

Patrick Willis
Federal Contractor

**United States Department of Agriculture (USDA)
National Agricultural Statistics Service (NASS)
Research and Development Division (RDD)
Spatial Analysis Research Section (SARS)**

The USDA-NASS 2007 California Cropland Data Layer

ASPRS Annual Conference – Portland, 2008



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

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

Home About NASS Newsroom Publications **Data and Statistics** Census Surveys Help Contact Us

You are here: Home / Data and Statistics

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.

I Want To...

- Query NASS Data from a Data Base
- Search for Data by Commodity
- Request a Special Tabulation
- Contact a Specialist
- View Data in Charts and Maps

About NASS Estimates

- Importance of Ag Estimates
- Understanding Crop Forecasts
- Foundation of Estimates
- Estimating Programs
- Citation Request

Also See

- NASS Publications
- Statistical Bulletins
- Pest Management
- Price Reactions
- State Ag Overview
- Track Records

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: 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 | White House

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. Soybean losses were 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 crops. Damage was reported on 27 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 Yield (bushels)	Average Yield Loss (bushels)	Production Loss (bu)	Economic Loss (\$)
Western Maryland	Corn	9,500	124,493	7.4	40,100	83
	Soybeans	300	36.7	9.9	1,202,250	2,413
	Wheat	200	45.2	2.0	460	1
Central Maryland	Corn	114,200	984	3.9	360,750	1,479
	Soybeans	92,800	34.2	3.3	126,250	319
	Wheat	38,300	63.3	3.3	126,250	319
Southern Maryland	Corn	29,800	132.9	4.9	146,250	299
	Soybeans	43,200	39.0	3.1	142,250	354
	Wheat	16,900	57.0	0.9	14,400	36
Upper Shore	Corn	197,200	159.2	5.1	800,750	1,211
	Soybeans	232,000	39.8	2.4	186,000	2,232
	Wheat	84,800	64.0	1.1	99,250	233

USDA 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 FORECASTS RECORD-SETTING CORN CROP FOR 2007

Washington, Aug. 10, 2007 – U.S. history in 2007, according to the United States Department of Agriculture's National Agricultural Statistics Service, is 13.1 billion bushels, 10.6 percent more than the record set in 2006. Based on conditions as of August 10, 2007, the Service projects a record-setting corn crop of 13.1 billion bushels, up 3.7 bushels from last year's crop. The record-setting crop is behind the 160.4 bushels per acre national average, up 2.0 bushels per acre from last year's crop. Yield forecasts are higher than last year's forecasts in the Delta. Meanwhile, hot, dry conditions in the Southeast and eastern Corn Belt, Ohio Valley and parts of the Midwest are expected to reduce yields in those areas.

WISCONSIN AGRICULTURAL STATISTICS SERVICE
P.O. Box 8034 Madison, WI 53708-8034
In cooperation with WI Department of Agriculture, Trade and Consumer Protection

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 Agricultural 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.

2002 Census of Agriculture - SVG Interactive Mapping - United States - 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:

Download data as CSV | XML | PDF

Help | Print | Return to

Legend

Scale: National | Zero or Data Withheld

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

- <= 20,000
- 20,001 to 40,000
- 40,001 to 60,000
- 60,001 to 80,000
- 80,001 to 100,000
- 100,001 >=

Comparisons: 6 | 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 1/

Wisconsin Dairy Herds by Herd Size

Milk cow herd size	May 2002 herds	May 2007 herds (projected) 1/	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	+10
200 - 499	700	600	-29
500+	200	440	+120
Total	17,500	15,900	-20

1/ 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

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

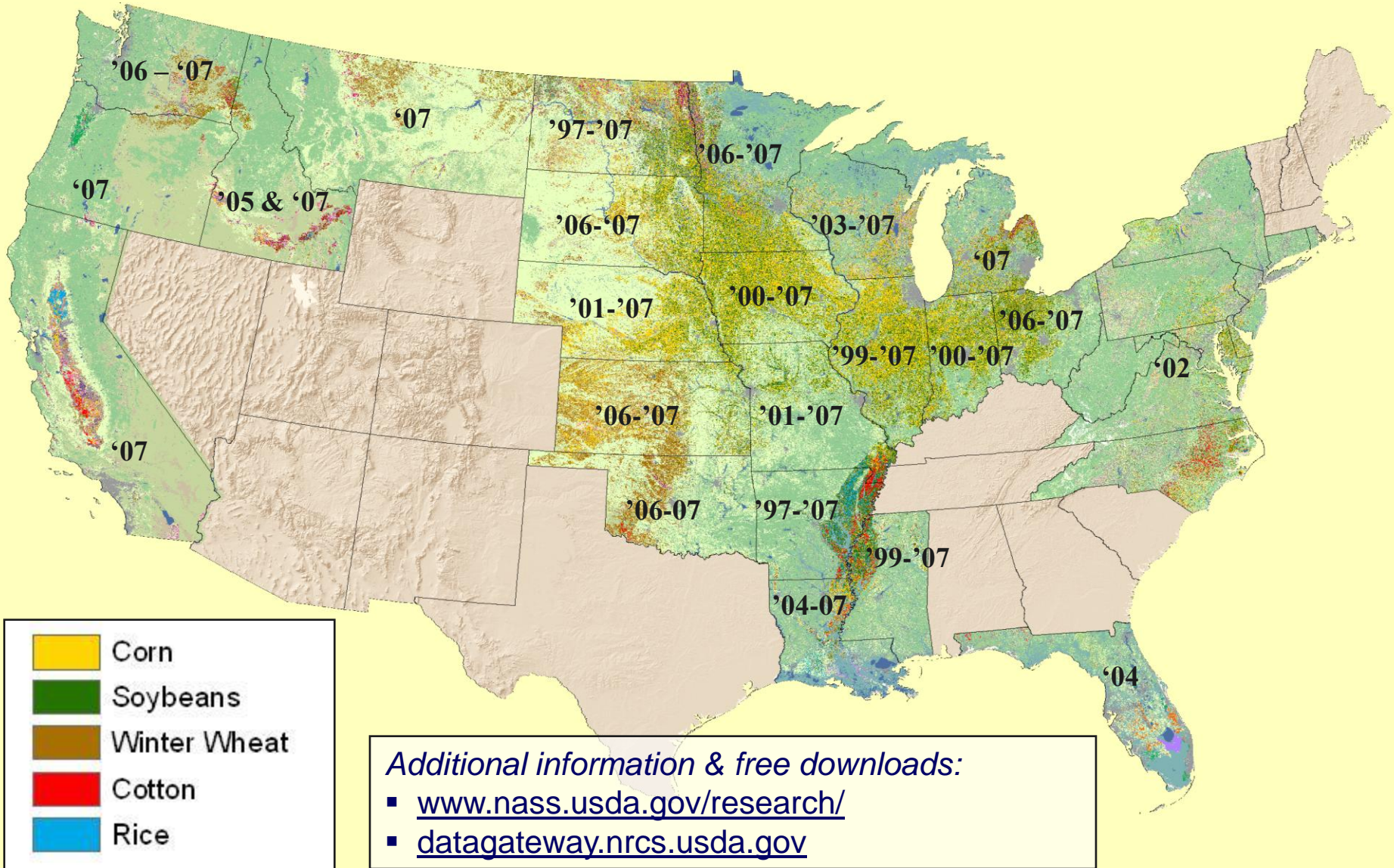
Herds	Keep same herd size	Increase herd size	Discontinue milking
2,800	47	17	36
4,700	71	9	20
7,400	63	19	18
1,900	53	37	10
700	33	59	8
200	22	78	0
17,500	62	29	20

1/ 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.





Cropland Data Layers 1997 - 2007



Purpose of the Cropland Data Layer (CDL) Program

Typically, the CDL program goals are:

- 1) Combine remote sensing imagery, USDA/Farm Service Agency reported data and NASS survey data to produce supplemental, unbiased independent acreage estimates for the state's major commodities.
- 2) Production of a crop-specific digital land cover data layer for distribution in industry standard formats.

Annual CDL states traditionally focused in the Midwest and Mississippi Delta States

- Corn, Cotton, Rice, Soybeans, Winter Wheat



Corn

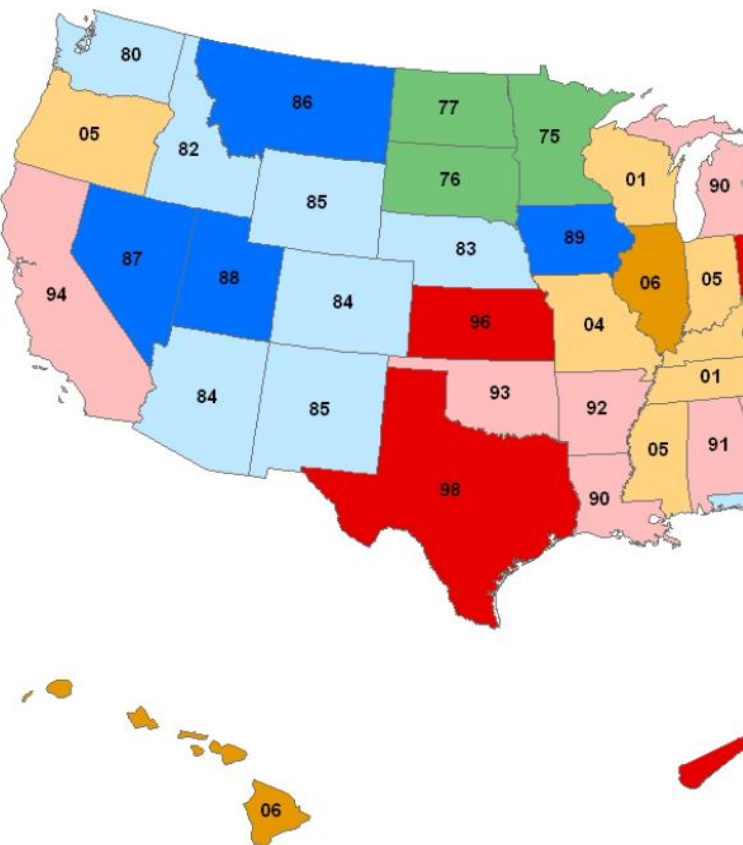


Soybeans

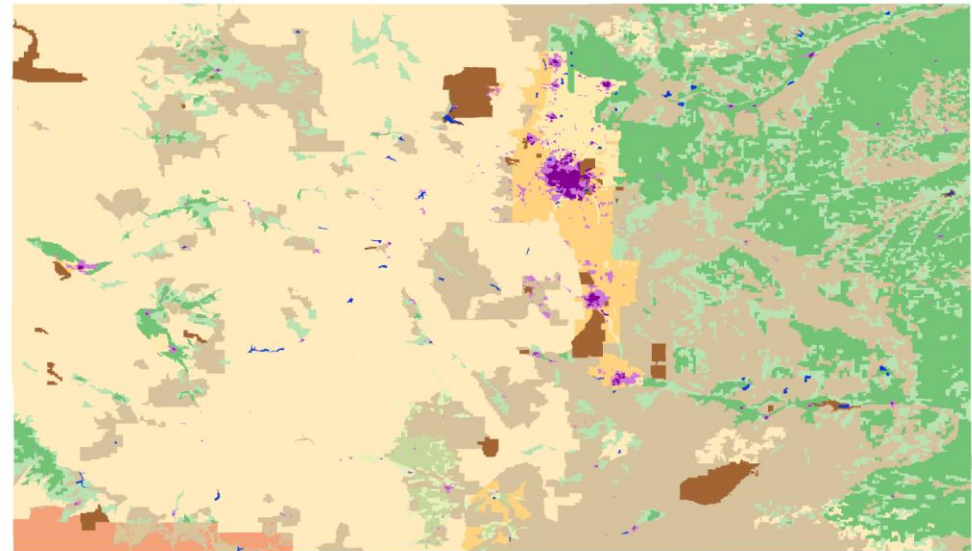
Purpose of the Cropland Data Layer (CDL) Program

The 2007 California CDL intended as a one-time special project

- Done at the request of NASS' Area Frame Section
- Update of the California area sampling frame



**Stratification of Colorado
1984**



Land Use Strata

- | | | |
|-------------------|-----------------------------------|------------------|
| >50% Cultivated | Agri-Urban: >20 Homes/Sq Mi | Native American |
| >50% Potato | Commercial: >20 Homes/Sq Mi | Public |
| 15-50% Cultivated | >50% Cultivated/Potential Urban | Non-Agricultural |
| Native American | 15-50% Cultivated/Potential Urban | Water |
| 15-50% Potato | Private | |

Projection: Geographic Latitude and Longitude



Top 20 Commodities for 2004-2006

Commodity	Value and Rank					
	2004		2005		2006	
	<i>\$1,000</i>					
Milk and Cream	5,365,992	(1)	5,223,062	(1)	4,492,229	(1)
Grapes, All	2,764,534	(2)	3,197,820	(2)	3,032,655	(2)
Nursery and Greenhouse Products	2,297,363	(3)	2,433,346	(4)	2,775,000	(3)
Almonds	2,189,005	(4)	2,525,909	(3)	2,040,357	(4)
Cattle and Calves	1,633,740	(6)	1,744,403	(5)	1,676,354	(5)
Lettuce, All	1,748,826	(5)	1,416,117	(6)	1,607,572	(6)
Strawberries, All	1,205,513	(7)	1,122,834	(8)	1,194,379	(7)
Tomatoes, ^A	1,100,357	(8)	1,010,260	(10)	1,120,641	(8)
Floriculture						(9)
Hay, All						(10)
Oranges, A						(11)
Chickens, /						(12)
Broccoli						(13)
Cotton, All						(14)
Walnuts						(15)
Rice						(16)
Carrots, Al						(17)
Pistachios						(18)
Lemons						(19)
Avocados						(20)

USDA's National Agricultural Statistics Service, California Field Office publications are available free-of-charge on the Internet at:

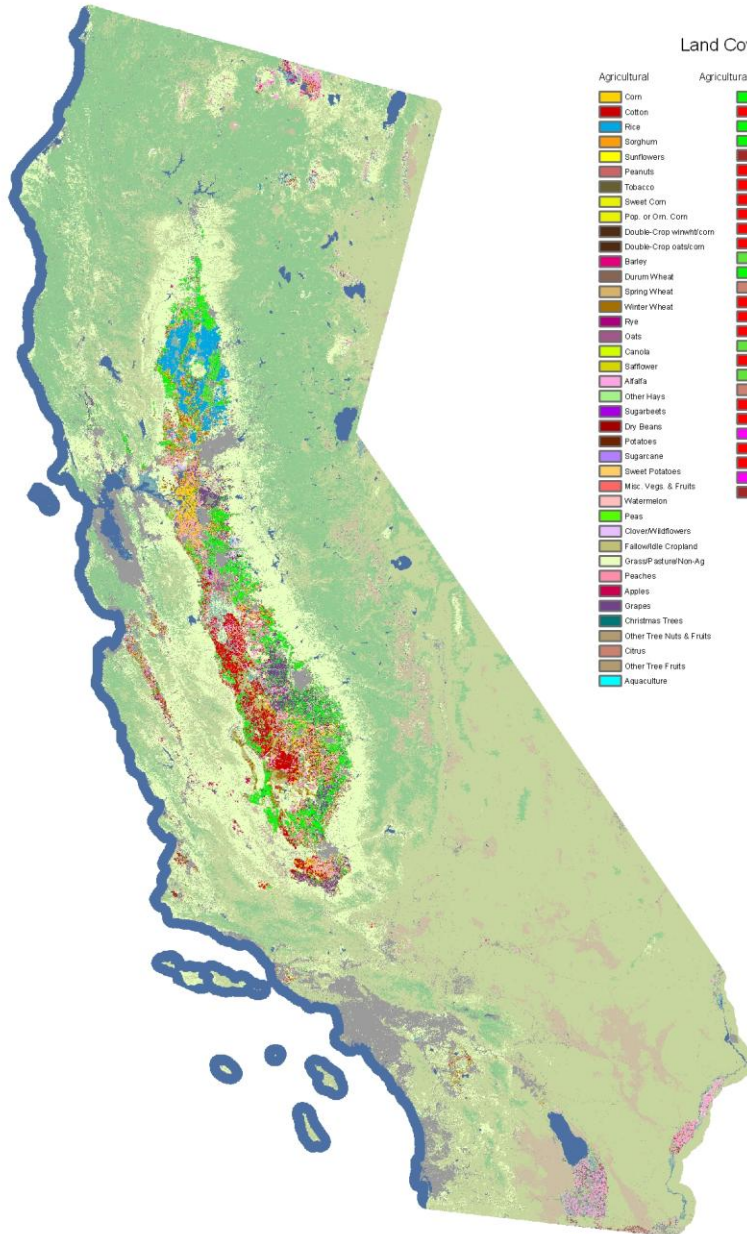
www.nass.usda.gov/ca

County						
Fresno						
Tulare						
Monterey						
Kern	3,350,715	(5)	3,476,801	(4)	Almonds and By-Products, All Grapes, Milk, All Carrots, All citrus	
Merced	2,388,058	(5)	2,284,457	(5)	Milk, All chickens, Almonds, Cattle and Calves, All Tomatoes	
Stanislaus	1,977,596	(6)	2,148,152	(6)	Milk, Almonds, Cattle and Calves, All chickens, Walnuts	
San Joaquin	1,735,528	(7)	1,684,871	(7)	Milk, All Grapes, All tomatoes, Almonds, Walnuts	
Ventura	1,253,048	(11)	1,505,588	(8)	Fresh Market Strawberries, Lemons, Celery, Woody Ornamentals, Tomatoes	
San Diego	1,531,307	(8)	1,461,476	(9)	Flower and Foliage Plants, Trees and Shrubs, Bedding Plants, Avocados, Tomatoes	
Imperial	1,286,066	(10)	1,307,615	(10)	Cattle, Alfalfa Hay, Carrots, Leaf Lettuce, Head Lettuce	

2007 California Cropland Data Layer

Agricultural (California Specific)

- Almonds
- Tomatoes
- Walnuts
- Pistachios
- Triticale (Wheat Hybrid)
- Lettuce
- Onion
- Carrots
- Asparagus
- Garlic
- Cantaloupe
- Prunes
- Olives
- Oranges
- Honeydew Melons
- Broccoli
- Herbs
- Cherry Orchard
- Peppers
- Pomegranates
- Nectarine
- Cucumber
- Greens
- Plums
- Strawberries
- Squash
- Apricots
- Vetch (flowering plant)



Land Cover Categories

- | | |
|---|--|
| <p>Agricultural</p> <ul style="list-style-type: none"> Corn Cotton Rice Sorghum Sunflowers Peanuts Tobacco Sweet Corn Pop. or Om. Corn Double-Crop winter/om Double-Crop oats/corn Barley Durum Wheat Spring Wheat Winter Wheat Rye Oats Canola Alfalfa Other Hays Sugarbeets Dry Beans Potatoes Sugarcane Sweet Potatoes Misc. Vggs & Fruits Watermelon Pasa Clover/Wildflowers Fallow/Cropland Grass/Pasture/Non-Ag Pastures Apples Grapes Christmas Trees Other Tree Nuts & Fruits Citrus Other Tree Fruits Aquaculture | <p>Agricultural (California Specific)</p> <ul style="list-style-type: none"> Almonds Tomatoes Walnuts Pistachios Triticale (Wheat Hybrid) Lettuce Onion Carrots Asparagus Garlic Cantaloupe Prunes Olives Oranges Honeydew Melons Broccoli Herbs Cherry Orchard Peppers Pomegranates Nectarine Cucumber Greens Plums Strawberries Squash Apricots Vetch (flowering plant) |
|---|--|

Non-Agricultural

- NLCD - Open Water
- NLCD - Perennial Ice/Snow
- NLCD - Developed/Open Space
- NLCD - Developed/Low Intensity
- NLCD - Developed/Medium Intensity
- NLCD - Developed/High Intensity
- NLCD - Barren
- NLCD - Deciduous Forest
- NLCD - Evergreen Forest
- NLCD - Mixed Forest
- NLCD - Shrubland
- NLCD - Grassland Herbaceous
- NLCD - Woody Wetlands
- NLCD - Herbaceous Wetlands
- Grass/Grazing
- Grass/Forage
- Grass/Left Standing
- Grass/Seed
- Grass/Sod



Methodology

- “Stack” satellite imagery and ancillary data layers within a raster GIS
 - 30 meter grid cells, Albers Conic Equal Area projection
- Sample spatially from stack within known ground truth from FSA and NLCD
- Data-mine samples using Boosted Classification Tree Analysis to derive best fitting decision rules
- Apply derived decision rules back to input data stack
- Create land cover map
- Create probability map
- Assess map accuracy
- Derive acreage estimates
- Commercial Software
 - Ground Truth Preparation: ESRI ArcGIS 9.2
 - Imagery Preparation: Leica Geosystems ERDAS Imagine 9.1
 - Decision-Tree Classification Software: Rulequest See 5.0

Methodology

- Ground Truth
 - Agricultural training & validation
 - Farm Service Agency (FSA) Common Land Unit (CLU)
 - NASS June Agricultural Survey (JAS)
 - Non-Agricultural training & validation
 - USGS 2001 National Land Cover Dataset (NLCD)
- Satellite Imagery
 - Landsat 5 TM
 - IRS Resourcesat-1 AWiFS
 - NASA Terra MODIS 16-day composite NDVI
- Ancillary data layers
 - USGS National Elevation Dataset (NED)
 - USGS NLCD 2001 Impervious and Tree Canopy layers
 - Farmland Mapping and Monitoring Program (2004 FMMP)

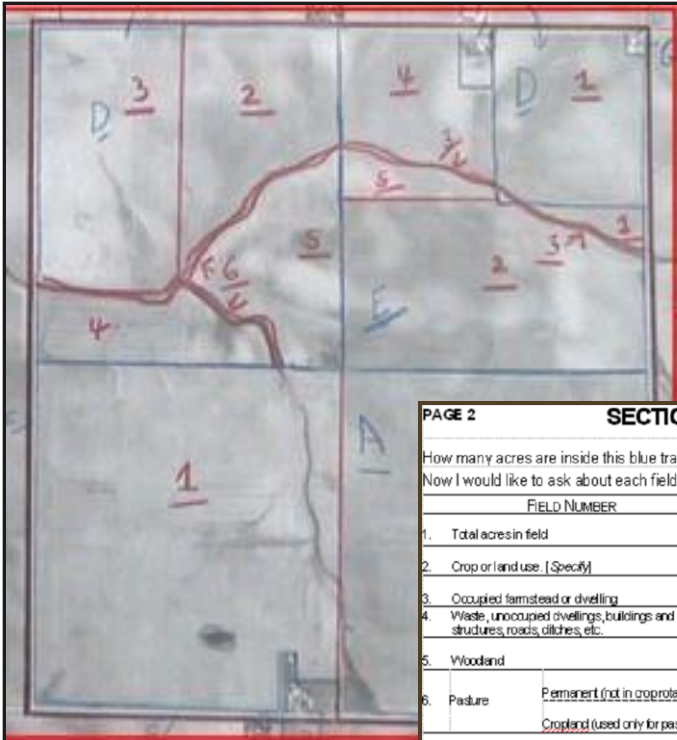
Ground Truth

- Agricultural Training & Validation
 - Farm Service Agency (FSA) Common Land Unit (CLU) Program
 - ½ used for training
 - ½ used for validation
 - NASS June Agricultural Survey (JAS)
- Non-Agricultural Training & Validation
 - USGS National Land Cover Dataset (NLCD) 2001
 - Sampled proportionate to the amount of agricultural training data

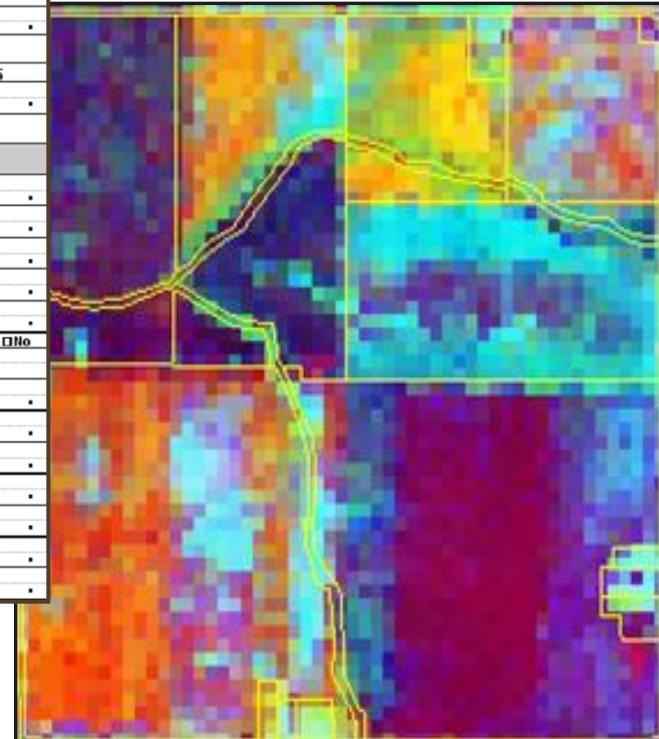
Ground truth - Agricultural Training & Validation

June Agricultural Survey (JAS) – National in Scope

- 41,000 farms visited
- 11,000 one-square mile sample area segments
- Most states contain 150 – 400 segments
- California 404 segments



PAGE 2		SECTION D - CROPS AND LAND USE ON TRACT										17
How many acres are inside this blue tract boundary drawn on the photo (map)?												
Now I would like to ask about each field inside this blue tract boundary and its use during 2000.												
FIELD NUMBER		01	02	03	04	05						
1.	Total acres in field	828	828	828	828	828						
2.	Crop or land use. (Specify)											
3.	Occupied farmstead or dwelling	843										
4.	Waste, unoccupied dwellings, buildings and structures, roads, ditches, etc.	---	---	---	---	---						
5.	Woodland	831	831	831	831	831						
6.	Pasture	842	842	842	842	842						
	Permanent (not in crop rotation)	856	856	856	856	856						
	Cropland (used only for pasture)	857	857	857	857	857						
8.	Idle cropland - Idle all during 2000	867	867	867	867	867						
9.	Two crops planted in this field or two uses of the same crop. [Specify second crop or use]	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
		844	844	844	844	844						
	Acres	810	810	810	810	810						
10.	Acres left to be planted	620	620	620	620	620						
11.	Acres irrigated and to be irrigated. [If double cropped, include acreage of each crop irrigated]	540	540	540	540	540						
16.	Winter Wheat (include cover crop)	Planted	541	541	541	541	541					
		For grain or seed	547	547	547	547	547					
18.	Rye (include cover crop)	Planted	548	548	548	548	548					
		For grain or seed	548	548	548	548	548					



Ground truth - Agricultural Training & Validation

Farm Service Agency (FSA) Common Land Unit (CLU)

- USDA programs (crop subsidy, disaster relief)
- Program crops (may under report specialty crops)
- Much larger area of coverage than the JAS survey
- GIS-ready (less labor intensive for NASS)

JAS survey data is still used in the crop area estimation process

Ground truth - Agricultural Training & Validation

NASS June Agricultural Survey (JAS)



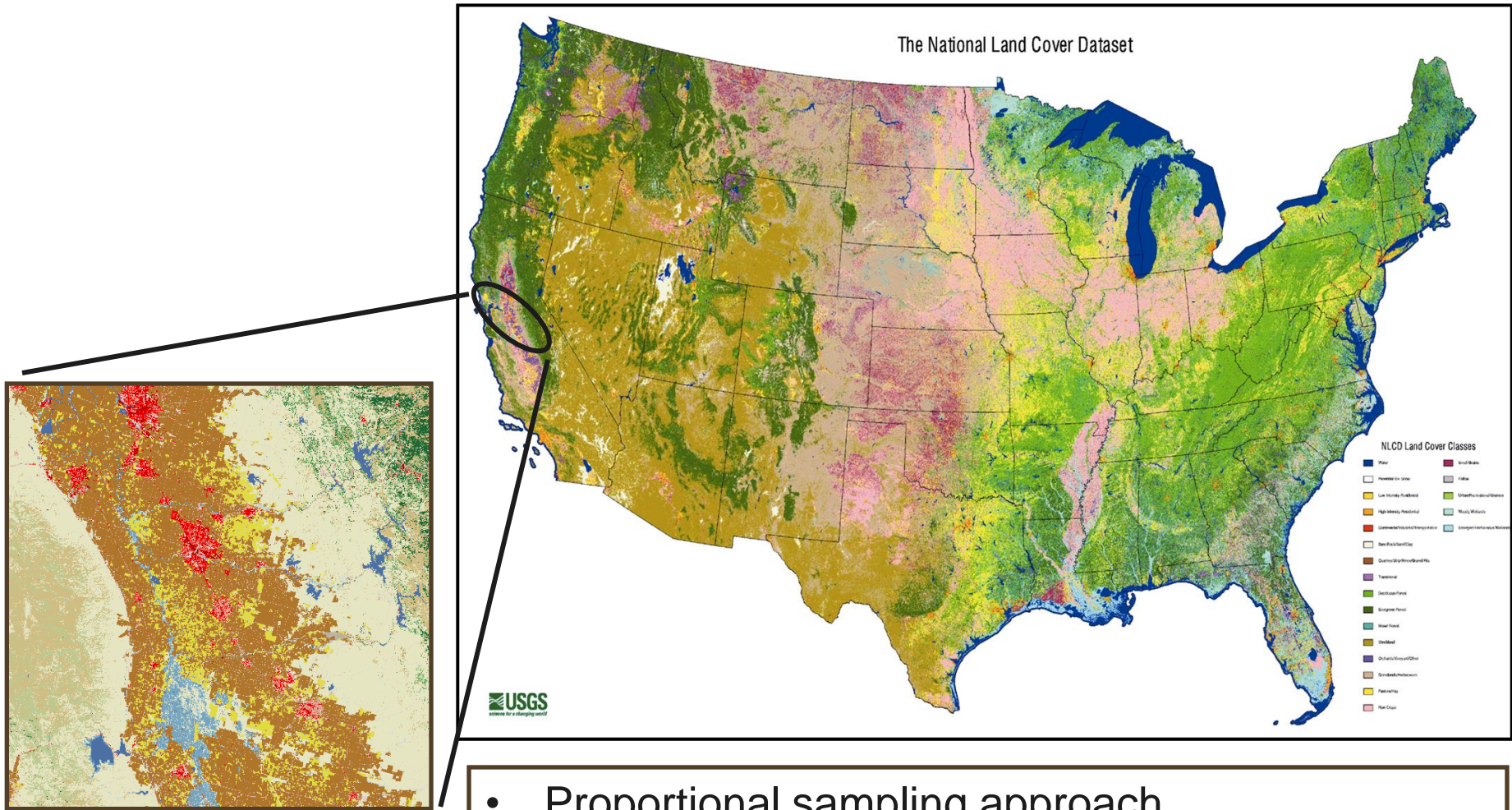
Farm Service Agency (FSA) Common Land Unit (CLU)



- 2007 California JAS summary
- 1,392 polygons
- ~125,150 acres (50,650 hectares)

- 2007 California FSA CLU summary
- 51,479 polygons
- ~2,413,500 acres (976,700 hectares)

Non-Ag Ground Truth – 2001 National Land Cover Dataset



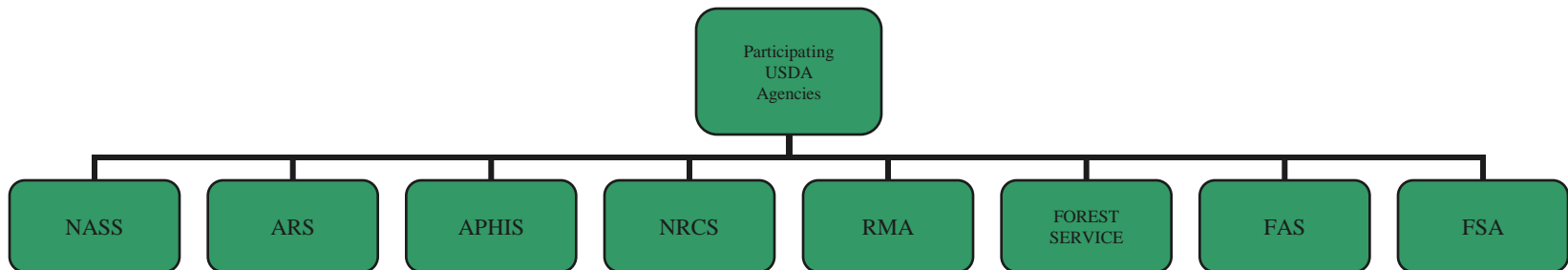
- Proportional sampling approach
- Pasture/hay and cultivated categories ignored

2007 CDL Inputs

- Landsat 5 TM
 - Minimum of three scenes during growing season
- IRS Resourcesat-1 AWiFS Imagery (raw reflectance)
 - Added dates
- NASA MODIS Terra (16-day NDVI composite derivative)
 - Fall scenes from previous year
- USGS Ancillary datasets
 - National Land Cover Dataset (NLCD 2001)
 - Impervious
 - Canopy
 - National Elevation Dataset (NED)
 - Elevation
- Farmland Mapping and Monitoring Program
 - 2004 California prime farmland

USDA's Satellite Imagery Archive (USDA-SIA)

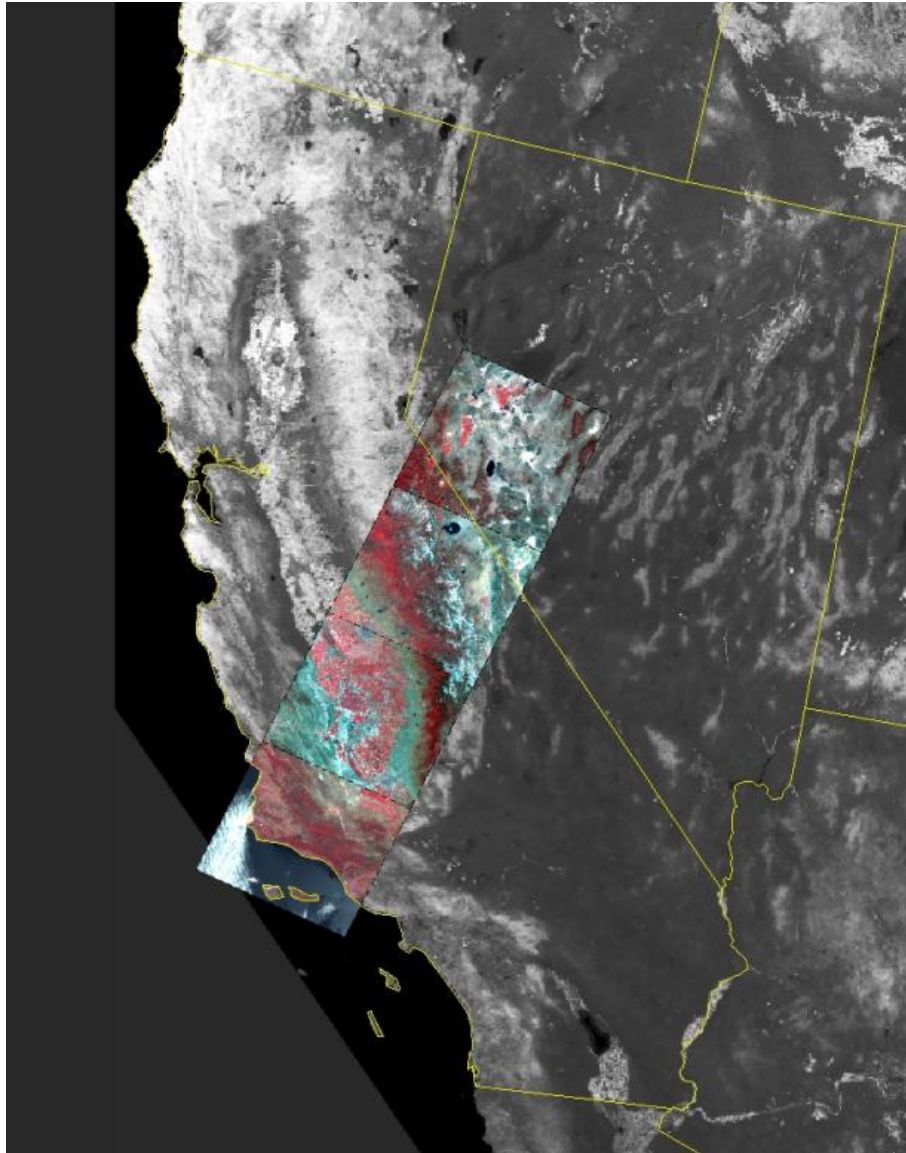
- Cost-sharing program to maximize the cost effectiveness of USDA's expenditures on satellite imagery
- Established March 16, 2000
- Affiliated with USGS/EROS
 - Broad MOU for cooperative efforts.
 - Based on subscription fees paid annually
- Reduce the per-image price paid by spreading acquisition costs over all USDA agencies
- Leverage the power of a single USDA purchasing body



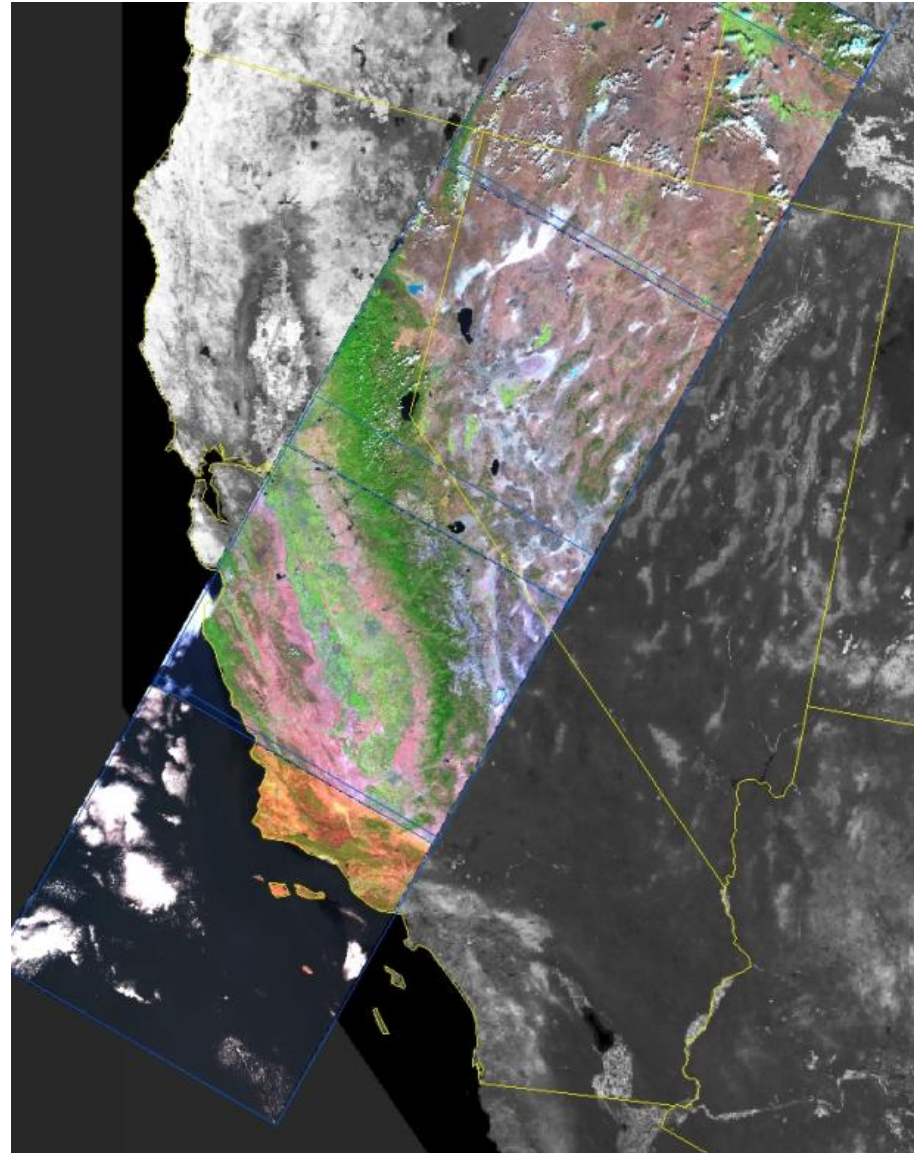
Sensor Specifications Compared

	<u>TM</u>	<u>AWiFS</u>
Altitude	705 km	817 km
Equatorial crossing time	9:45 ± 15 minutes	10:30 ± 5 minutes
Orbit time	99 minutes	101 minutes
Pixel size	30 x 30 m (reflective) 120 x 120 m (thermal)	56 x 56 m
Quantization	8	10
Spectral bands	6 (B, G, R, NIR, SWIR, MIR) + Thermal IR	4 (G, R, NIR, SWIR)
Field of view	14.7°	42.1°
Swath wide	185 km	737 km
Scene size	184 x 152 km	370 x 370 km

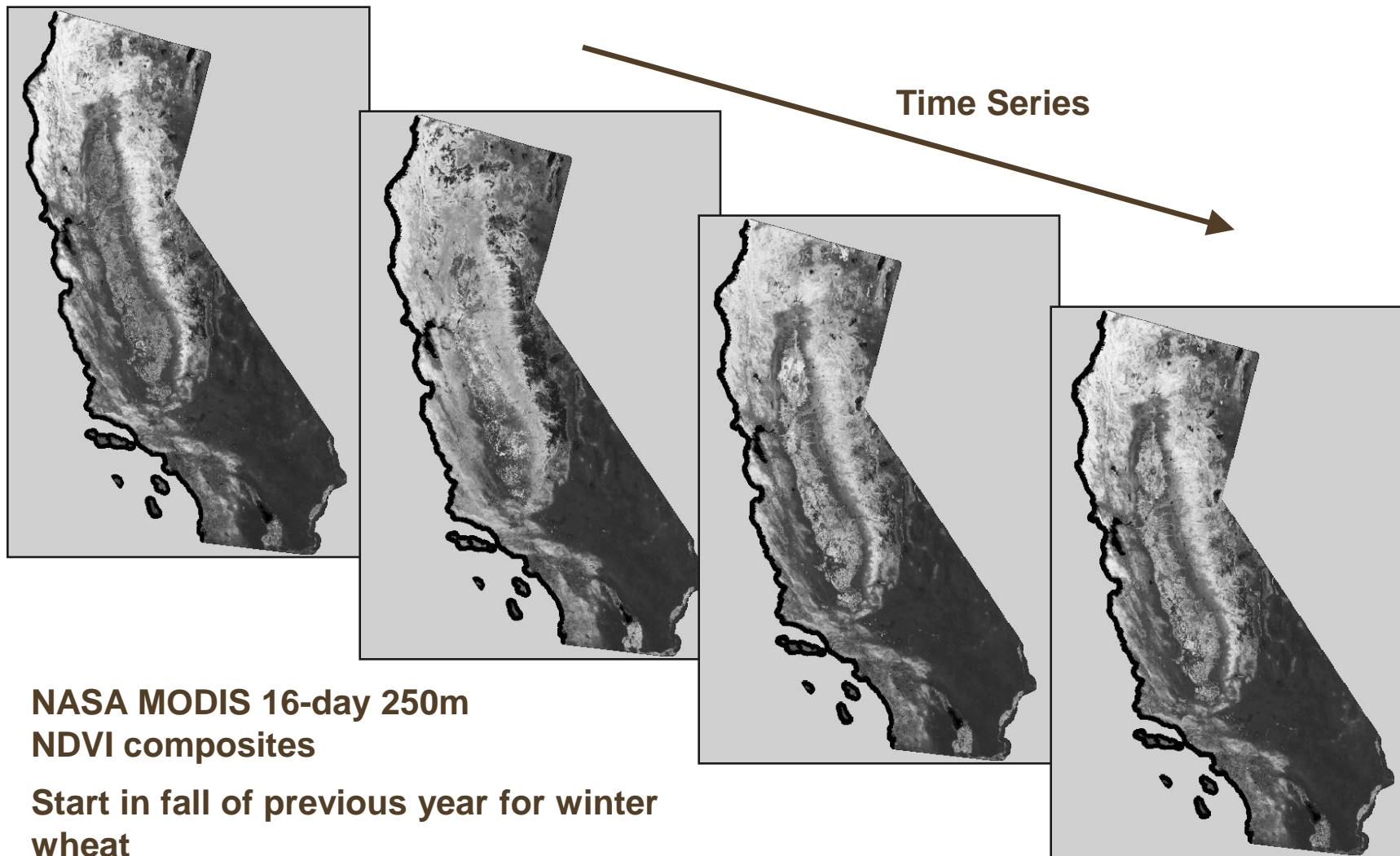
TM path 42, rows 33-36, 06/21/2007



AWiFS path 246, rows 40-45, quads B & D, 09/16/2007

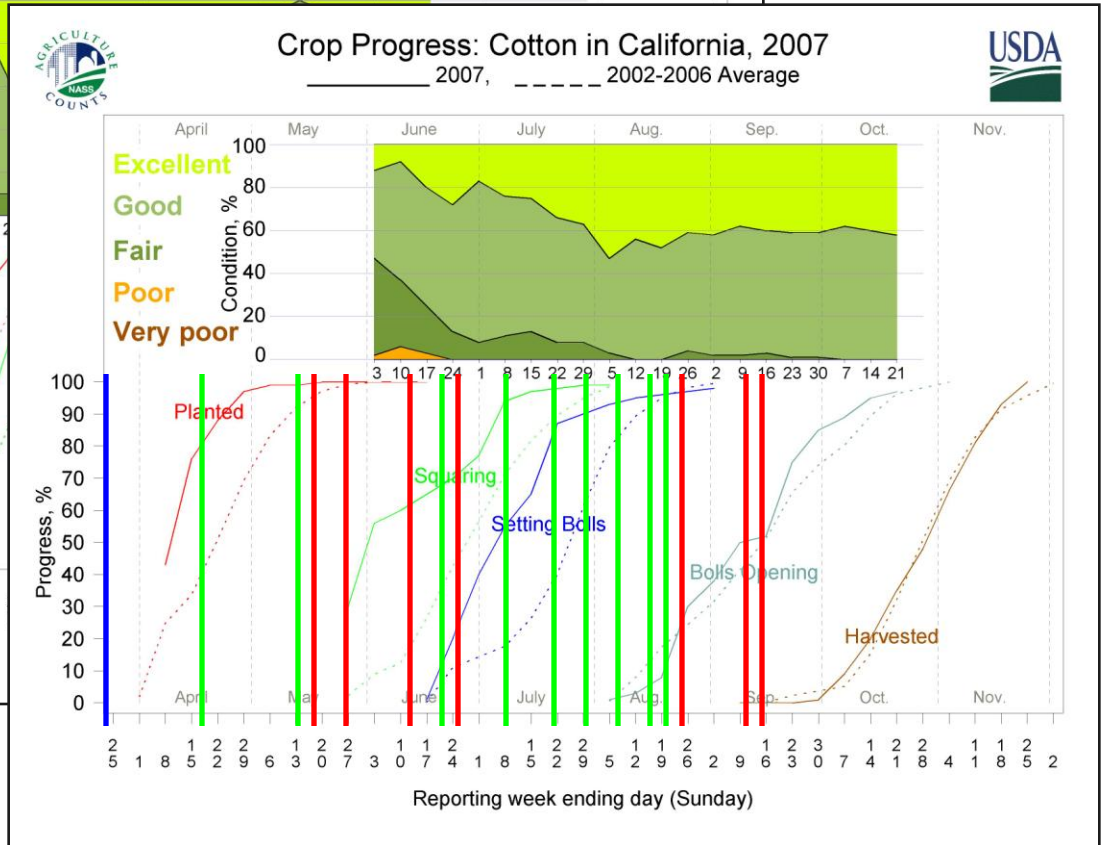
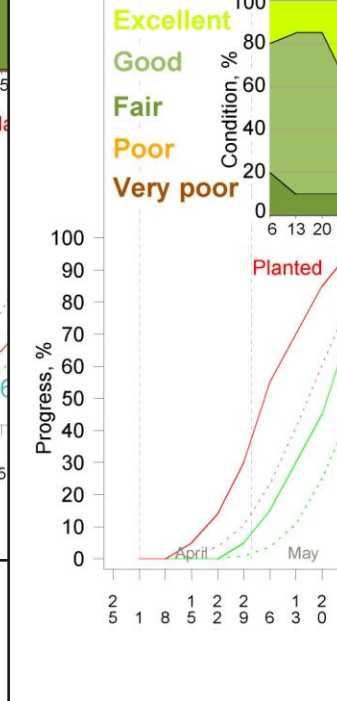
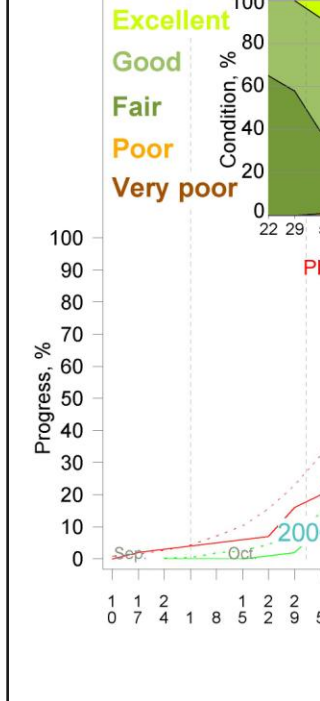


Ancillary - MODIS



- **NASA MODIS 16-day 250m NDVI composites**
- **Start in fall of previous year for winter wheat**

Crop Progress



Ancillary – USGS Products



Elevation

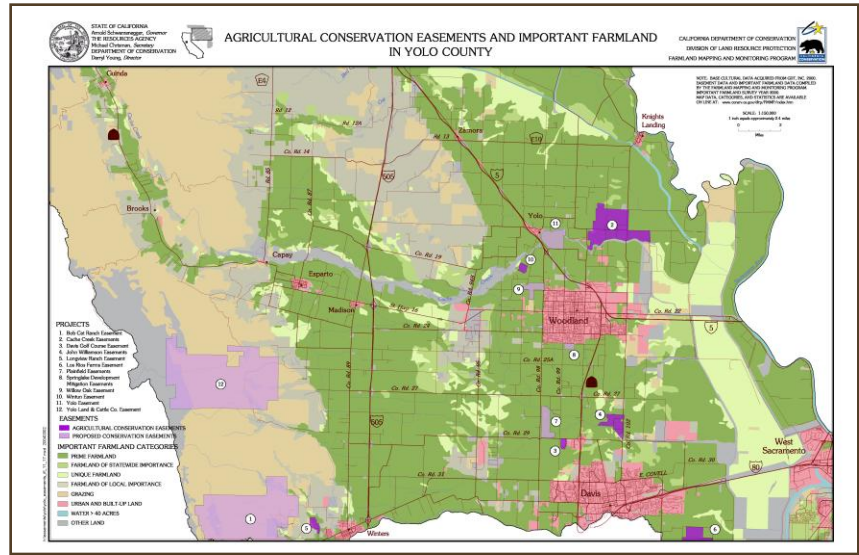
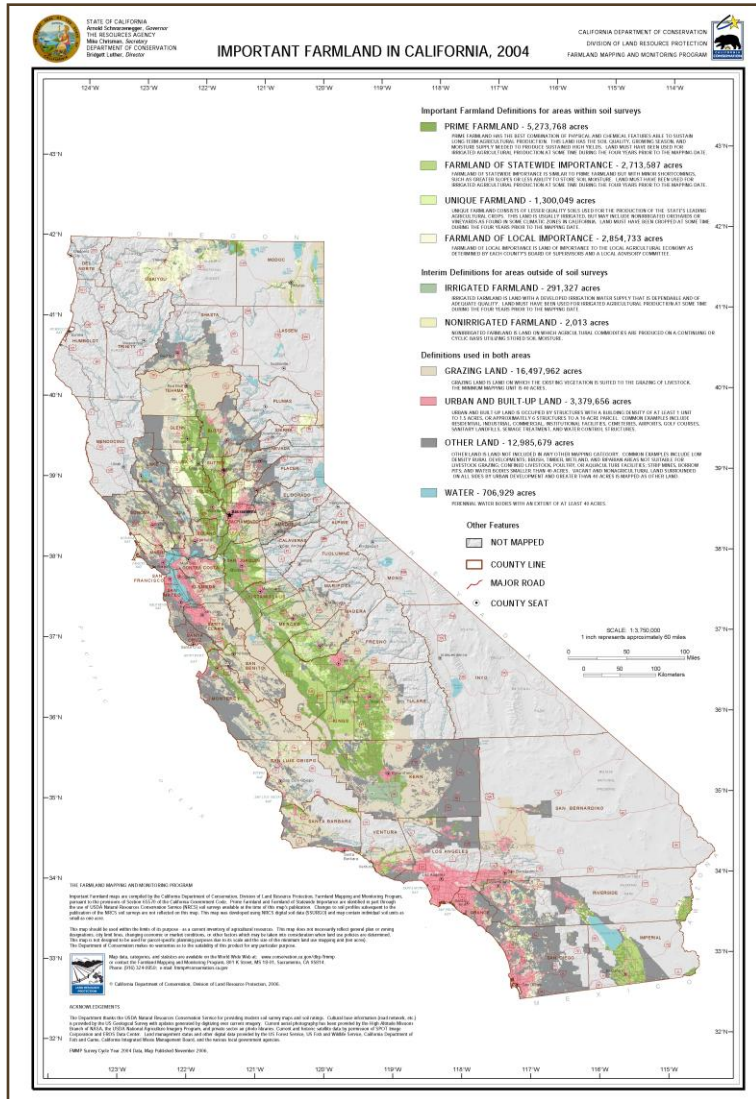


Canopy



Impervious

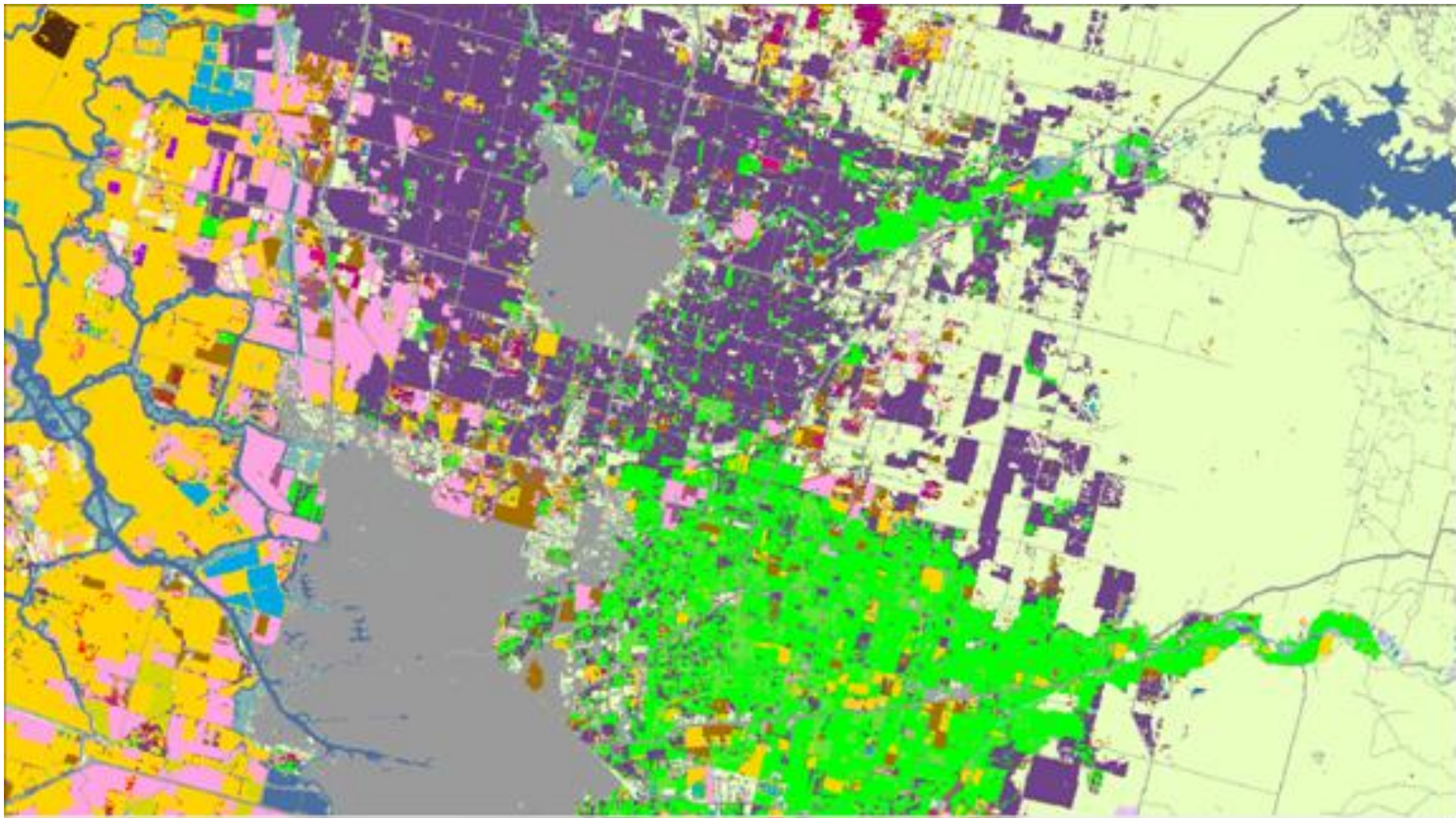
California Farmland Mapping and Monitoring Program



- Produces maps and statistical data used for analyzing impacts on California's agricultural resources
- Land is rated according to soil quality and irrigation status
- Maps are updated every two years with the use of aerial photographs, computer mapping, public review, and field work



2007 California Cropland Data Layer (30 meter)



San Joaquin County, California

USDA, National Agricultural Statistics Service, 2007 California Cropland Data Layer
 AGRICULTURAL ACCURACY REPORT (CENTRAL VALLEY ONLY)

Crop-specific covers only	*Correct	Accuracy	Error	Kappa
OVERALL ACCURACY	409276	97.15%	2.85%	0.9657

Cover Type	*Correct Pixels	Producer's Accuracy	Omission Error	Kappa	User's Accuracy	Commission Error	Cond'l Kappa
Rice	126989	99.88%	0.12%	0.9987	99.36%	0.64%	0.9930
Alfalfa	81423	99.16%	0.84%	0.9911	96.19%	3.81%	0.9597
Winter Wheat	55422	98.46%	1.54%	0.9839	96.25%	3.75%	0.9610
Corn	35459	98.78%	1.22%	0.9875	97.76%	2.24%	0.9771
Almonds	23519	97.13%	2.87%	0.9708	95.94%	4.06%	0.9587
Oats	10934	92.65%	7.35%	0.9259	92.54%	7.46%	0.9248
Cotton	10531	98.89%	1.11%	0.9888	97.70%	2.30%	0.9768
Walnuts	9898	95.47%	4.53%	0.9543	94.43%	5.57%	0.9439
Barley	9247	94.84%	5.16%	0.9481	93.82%	6.18%	0.9378
Grapes	9094	96.82%	3.18%	0.9680	95.28%	4.72%	0.9525
Safflower	6631	97.37%	2.63%	0.9736	97.30%	2.70%	0.9729
Pistachios	5272	96.75%	3.25%	0.9674	97.02%	2.98%	0.9701
Durum Wheat	3348	96.35%	3.65%	0.9634	99.20%	0.80%	0.9920
Rye	2909	93.66%	6.34%	0.9364	95.57%	4.43%	0.9556
Tomatoes	2748	97.07%	2.93%	0.9706	97.31%	2.69%	0.9730
Spring Wheat	2593	98.63%	1.37%	0.9863	96.90%	3.10%	0.9689
Prunes	2571	94.28%	5.72%	0.9427	93.66%	6.34%	0.9365
Triticale (Wheat Hybrid)	2198	90.98%	9.02%	0.9096	96.62%	3.38%	0.9661
Olives	1606	94.58%	5.42%	0.9458	92.03%	7.97%	0.9203
Double-crop Winwht/corn	1181	90.71%	9.29%	0.9070	97.28%	2.72%	0.9728

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

Regression-based Acreage Estimator

Acreage not just about counting pixels

NASS Inputs

- June Survey summaries
- Area Sampling Frame
- CDLs

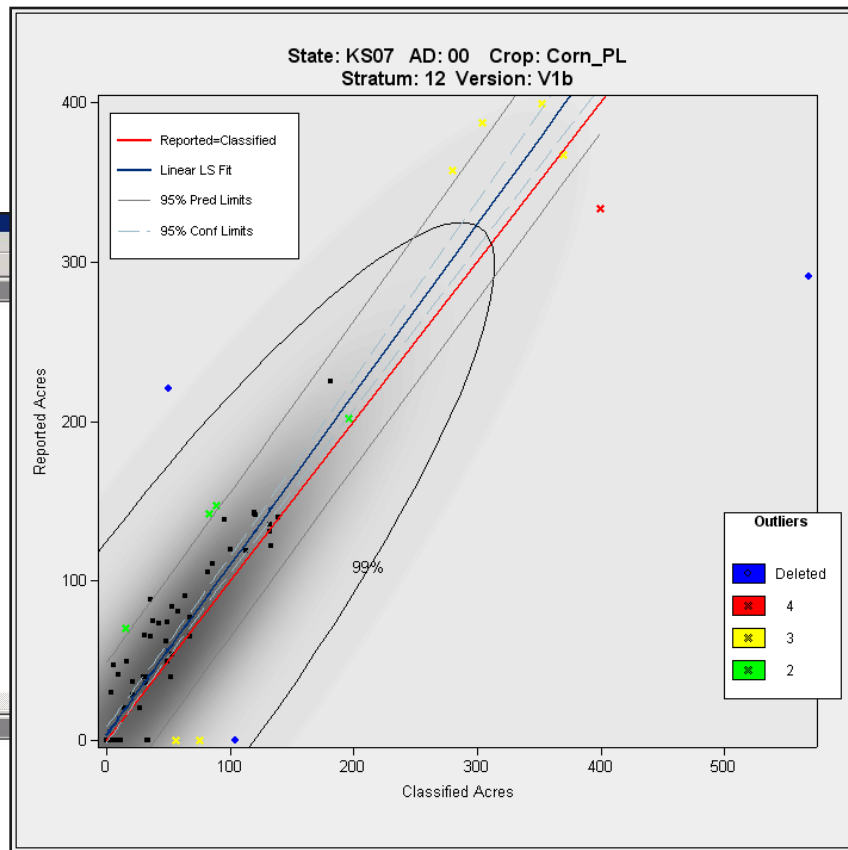
```

/*
Import the NESTAB.lst files across districts using
Import_NBS-TAB.sas

*/
/*- TO DO
How to set State, Year, LibDir? : IML input statement
Add columns to DoDialogGetListItems (Strata) of seg. counts, ...?
Regression of multiple strata does not work
Brush scatterplot by % good ground truth
Save SegDropAccum list of dropped segment to a file
Print state, year, district, strata, cover to log/output
*/
Year = '06';
State = 'IA';
    
```

Source	DF	Sum of Squares	Mean Square	F Value
Model	1	4991716	4991716	2785.56
Error	373	668415	1791.99648	<.0001
Corrected Total	374	5660131		

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t	95% Confidence Limits
Intercept	1	24.01235	5.16370	4.65	<.0001	13.85874 34.16595
Pixels	1	0.68913	0.01306	52.78	<.0001	0.66346 0.71481

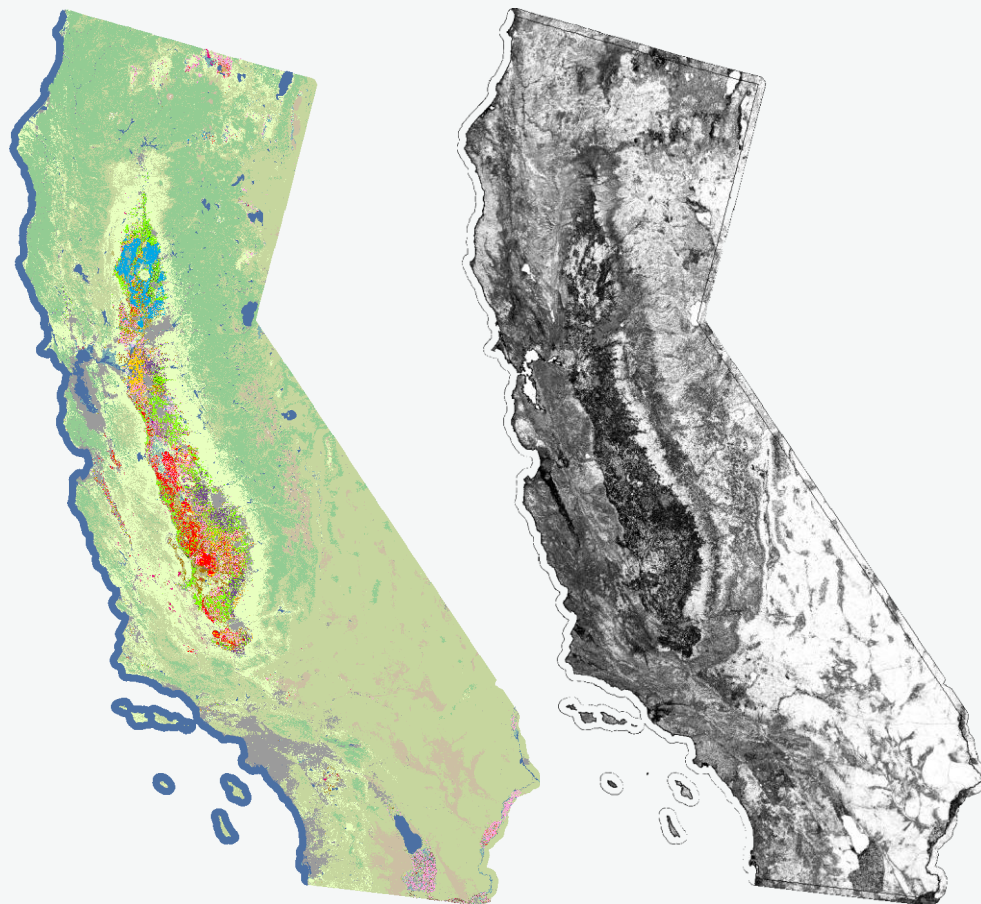


116	IA	06	01	Soybeans	13
445	IA	06	01	Soybeans	13
101	IA	06	01	Soybeans	13
181	IA	06	01	Soybeans	13
287	IA	06	01	Soybeans	13
117	IA	06	01	Soybeans	13
70	IA	06	01	Soybeans	13

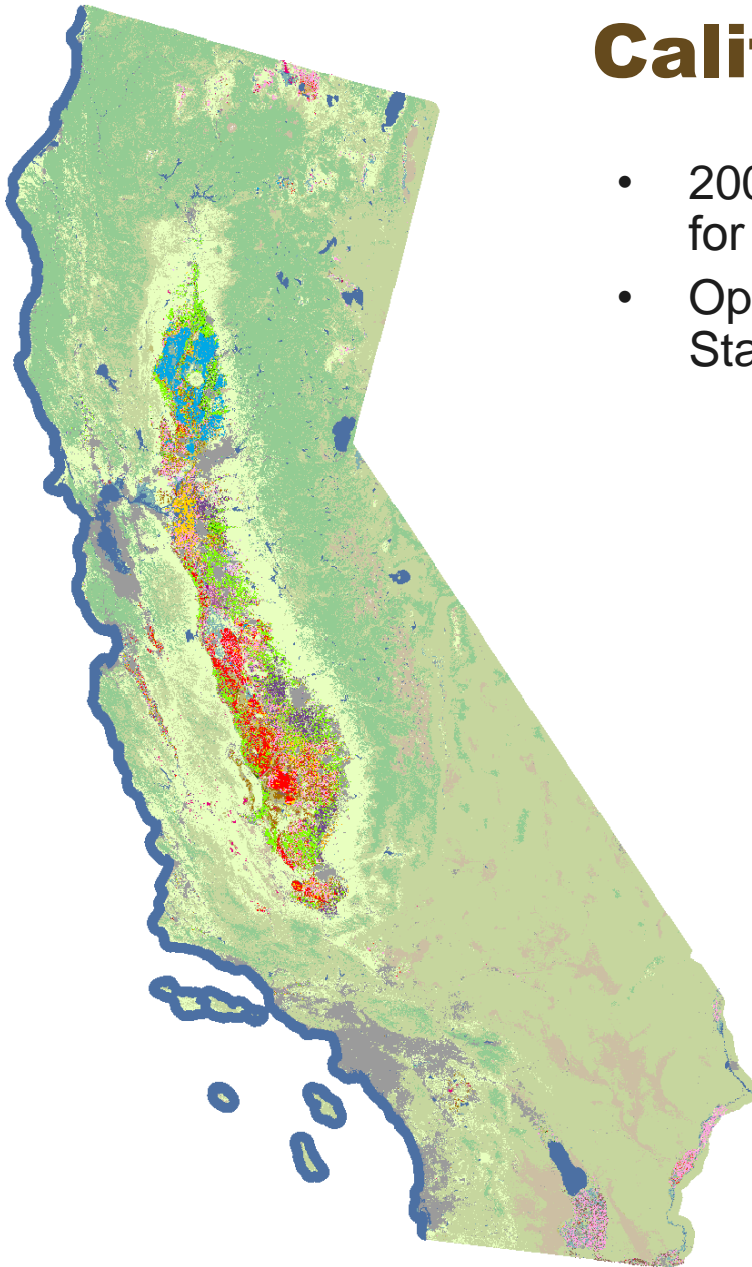
California Cropland Data Layer



- Available July 2008
- Downloadable at USDA Geospatial Data Gateway
- Includes:
 - Cropland data layer
 - Confidence map
 - 30m resolution version

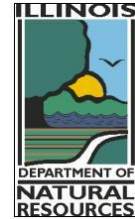


California Cropland Data Layer



- 2007 California CDL, one-time special project for NASS' Area Frame Section
- Opportunity for program expansion via Federal, State and University cooperative partnering

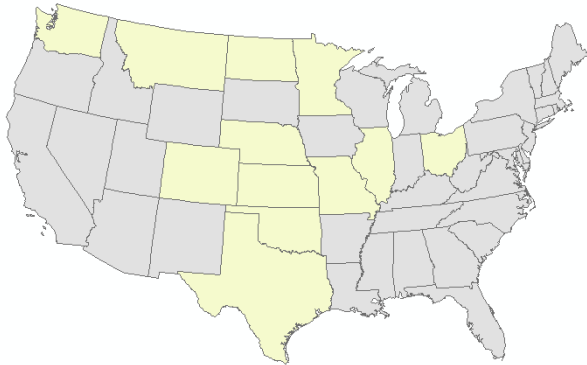
Current Cooperators:



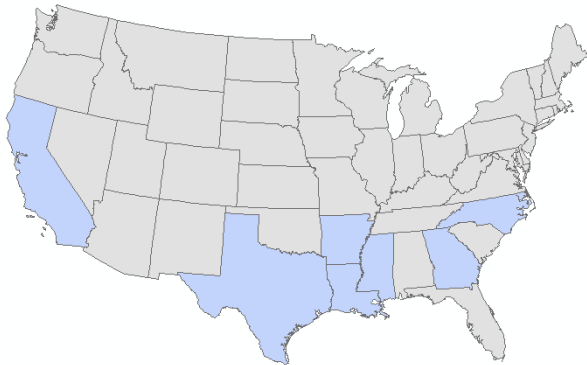
Past Cooperators:



CDL 2008?



Primary Wheat States

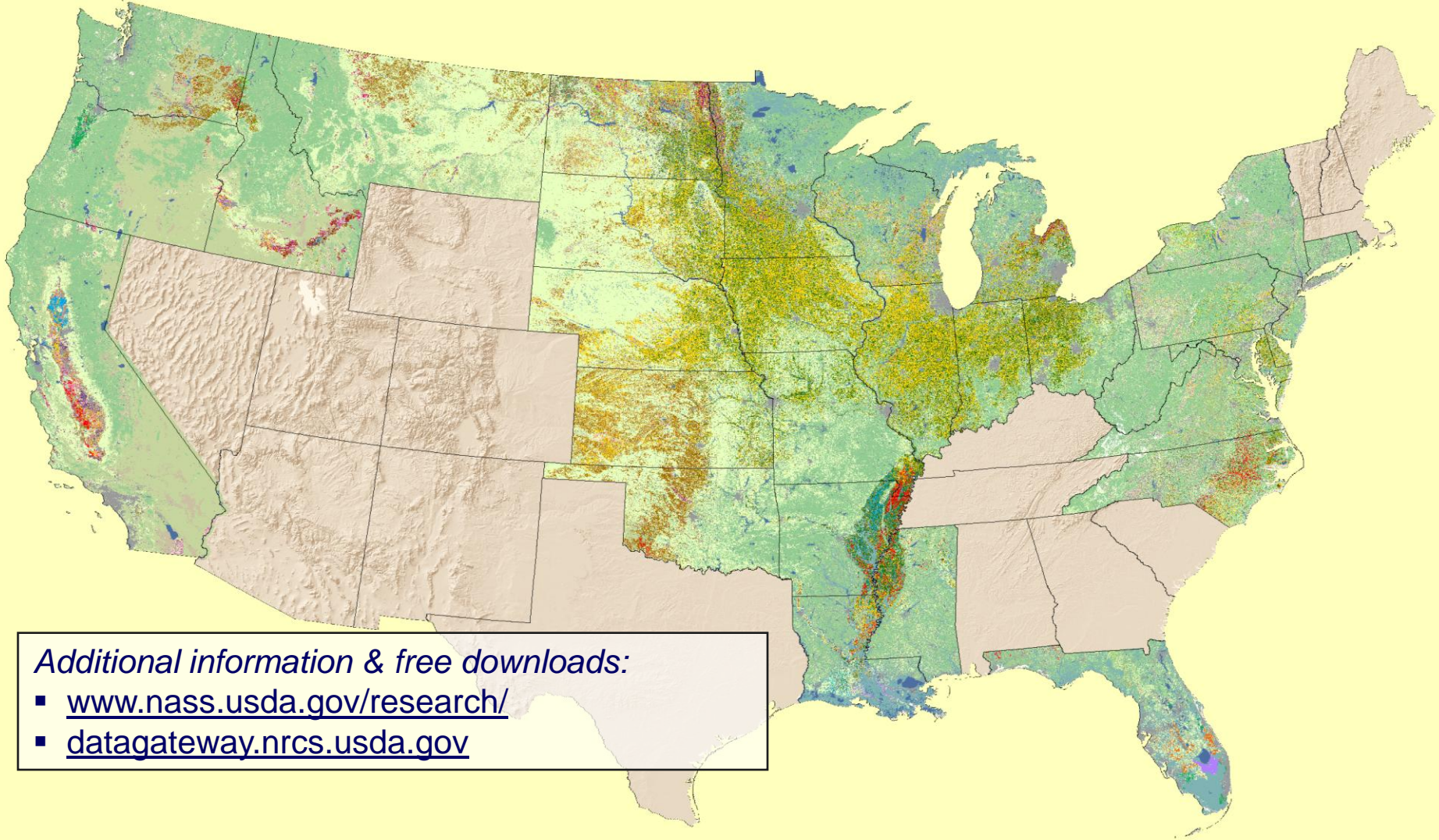


Primary Cotton States

- Expand geographic scope?
 - Wheat states next priority
 - Mid-Atlantic region (often asked about)
- Improved categories?
 - Grassland
 - Pasture (chewed grass)
 - Hay (cut grass)
 - Natural (quasi-native)
- Imagery?
 - More frugal use of
 - Future sensors
 - Finer resolution
- Derivatives?
 - Change detection
 - Crop rotation patterns
- Other ancillary data?
 - Soils
 - Climate



Thank You



Additional information & free downloads:

- www.nass.usda.gov/research/
- datagateway.nrcs.usda.gov