

Guidance for County and Regional Inventories

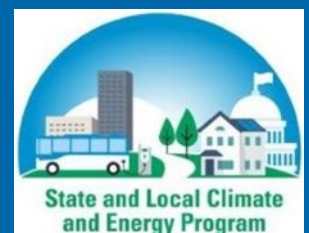
Agriculture and Land Management
Appendix to Local Greenhouse Gas
Inventory Tool: Community Module
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Tool Overview

The Guidance for County and Regional Inventories User’s Guide accompanies the Local Greenhouse Gas Inventory Tool: Community Module and Government Operations Module. It explains how to obtain agriculture and land management activity data at the county-level to support users with entering data into the Community and Government Operations Modules. For more information on using the Modules, please refer to the Local Greenhouse Gas Inventory Tool User’s Guides, which are available to download here: <https://www.epa.gov/statelocalenergy/download-local-greenhouse-gas-inventory-tool>.

Agriculture & Land Management Inventory Sheet

The agriculture & land management sheet within the Community Greenhouse Gas (GHG) Inventory Tool may be used to calculate emissions associated with fertilizer application from different sectors in your community¹. Agricultural emissions that can be estimated with this tool include direct nitrous oxide (N₂O) associated with the application of synthetic, organic, and manure fertilizers, as shown in Table 1. Additionally, a portion of applied fertilizers volatilize into the atmosphere as indirect N₂O emissions.

Once you enter the information for each sector on the amount of fertilizer applied by fertilizer type, the total emissions from this source will be calculated.

Table 1. Required Data Inputs Agriculture & Land Management Inventory Sheet

GHG Sector	Input Data
Agriculture & Land Management	Synthetic fertilizer use (short tons)
	Organic fertilizer use (short tons)
	Manure fertilizer use (short tons)

Obtaining Input Data

Fertilizer consumption data for synthetic, organic, and manure fertilizers are typically not available at sub-state or county levels. However, fertilizer consumption data are available at the state level, such as tons consumed per state from EPA’s State Inventory Tool (SIT) Agriculture Module or pounds of each fertilizer type applied per acre for each state/crop type from the [U.S. Department of Agriculture’s Economic Research Service](#). Equation 3 through Equation 5 explain how to apportion total fertilizer consumption to each fertilizer type (synthetic, organic, and manure).

Scaling State-Level Fertilizer Data

The following section details how to downscale state-level fertilizer consumption to the county-level.

Step 1: Obtain state-level fertilizer data from the State Inventory Tool Agriculture Module

Fertilizer consumption data at the state level is available from the State Inventory Tool (SIT) Agriculture Module. The SIT Modules are available for download here:

¹ Emissions from livestock, such as enteric fermentation and manure management, are currently not estimated within this tool. If emissions from these sources are estimated elsewhere, the results can be entered on the Additional Sources Inventory Sheet, where they will be summed alongside emissions estimated by the Local Greenhouse Gas Inventory Tool Module. Please see the Local Greenhouse Gas Inventory Tool User’s Guides for additional information. Other emissions from agricultural business operations, such as building and transportation energy use, are estimated in the energy sector.

<https://www.epa.gov/statelocalenergy/download-state-inventory-and-projection-tool>. Within the Agriculture Module, SIT lists total nitrogen (N) consumption in metric tons by state on the FertilizerData tab (Figure 1).

Figure 1. Activity Data on the FertilizerData tab in the SIT Agriculture Module

Consumption of Primary Plant Nutrients: Total Nitrogen (Metric Tons)											
Source: The Association of American Plant Food Control Officials and The Fertilizer Institute. Commercial Fertilizers.											
Table 9 and 10- Consumption of Primary Plant Nutrients, Total Nutrients-All Fertilizers (N)											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
AL	116,467	111,700	113,809	123,102	135,973	94,202	111,929	96,291	118,382	112,291	106,677
SD	153,320	178,276	153,103	186,334	188,672	156,399	139,251	179,324	250,223	226,206	285,118
TN	141,273	135,436	148,335	145,925	151,212	151,136	155,880	159,786	142,791	149,929	136,680
TX	717,322	796,680	770,493	847,328	943,229	804,326	818,228	859,032	857,438	867,574	869,893
UT	29,390	18,205	18,347	25,115	24,956	25,528	23,799	26,737	26,236	27,182	33,710
VT	5,800	4,887	5,163	4,749	5,850	4,499	4,741	5,323	7,188	8,695	5,276
VA	82,356	89,695	107,899	98,099	91,990	88,367	93,702	88,867	93,134	110,474	104,194
WA	179,640	153,372	173,023	175,402	204,116	196,446	221,365	207,342	196,976	196,976	186,103
WV	7,942	6,425	8,661	8,782	8,133	7,338	6,406	10,184	9,943	19,301	7,473
WI	214,407	220,370	214,438	184,112	195,710	191,797	200,235	225,408	228,944	248,049	197,515
WY	36,531	73,374	60,898	78,225	93,088	94,949	99,838	102,402	107,215	100,271	106,971
US	9,846,932	10,052,303	10,186,844	10,131,045	11,254,427	10,621,902	11,152,460	11,198,115	11,162,563	11,291,068	11,184,453
Synthetic	99.91%	99.85%	99.81%	99.81%	99.87%	99.82%	99.81%	99.83%	99.81%	99.81%	99.77%
Dried Manure	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Activated Sewage Sludge	0.05%	0.04%	0.09%	0.09%	0.05%	0.08%	0.08%	0.04%	0.07%	0.06%	0.12%
Other	0.03%	0.10%	0.09%	0.09%	0.07%	0.09%	0.11%	0.12%	0.11%	0.12%	0.10%

Calculated based on totals in the "Cross-Cutting Agricultural Data" in the Fertilizer worksheet.

Step 2: Convert from fertilizer year to calendar year

Note that the data included on the FertilizerData tab are reported in fertilizer years, not calendar years. The fertilizer year spans from July 1 to June 31, so total nitrogen (N) consumption must be reapportioned from the fertilizer year to the calendar year for emissions to be properly allocated to the calendar year (see Equation 1). The Tennessee Valley Authority estimates that 35% of fertilizer consumption occurs from July to December and 65% from January to June, as more fertilizer is typically applied during the spring. The 1990 fertilizer year, for example, spans from July 1, 1989 to June 31, 1990.

For example, fertilizer consumption in calendar year 1990 in Alabama would be calculated as follows:

Equation 1. Converting to Calendar Year Fertilizer Consumption

$$(\text{Year 1 Fertilizer } t_m \times 35\%) + (\text{Year 2 Fertilizer } t_m \times 65\%) = \text{Fertilizer}_{total}$$

$$(116,467 t_m \times 35\%) + (111,700 t_m \times 65\%) = 114,799 t_m$$

Where:

- Fertilizer_{total}* total amount of fertilizer applied during the calendar year
- Year 1 Fertilizer t_m* total amount of fertilizer applied during Year 1 fertilizer year
- Year 2 Fertilizer t_m* total amount of fertilizer applied during Year 2 fertilizer year
- t_m* metric tons

Step 3: Convert from metric tons to short tons

Next, use Equation 2 to convert total N consumption to short tons by dividing by 0.9072 (0.9702 metric tons = 1 short ton).

Equation 2. Converting to Short Tons of Fertilizer

$$\text{Fertilizer}_{total} = \text{Fertilizer } t_m \div 0.9072$$

$$126,541 t_s = 114,799 t_m \div 0.9072$$

Where:

$Fertilizer_{total}$ *total amount of fertilizer applied, from all sources*
 t_s *short tons*
 t_m *metric tons*
 0.9072 *the conversion factor for metric tons to short tons*

Step 4: Calculate the consumption of each fertilizer type

Finally, use Equations 3-6 to derive consumption of each fertilizer type by multiplying the total fertilizer in short tons by the percentage of each fertilizer type consumed as a fraction total fertilizer consumption, as listed in rows 57-60 on the Agriculture Module FertilizerData tab (Figure 1). Please see [Chapter 5 Agriculture](#) of the Inventory of U.S. Greenhouse Gas Emissions and Sinks for more information on fertilizer types.

Equation 3. Calculating Consumption of Fertilizer, Synthetic N (short tons)

$$Fertilizer_{synthetic} = Fertilizer t_s \times 99.91\%$$

$$126,427 t_s = 126,541 t_s \times 99.91\%$$

Where:

$Fertilizer_{synthetic}$ *amount of synthetic fertilizer applied, from total fertilizer (short tons)*
 99.91% *percentage of synthetic nitrogen fertilizer in total fertilizer*

Equation 4. Calculating Consumption of Fertilizer, Manure (short tons)

$$Fertilizer_{manure} = 126,541 t_s \times 0.01\%$$

$$12.6 t_s = 126,541 t_s \times 0.01\%$$

Where:

$Fertilizer_{manure}$ *amount of manure applied, from total fertilizer*
 0.01% *percentage dried manure fertilizer in total fertilizer*

Equation 5. Calculating Consumption of Fertilizer, Activated Sewage Sludge (short tons)

$$Fertilizer_{organic} = 126,541 t_s \times 0.05\%$$

$$63.3 t_s = 126,541 t_s \times 0.05\%$$

Where:

$Fertilizer_{organic}$ *amount of activated sewage sludge fertilizer applied, from total fertilizer*
 0.05% *percentage of (organic) sewage sludge in fertilizer*

Equation 6. Calculating Consumption of Fertilizer, Other Organic Materials (short tons)

$$Fertilizer_{other} = t_s \times 0.03\%$$

$$38.0 t_s = 126,541 t_s \times 0.03\%$$

Where:

$Fertilizer_{other}$ amount of other fertilizer applied (e.g., compost), from total fertilizer
0.03%

Step 5: Downscale state-level data to the local level

Once state-level data are calculated, it can be downscaled to the county or city level depending on data availability. For example, local fertilizer consumption can be calculated by multiplying the state-level fertilizer consumption estimates by the proportion of state cropland acreage found within the county or city, per crop type. Note that total cropland acres in each county can be downloaded from the U.S. Department of Agriculture (USDA)'s [QuickStats database](#). See Appendix A: Using USDA NASS QuickStats Database for additional detail on how to operate QuickStats.

Equation 7 shows a sample calculation for how to scale state-level fertilizer data to the county-level using cropland acreage.

Equation 7. Scaling State-Level Fertilizer Data to the County Level

$$Fertilizer_{county} = (Cropland\ acres_{county} \div Cropland\ acres_{state}) \times Fertilizer_{state}$$

Where:

$Cropland\ acres_{county}$ total cropland acreage per selected county, from USDA QuickStats
 $Cropland\ acres_{state}$ total cropland acreage per selected state, from USDA QuickStats
 $Fertilizer_{state\ fertilizer\ type}$ total fertilizer consumption per fertilizer type (synthetic, organic, manure) per selected state, from SIT Agriculture Module

Repeat the above equation for each fertilizer type and enter the quantities into the tool following the instructions under Step 6: Enter fertilizer consumption data into the tool

Step 6: Enter fertilizer consumption data into the tool

Fertilizer consumption data can be entered into the tool by entering the Fertilizer, Synthetic N total into the Synthetic N column, the sum of the Fertilizer, Activated Sewage Sludge and Fertilizer, Other Organic Materials into the Organic column, and the Fertilizer, Dried Manure total into the Manure column on the Agriculture and Land management tab in the Module (Figure 2). The fertilizer consumption should be entered into the row that corresponds to its sector of origin. For example, synthetic N applied to turf at a school would be entered under the Commercial/Institutional sector, while synthetic N applied to agricultural fields would be entered under the Industrial sector.

Figure 2. Fertilizer Data Entry in the Agriculture & Land Management Sheet

Agriculture & Land Management
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Data Entry & Calculations

This sheet is where you will calculate the Scope 3 emissions associated with the application of synthetic, organic, and manure fertilizers. A portion of applied fertilizers volatilize into the air in the form of nitrous oxide (N₂O), a greenhouse gas.

1. Enter Fertilizer Consumption Data for Each Sector.
Please enter the amount of synthetic, organic, or manure fertilizer applied.

Sector	Synthetic (short tons N)	Organic (short tons)	Manure (short tons)
Residential			
Commercial/Institutional			
Industrial			
Energy Generation			

Fertilizer Emissions Summary

Fertilizer Application Emissions (MT CO ₂ e)				
	Synthetic N ₂ O	Organic N ₂ O	Manure N ₂ O	TOTAL
Residential	-	-	-	-
Commercial/Institutional	-	-	-	-
Industrial	-	-	-	-
Energy Generation	-	-	-	-
Total Emissions from Fertilizer Application	-	-	-	-

Appendix A: Using USDA NASS QuickStats Database

The USDA NASS QuickStats² Database has limited data on fertilizer consumption at the county-level. However, it does publish estimates of total cropland acreage by county, which can be used to scale fertilizer consumption from the state level to the county-level as described in Equation 7 under Step 5: Downscale state-level data to the local level.

The following figures show how to download cropland acreage by county from QuickStats. To use QuickStats, first navigate to the website: <https://quickstats.nass.usda.gov/> (Figure 3).

² The U.S. Department of Agriculture (USDA) publishes agricultural activity data on the QuickStats website. The QuickStats database is the most comprehensive tool for accessing agricultural data published by the National Agricultural Statistics Service (NASS). The tool allows the user to customize the query by commodity, location, or time period.

Figure 3. USDA NASS QuickStats Database

The screenshot shows the 'Quick Stats' interface with the following sections:

- Select Commodity (one or more):** Includes dropdowns for Program (CENSUS SURVEY), Sector (ANIMALS & PRODUCTS, CROPS, DEMOGRAPHICS, ECONOMICS, ENVIRONMENTAL), Group (ANIMAL TOTALS, AQUACULTURE, COMMODITIES, CROP TOTALS, DAIRY, ENERGY, EXPENSES, FARMS & LAND & ASSETS, FIELD CROPS), and Commodity (AG LAND, AG SERVICES, AG SERVICES & RENT, ALCOHOL COPRODUCTS, ALMONDS, ALPACAS, AMARANTH, ANIMAL PRODUCTS, OTHER, ANIMAL SECTOR).
- Select Location (one or more):** Includes a dropdown for Geographic Level (AGRICULTURAL DISTRICT, AMERICAN INDIAN RESERVATION, COUNTY, NATIONAL, PUERTO RICO & OUTLYING AREAS, REGION : MULTI-STATE, REGION : SUB-STATE, STATE, WATERSHED).
- Select Time (one or more):** Includes a dropdown for Year (2023, 2022, 2021, 2020, 2019, 2018, 2017, 2016, 2015).

Next, select which commodity you are interested in examining by selecting a parameter in the Commodity field (Figure 4). Do not select parameters in the Program, Sector, or Group fields. These fields will automatically update depending on which parameter you select in the Commodity field.

Figure 4. Selecting a Commodity

The screenshot shows the 'Quick Stats' interface with the 'Commodity' dropdown highlighted in red. The 'Data Item' field is now populated with a list of options:

- AG LAND - ACRES
- AG LAND - NUMBER OF OPERATIONS
- AG LAND - OPERATIONS WITH TREATED
- AG LAND - TREATED, MEASURED IN ACRES
- AG LAND - TREATED, MEASURED IN CUERDAS
- AG LAND, (EXCL CROPLAND & PASTURELAND & WOODLAND) - ACRES
- AG LAND, (EXCL CROPLAND & PASTURELAND & WOODLAND) - AREA, MEASURED IN PCT OF AG LAND
- AG LAND, (EXCL CROPLAND & PASTURELAND & WOODLAND) - AREA, MEASURED IN PCT OF FARM OPERATIONS
- AG LAND, (EXCL CROPLAND & PASTURELAND & WOODLAND) - CUERDAS

Other visible elements include the 'Status: 3,485,583 records' notification, the 'Category' dropdown (AREA, ASSET VALUE, NET INCOME, OPERATIONS, RECEIPTS, TREATED, WATER APPLIED), and the 'Clear' and 'Get Data' buttons at the bottom.

After you select a commodity, the Data Item field will appear. Select a Data Item from the list. The Data

Item parameter will vary depending on the commodity. There is no need to select a Category parameter.

Figure 5. Selecting a Data Item

The screenshot shows the 'Quick Stats' interface with the following elements:

- Navigation:** Home, Recent Statistics, Developers, Help
- Status:** 26,890 records. Selected items filter to 26,890 of 46,745,946 total records.
- Select Commodity:**
 - Program: CENSUS
 - Sector: DEMOGRAPHICS ECONOMICS
 - Group: FARMS & LAND & ASSETS
 - Commodity: AG LAND, AG SERVICES, AG SERVICES & RENT, ALCOHOL COPRODUCTS, ALMONDS, ALPACAS, AMARANTH, ANIMAL PRODUCTS, OTHER, ANIMAL SECTOR
 - Category: AREA
- Data Item (highlighted):**
 - AG LAND, AGRICULTURAL RESERVE - NUMBER OF OPERATIONS
 - AG LAND, CROP INSURANCE - ACRES
 - AG LAND, CROP INSURANCE - NUMBER OF OPERATIONS
 - AG LAND, CROPLAND - ACRES
 - AG LAND, CROPLAND - AREA, MEASURED IN PCT OF AG LAND
 - AG LAND, CROPLAND - AREA, MEASURED IN PCT OF FARM OPERATIONS
 - AG LAND, CROPLAND - ASSET VALUE, MEASURED IN \$ / ACRE
 - AG LAND, CROPLAND - CUERDAS
 - AG LAND, CROPLAND - NUMBER OF OPERATIONS
- Domain:**
 - AREA OPERATED
 - CONCENTRATION
 - ECONOMIC CLASS
 - FARM OPERATIONS
 - FARM SALES
 - IRRIGATION STATUS
 - NAICS CLASSIFICATION
 - OPERATORS
 - OPERATORS, AGE
- Select Location:**
 - Geographic Level: AMERICAN INDIAN RESERVATION, COUNTY, NATIONAL, PUERTO RICO & OUTLYING AREAS, STATE, WATERSHED
- Buttons:** Clear, Get Data

Once you select a Data Item, the Domain field will appear (Figure 6). The Domain field will change depending on which Data Item is selected. The Domain field is where you can select what type of information you would like to know about the selected Data Item, such as total acres, total sales, number of operations, irrigation status, etc.

Figure 6. Selecting a Domain

The screenshot shows the 'Quick Stats' interface with the following elements:

- USDA Logo:** United States Department of Agriculture, National Agricultural Statistics Service
- Navigation:** Home, Recent Statistics, Developers, Help
- Select Commodity:**
 - Program: CENSUS
 - Sector: ECONOMICS
 - Group: FARMS & LAND & ASSETS
 - Commodity: AG LAND, AG SERVICES, AG SERVICES & RENT, ALCOHOL COPRODUCTS, ALMONDS, ALPACAS, AMARANTH, ANIMAL PRODUCTS, OTHER, ANIMAL SECTOR
 - Category: AREA
- Data Item:**
 - AG LAND, AGRICULTURAL RESERVE - NUMBER OF OPERATIONS
 - AG LAND, CROP INSURANCE - ACRES
 - AG LAND, CROP INSURANCE - NUMBER OF OPERATIONS
 - AG LAND, CROPLAND - ACRES
 - AG LAND, CROPLAND - AREA, MEASURED IN PCT OF AG LAND
 - AG LAND, CROPLAND - AREA, MEASURED IN PCT OF FARM OPERATIONS
 - AG LAND, CROPLAND - ASSET VALUE, MEASURED IN \$ / ACRE
 - AG LAND, CROPLAND - CUERDAS
 - AG LAND, CROPLAND - NUMBER OF OPERATIONS
- Domain (highlighted):**
 - OPERATORS, AGE
 - OPERATORS, PRINCIPAL
 - OPERATORS, PRINCIPAL, ON PRESENT OPERATION
 - ORGANIZATION
 - PRODUCERS
 - TENURE
 - TENURE AND FARM OPERATIONS
 - TOTAL
 - TYPOLOGY
- Select Location:**
 - Geographic Level: AMERICAN INDIAN RESERVATION, COUNTY, NATIONAL, PUERTO RICO & OUTLYING AREAS, STATE, WATERSHED
- Select Time:**
 - Year: _____
- Buttons:** Clear, Get Data

Next, select the geographic area for which you would like to download data (Figure 7). Note that the

Geographic Level field will automatically update depending on what is selected in the Data Item and Domain fields. Data the county or watershed level, for example, is not available for every Data Item. The Geographic Level can be further refined by selecting a specific state in the State field. Do not select a state to download data for all states.

Figure 7. Selecting a Geographic Level

The screenshot shows the 'Quick Stats' interface for the USDA National Agricultural Statistics Service. At the top, there are navigation links for 'Home', 'Recent Statistics', 'Developers', and 'Help'. Below these are several dropdown menus for 'Program' (CENSUS), 'Sector' (ECONOMICS), 'Group' (FARMS & LAND & ASSETS), 'Commodity' (AG LAND, AG SERVICES, etc.), and 'Category' (AREA). The 'Data Item' and 'Domain' sections contain lists of available data items and domains. The 'Select Location' section is highlighted with a red box, showing a 'Geographic Level' dropdown menu with 'COUNTY' selected, and a 'State' dropdown menu with 'ALABAMA' selected. Below this is a 'Select Time' section with a 'Year' field and 'Clear' and 'Get Data' buttons.

Similarly, the Year field will update depending on what Geographic Level is selected (Figure 8). County-level data are available for each year for some Data Items. For others, county-level data are only available every 5 years in each Census of Agriculture. The Program field gives insight into data availability by indicating whether the data originates from the Census of Agriculture or a survey. Surveys are typically administered annually, while the Census of Agriculture is performed every 5 years and was last conducted in 2017.

Figure 8. Selecting a Year

The screenshot shows the 'Quick Stats' interface with the following elements:

- Data Item:** A dropdown menu with options like 'AG LAND, AGRICULTURAL RESERVE - NUMBER OF OPERATIONS' and 'AG LAND, CROPLAND - ACRES'. 'AG LAND, CROPLAND - ACRES' is selected.
- Domain:** A dropdown menu with options like 'OPERATORS, AGE' and 'TOTAL'. 'TOTAL' is selected.
- Select Location (one or more):**
 - Geographic Level:** A dropdown menu with options like 'AMERICAN INDIAN RESERVATION' and 'STATE'. 'STATE' is selected.
 - State:** A dropdown menu with options like 'ALABAMA' and 'FLORIDA'. 'FLORIDA' is selected.
- Select Time (one or more):**
 - Year:** A dropdown menu with options like '2012', '2007', and '1997'. '2012' is selected and highlighted with a red box.
 - Period Type:** A dropdown menu with the option 'ANNUAL'.
- Buttons:** 'Clear' and 'Get Data' buttons are located at the bottom left.

Once the desired parameters are selected, select the Get Data button at the bottom left corner of the screen (Figure 9).

Figure 9. Selecting Get Data Button

This screenshot is identical to Figure 8, but with the 'Get Data' button highlighted by a red box. The 'Year' dropdown menu is no longer highlighted.

A new window will be launched that contains the results of your query. To export this data to Excel, click the Spreadsheet button in the top right corner (Figure 10).

Figure 10. Exporting Data to Excel

Program	Year	Period	Geo Level	State	State ANSI	Ag District	Ag District Code	County	County Code	Watershed Code	Commodity	Data Item	Domain	Domain Category	Value	CV (%)
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	AUTAUGA	001	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	36,990	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	BALDWIN	011	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	19,960	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	BELL	047	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	78,887	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	ELMORE	051	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	34,937	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	ETOWNE	063	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	28,423	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	HALE	065	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	29,732	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	LOWMORSE	085	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	45,465	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	MADISON	087	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	49,813	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	MAUREHEAD	091	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	28,643	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	MONTGOMERY	101	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	56,563	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	PERRY	105	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	41,229	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	BLACK BELT	40	SMITH	119	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	21,110	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	BALDWIN	003	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	110,438	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	BUTLER	013	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	17,717	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	CHOCOLAY	023	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	6,648	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	CLARKE	025	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	11,181	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	CONECUH	035	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	28,854	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	ESCAMBA	063	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	53,335	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	MOBILE	097	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	37,655	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	MONROE	099	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	42,962	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	WASHINGTON	129	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	22,386	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	COASTAL PLAINS & GULF COAST	50	WILCOX	131	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	28,871	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	BLOUNT	009	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	43,793	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	CHANDLER	015	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	28,478	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	CHEROKEE	019	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	72,801	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	CLIBBINE	029	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	8,949	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	CULLMAN	043	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	49,878	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	DE KALB	048	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	91,495	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	ETOWNE	055	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	34,753	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	JACKSON	071	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	96,874	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	MARSHALL	095	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	44,884	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	MOUNTAINS & EASTERN VALLEY	20	SAINT CLAIR	115	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	14,424	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	COLBERT	033	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	18,796	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	FRANKLIN	058	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	32,410	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	LAURENS	077	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	168,310	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	LAURENS	079	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	128,789	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	LIVESTONE	083	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	151,168	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	MADISON	089	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	131,529	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	MARION	093	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	23,318	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	MORGAN	103	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	45,885	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	NORTHERN VALLEY	10	WINSTON	133	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	11,895	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	UPPER PLAINS & PIEDMONT	30	BERG	007	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	16,823	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	UPPER PLAINS & PIEDMONT	30	CHAMBERS	017	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	12,488	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	UPPER PLAINS & PIEDMONT	30	CRAWFORD	021	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	21,995	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	UPPER PLAINS & PIEDMONT	30	OLNEY	027	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	12,218	19.5
CENSUS	2017	YEAR	COUNTY	ALABAMA	01	UPPER PLAINS & PIEDMONT	30	COOSA	037	0000000	AG LAND	AG LAND, CROPLAND - ACRES	TOTAL	NOT SPECIFIED	5,157	19.5

Selecting this button will download a CSV with the cropland acreage for your selected county, which can be used to scale fertilizer consumption to the county level following the formula in Equation 7. The QuickStats instructions can be repeated to obtain total cropland acreage by state by changing the Geographic Level to state.