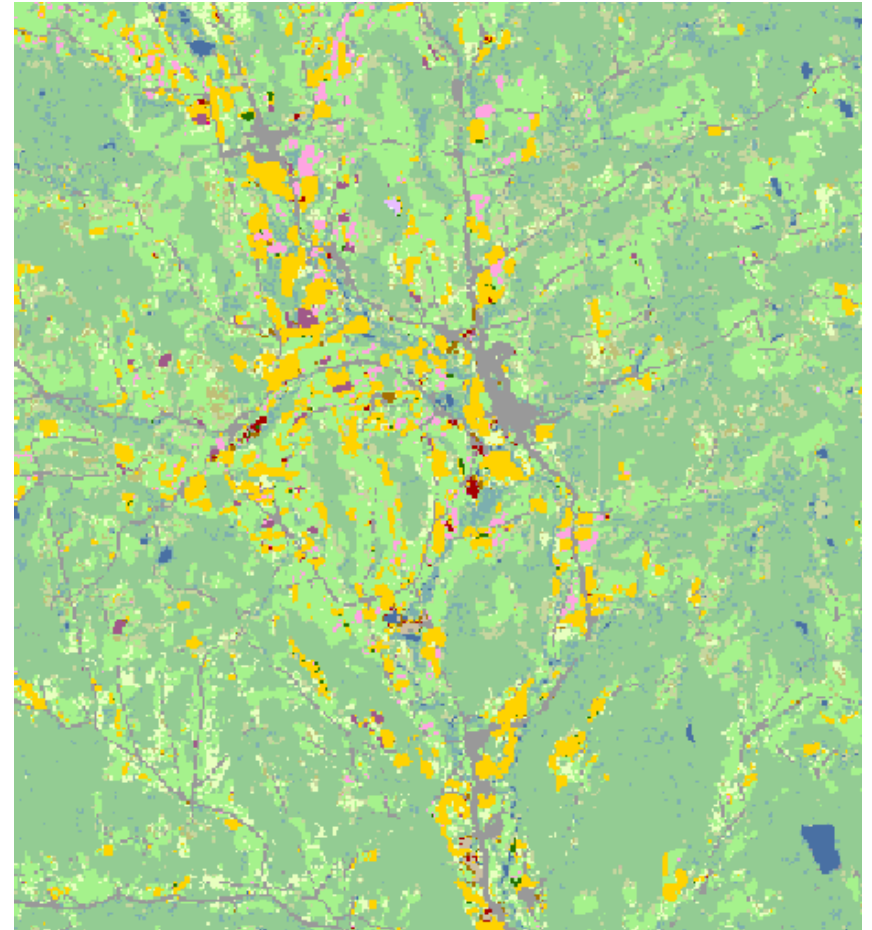


New York

AWiFS, 9/03/09
Bands 4/3/2 in RGB



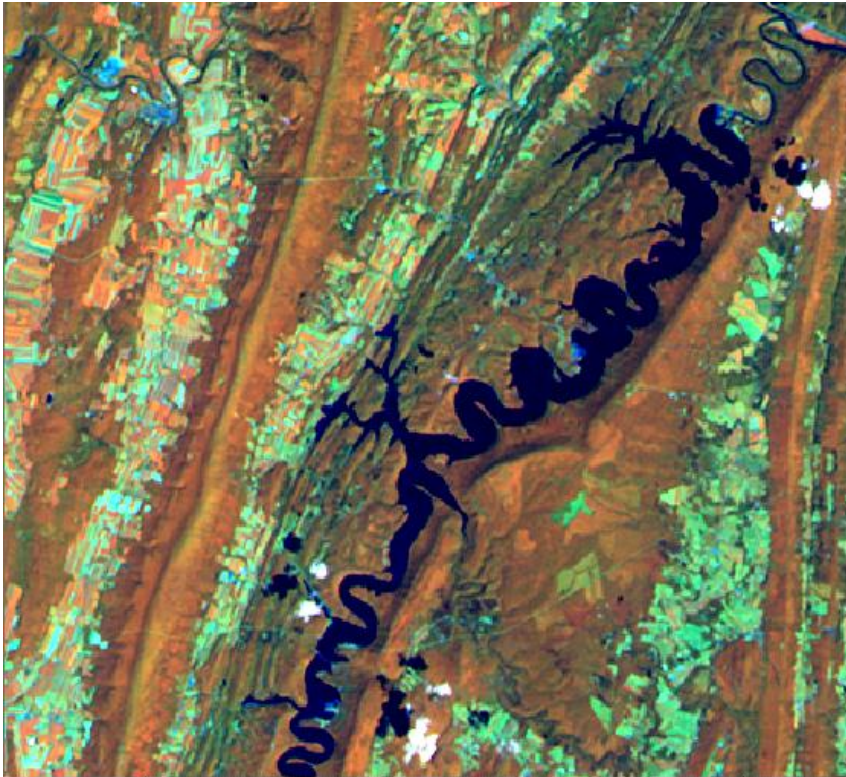
NASS Cropland Data Layer
Land Cover Classification



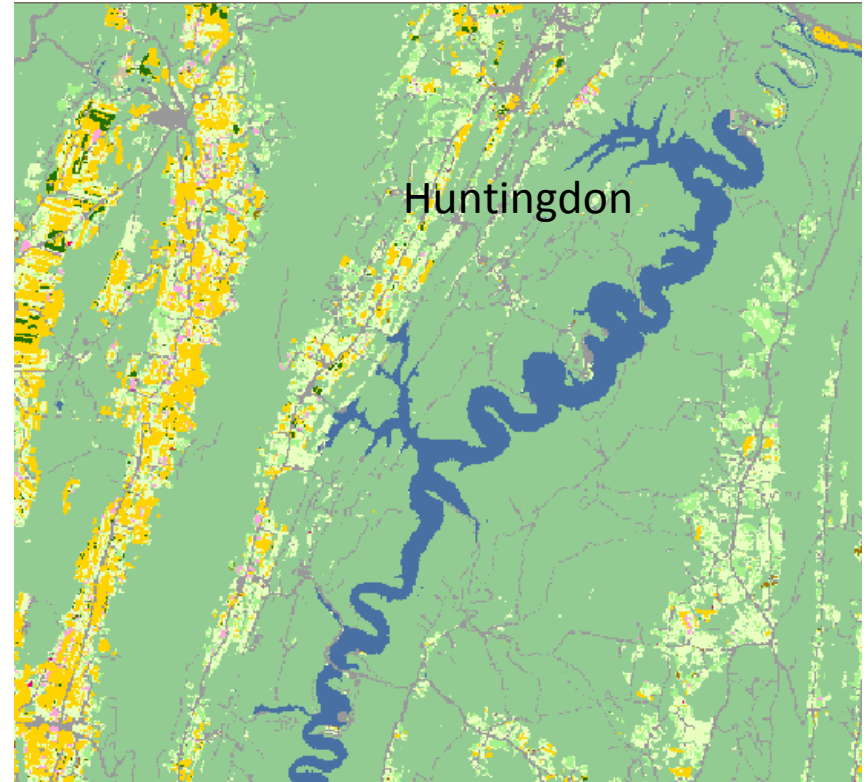
■ Corn ■ Oats ■ Alfalfa

Pennsylvania

AWiFS, 9/03/09
Bands 4/3/2 in RGB



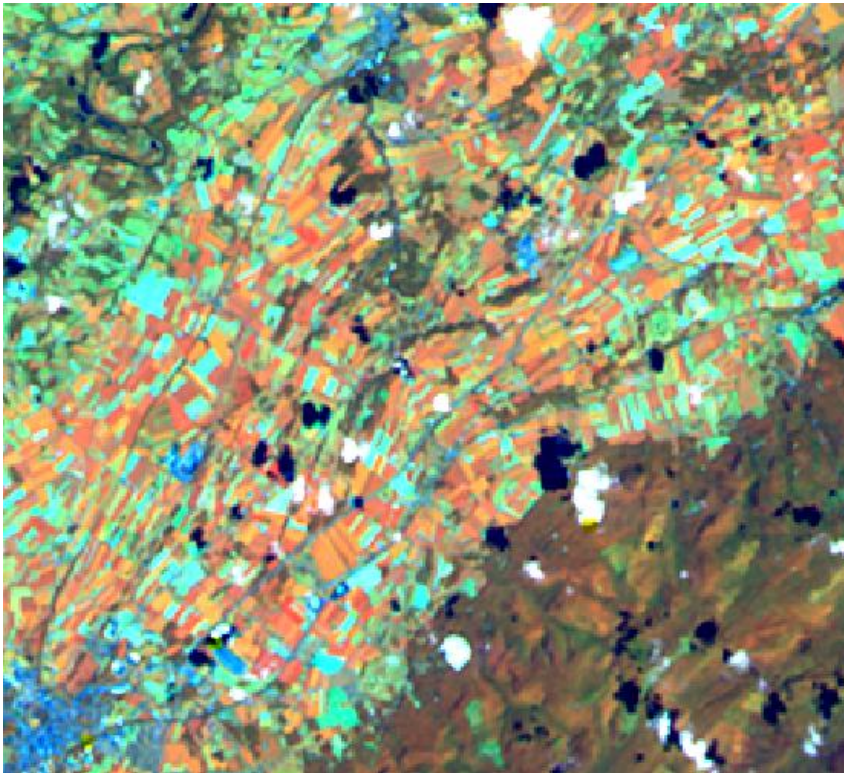
NASS Cropland Data Layer
Land Cover Classification



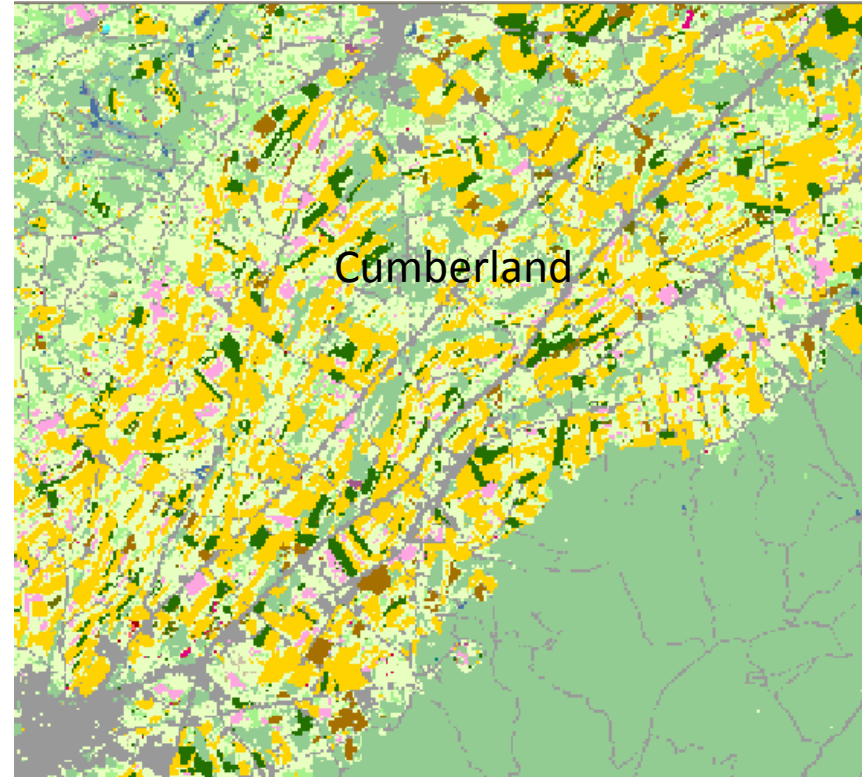
■ Corn ■ Soybeans

Pennsylvania

AWiFS, 9/03/09
Bands 4/3/2 in RGB



NASS Cropland Data Layer
Land Cover Classification



■ Corn ■ Soybeans
■ W. Wht./Soy. Dbl. Crop

USDA, National Agricultural Statistics Service, 2009 Delaware, Maryland and New Jersey Cropland Data Layers STATEWIDE AGRICULTURAL ACCURACY REPORT

Crop-specific covers only	*Correct	Accuracy	Error	Kappa
-----	-----	-----	-----	-----
OVERALL ACCURACY**	179913	80.86%	19.14%	0.7479

Cover Type	Attribute Code	*Correct Pixels	Producer's Accuracy	Omission Error	Kappa	User's Accuracy	Commission Error	Cond'l Kappa
----	----	-----	-----	-----	-----	-----	-----	-----
Corn	1	78299	93.03%	6.97%	0.9148	90.40%	9.60%	0.8833
Sorghum	4	100	14.41%	85.59%	0.1438	62.89%	37.11%	0.6284
Soybeans	5	47341	87.10%	12.90%	0.8540	85.56%	14.44%	0.8370
Sunflowers	6	0	0.00%	100.00%	0.0000	0.00%	100.00%	-0.0001
Sweet Corn	12	105	18.55%	81.45%	0.1850	38.04%	61.96%	0.3797
Barley	21	36	12.90%	87.10%	0.1288	33.64%	66.36%	0.3361
Winter Wheat	24	1662	38.49%	61.51%	0.3814	61.85%	38.15%	0.6150
W. Wht./Soy. Dbl. Crop	26	30968	90.17%	9.83%	0.8936	85.21%	14.79%	0.8406
Rye	27	104	21.94%	78.06%	0.2191	52.53%	47.47%	0.5248
Oats	28	38	19.69%	80.31%	0.1968	46.91%	53.09%	0.4689
Millet	29	0	0.00%	100.00%	0.0000	n/a	n/a	n/a
Alfalfa	36	672	37.42%	62.58%	0.3727	61.43%	38.57%	0.6128
Other Hays	37	11359	69.71%	30.29%	0.6856	65.56%	34.44%	0.6434
Dry Beans	42	943	59.09%	40.91%	0.5899	84.73%	15.27%	0.8467
Potatoes	43	329	39.98%	60.02%	0.3992	68.54%	31.46%	0.6849
Other Crops	44	130	15.72%	84.28%	0.1568	53.06%	46.94%	0.5298
Sweet Potatoes	46	19	52.78%	47.22%	0.5277	30.16%	69.84%	0.3015
Misc. Veggies. & Fruits	47	2	1.96%	98.04%	0.0195	2.99%	97.01%	0.0296
Watermelon	48	85	31.37%	68.63%	0.3135	73.28%	26.72%	0.7326
Peas	53	0	0.00%	100.00%	0.0000	0.00%	100.00%	0.0000
Tomatoes	54	95	45.02%	54.98%	0.4500	48.47%	51.53%	0.4845
Herbs	57	0	0.00%	100.00%	0.0000	0.00%	100.00%	0.0000

Correct Pixels represents the total number of independent validation pixels correctly identified in the error matrix.



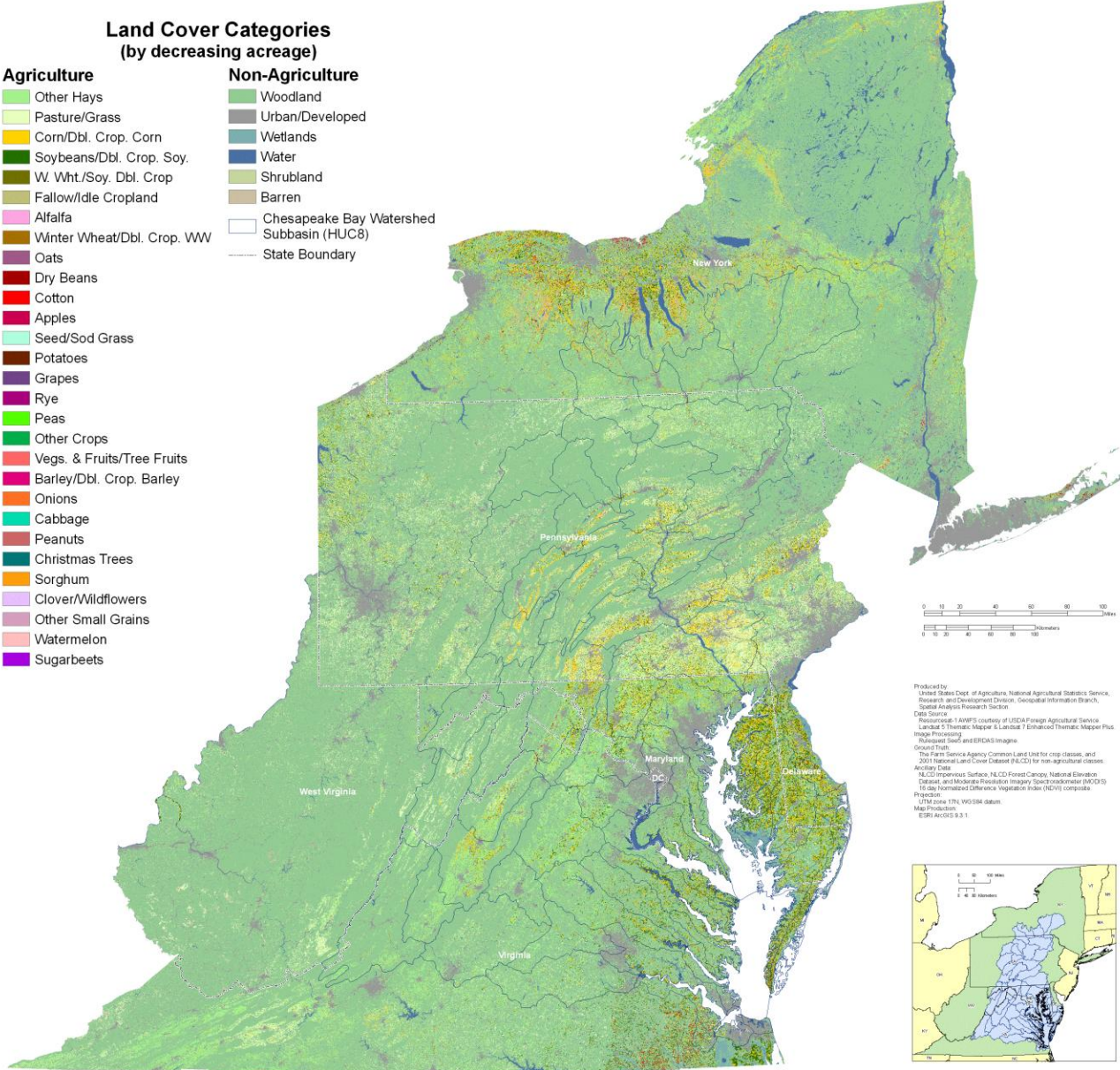
Chesapeake Bay Watershed States 2009 Cropland Data Layers



USDA, National Agricultural Statistics Service

Land Cover Categories (by decreasing acreage)

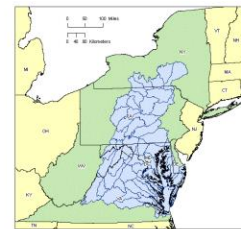
Agriculture	Non-Agriculture
Other Hays	Woodland
Pasture/Grass	Urban/Developed
Corn/Dbl. Crop. Corn	Wetlands
Soybeans/Dbl. Crop. Soy.	Water
W. Wht./Soy. Dbl. Crop	Shrubland
Fallow/Idle Cropland	Barren
Alfalfa	Chesapeake Bay Watershed Subbasin (HUC8)
Winter Wheat/Dbl. Crop. WW	State Boundary
Oats	
Dry Beans	
Cotton	
Apples	
Seed/Sod Grass	
Potatoes	
Grapes	
Rye	
Peas	
Other Crops	
Vegs. & Fruits/Tree Fruits	
Barley/Dbl. Crop. Barley	
Onions	
Cabbage	
Peanuts	
Christmas Trees	
Sorghum	
Clover/Wildflowers	
Other Small Grains	
Watermelon	
Sugarbeets	



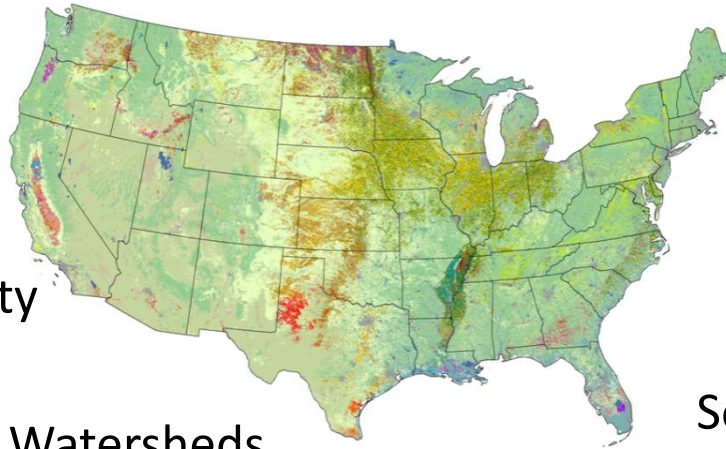
Major Crops in the Watershed

- Other Hays (VA)
- Corn (PA)
- Soybeans (MD)
- Winter Wheat /Soybeans (MD)
- Alfalfa (PA)

Produced by:
United States Dept. of Agriculture, National Agricultural Statistics Service,
Research and Development Division, Geospatial Information Branch,
Spatial Analysis Research Section
Data Source:
Resources: AWRIS courtesy of USDA's Agricultural Services
Landsat 5 Thematic Mapper, Landsat 7 Enhanced Thematic Mapper Plus
Image Processing:
Rubenstein S&I and ERDAS Imagine
Spatial Tools:
The Farm Service Agency Common Land Unit for crop classes, and
2001 National Land Cover Database (NLCD) for non-agricultural classes.
Auxiliary Data:
NCDC Elevation Surface, NCDC Forest Canopy, National Elevation
Dataset, and Moderate Resolution Imaging Spectroradiometer (MODIS)
16 day Normalized Difference Vegetation Index (NDVI) composite.
Projection:
UTM Zone 17N, WGS84 datum
Map Projections:
ESRI ArcGIS 9.3.1



Research



Agribusiness

Pesticides

Crop Production

Education

Fertilizer Usage

Condition Assessment

Soil and Water

Urban Growth

Environmental Risk

Water Quality

Crop Protection

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Land Management

Acreage Estimates

Change Detection

Commodity

Watersheds

Modeling

Crop Intensity

Yield

Crop Rotation

Carbon

Irrigation

Erosion

Wildlife Habitat

Land Cover

Ecosystem

CRP

Climate

Soil Utilization

Water Use

Pest Control

Transportation

Forest

Epidemiology

Biodiesel

Ethanol

Climate

Thank You

Claire Boryan

claire_boryan@nass.usda.gov

703-877-8000 x107

www.nass.usda.gov

datagateway.nrcs.usda.gov

