2024 Cropland Data Layer

Metadata:

- Identification_Information
- Data_Quality_Information
- Spatial_Data_Organization_Information
- Spatial_Reference_Information
- Entity_and_Attribute_Information
- Distribution_Information
- Metadata_Reference_Information

Identification_Information:

Citation:

Citation_Information:

Originator:

United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS)

Publication_Date: 20250227

Title: 2024 Cropland Data Layer

Edition: 2024 Edition

Geospatial_Data_Presentation_Form: raster digital data

Publication_Information:

Publication_Place:

USDA NASS Marketing and Information Services Office, Washington, D.C.

Publisher: USDA NASS

Other_Citation_Details:

Z. Li, R. Mueller, Z. Yang, D. Johnson and P. Willis, "Cloud-Powered Agricultural Mapping: A Revolution Toward 10m Resolution Cropland Data Layers," IGARSS 2024 - 2024 IEEE International Geoscience and Remote Sensing Symposium, Athens, Greece, 2024, pp. 4081-4084, doi: 10.1109/IGARSS53475.2024.10641079. PDF available at <https://www.nass.usda.gov/Research_and_Science/Cropland/docs/IGARSS2024_Proceedings_10mCDL_Li_etal.pdf>. Data available free for download at <https://croplandcros.scinet.usda.gov/>. Frequently Asked Questions at <https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php>.

Online_Linkage: <https://croplandcros.scinet.usda.gov/>

Description:

Abstract:

The USDA National Agricultural Statistics Service (NASS) Cropland Data Layer (CDL) is an annual raster, geo-referenced, crop-specific land cover data layer produced using satellite imagery and extensive agricultural ground reference data. The program began in 1997 with

limited coverage and in 2008 forward expanded coverage to the entire Continental United States. Please note that no farmer reported data are derivable from the Cropland Data Layer.

New for the 2024 10-meter CDL, the crop classification utilized remote sensing data from harmonized Sentinel-2 MSI Level-2A, Landsat 8, and Landsat 9 Level-2 Collection 2 Tier-1 products, providing surface reflectance (SR) data across multiple spectral bands, including GREEN, RED, NIR, SWIR1, SWIR2, and RedEdge bands 1-4. To mitigate cloud cover, 10-day median composites of surface reflectance and NDVI were created from the cloud-masked Landsat-Sentinel multi-sensor data for the growing season of 2024. An impervious layer from USGS NLCD 2021 and a digital elevation model from USGS 3DEP were also included ancillary input variables. In addition, mixed sampling strategies and localized training and were applied to the 2024 10m CDL production. Additional information: Z. Li, R. Mueller, Z. Yang, D. Johnson and P. Willis, "Cloud-Powered Agricultural Mapping: A Revolution Toward 10m Resolution Cropland Data Layers," IGARSS 2024 - 2024 IEEE International Geoscience and Remote Sensing Symposium, Athens, Greece, 2024, pp. 4081-4084, doi: 10.1109/IGARSS53475.2024.10641079. PDF available at <https://www.nass.usda.gov/Research_and_Science/Cropland/docs/IGARSS2024_Proceedings_ 10mCDL_Li_etal.pdf>.

The 2024 CDL has a spatial resolution of 10 meters and was produced using satellite imagery from Landsat 8 and 9 OLI/TIRS and ESA SENTINEL-2A and -2B collected throughout the growing season. Additional ancillary inputs were used to supplement and improve the land cover classification including the United States Geological Survey (USGS) 3D Elevation Program (3DEP) Elevation Dataset (NED), and the USGS National Land Cover Database imperviousness data layer. Agricultural training and validation data are derived from the Farm Service Agency (FSA) Common Land Unit (CLU) Program. Some CDL states incorporate additional crop-specific ground reference obtained from the following non-FSA sources which are detailed in the 'Lineage' Section of this metadata: US Bureau of Reclamation, NASS Citrus Data Layer (internal use only), California Department of Water Resources, Florida Department of Agriculture and Consumer Services Office of Agricultural Water Policy, Cornell University grape/vineyard data, Utah Department of Water Resources, and Washington State Department of Agriculture. The 2021 NLCD was used as non-agricultural training and validation data for the 2024 CDL. Please visit the CDL FAQs and metadata webpages at <https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php> to view a complete list of imagery, ancillary inputs, and ground reference used for a specific state and year.

Purpose:

The purpose of the Cropland Data Layer Program is to use satellite imagery to (1) provide supplemental acreage estimates to the Agricultural Statistics Board for the state's major commodities and (2) produce digital, crop-specific, categorized geo-referenced output products.

Supplemental_Information:

The data is available free for download through CroplandCROS at <https://croplandcros.scinet.usda.gov/>. Metadata, Frequently Asked Questions (FAQs), and the

most current year of data is available free for download at the official website <https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php>.

Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 20231001
Ending_Date: 20241231
Currentness_Reference: 2024 growing season
Status:
Progress: Complete
Maintenance_and_Update_Frequency: annual updates
Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: -127.8873
East_Bounding_Coordinate: -74.1585
North_Bounding_Coordinate: 47.9580
South_Bounding_Coordinate: 23.1496
Keywords:
Theme:
Theme_Keyword_Thesaurus: NGDA Portfolio Themes
Theme_Keyword: National Geospatial Data Asset
Theme_Keyword: Land Use Land Cover Theme
Theme_Keyword: NGDA
Theme_Keyword: NGDA109
Theme:
Theme_Keyword_Thesaurus: ISO 19115 Topic Category
Theme_Keyword: farming, 001
Theme_Keyword: environment, 007
Theme_Keyword: imageryBaseMapsEarthCover, 010
Theme:
Theme_Keyword_Thesaurus: Global Change Master Directory (GCMD) Science Keywords
Theme_Keyword:
Earth Science > Biosphere > Terrestrial Ecosystems > Agricultural Lands
Theme_Keyword: Earth Science > Land Surface > Land Use/Land Cover > Land Cover
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: crop cover
Theme_Keyword: cropland
Theme_Keyword: agriculture
Theme_Keyword: farming

Theme_Keyword: land cover
Theme_Keyword: crop estimates
Theme_Keyword: ESA SENTINEL-2
Theme_Keyword: Landsat
Theme_Keyword: CroplandCROS
Place:
Place_Keyword_Thesaurus: Global Change Master Directory (GCMD) Location Keywords
Place_Keyword: Continent > North America > United States of America
Place:
Place_Keyword_Thesaurus: None
Place_Keyword: United States
Place_Keyword: USA
Place_Keyword: CONUS
Temporal:
Temporal_Keyword_Thesaurus: None
Temporal_Keyword: 2024
Access_Constraints: none
Use_Constraints:
The USDA NASS Cropland Data Layer and the data offered on the CroplandCROS website is provided to the public as is and is considered public domain and free to redistribute. The USDA NASS does not warrant any conclusions drawn from these data.
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA NASS, Spatial Analysis Research Section
Contact_Person: USDA NASS, Spatial Analysis Research Section staff
Contact_Address:
Address_Type: mailing and physical address
Address: 1400 Independence Avenue, SW, Room 5029 South Building
City: Washington
State_or_Province: District of Columbia
Postal_Code: 20250-2001
Country: USA
Contact_Voice_Telephone: 800-727-9540
Contact_Facsimile_Telephone: 855-493-0447
Contact_Electronic_Mail_Address: SM.NASS.RDD.GIB@usda.gov
Data_Set_Credit: USDA National Agricultural Statistics Service
Security_Information:

Security_Classification_System: None
Security_Classification: Unclassified
Security_Handling_Description: None
Native_Data_Set_Environment:
Microsoft Windows 10 Enterprise; Google Earth Engine <https://earthengine.google.com/>; ERDAS Imagine Version 2018 <https://www.hexagongeospatial.com/>; ESRI ArcGIS Version 10.8 and ArcGIS Pro 3.1.3 <https://www.esri.com/>.
The 2024 CDL is the first time using Google Earth Engine to produce the land cover classification. ERDAS Imagine is used in the pre- and post- processing of all raster-based data. ESRI ArcGIS is used to prepare the vector-based Farm Service Agency (FSA) Common Land Unit (CLU) training and validation data. The CDL methodology from 2007 to 2023 used Rulequest See5.0 software to create a decision-tree based classifier. The NLCD Mapping Tool was used to apply the See5.0 decision-tree via ERDAS Imagine. Pre-2007 CDLs were created using in-house software (Peditor) based upon a maximum likelihood classifier approach. Please visit the CDL FAQs at <https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php> to verify the methodology used for a specific state and year.
Data_Quality_Information:
Attribute_Accuracy:
Attribute_Accuracy_Report:
If the following table does not display properly, then please visit the CDL Metadata webpage at <https://www.nass.usda.gov/Research_and_Science/Cropland/metadata/meta.php> to view the original file. Accuracy at the individual state-level can be viewed at the CDL Metadata webpage.
USDA National Agricultural Statistics Service, 2024 Cropland Data Layer
STATEWIDE AGRICULTURAL ACCURACY REPORT

Crop-specific covers only	*Correct	Accuracy	Error	Kappa
OVERALL ACCURACY**	2,763,127	77.5%	22.5%	0.733

Cover Type	Attribute Code	*Correct Pixels	Producer's Accuracy	Omission Error	Kappa	User's Accuracy	Commission Error	Cond'l Kappa
Corn	1	926,684	92.6%	7.4%	0.923	92.3%	7.7%	0.919
Cotton	2	118,322	85.2%	14.8%	0.852	86.2%	13.8%	0.861
Rice	3	35,276	96.1%	3.9%	0.961	91.3%	8.7%	0.912
Sorghum	4	60,299	79.9%	20.1%	0.799	69.8%	30.2%	0.697

Crop	Code	Acres	%	%	Value	%	%	Value
Soybeans	5	830,135	91.2%	8.8%	0.908	91.6%	8.4%	0.912
Sunflower	6	7,181	82.8%	17.2%	0.828	82.8%	17.2%	0.828
Peanuts	10	18,182	90.7%	9.3%	0.906	74.8%	25.2%	0.747
Tobacco	11	329	37.9%	62.1%	0.379	70.3%	29.7%	0.703
Sweet Corn	12	1,389	56.2%	43.8%	0.562	56.6%	43.4%	0.566
Pop or Orn Corn	13	1,298	82.7%	17.3%	0.827	52.3%	47.7%	0.523
Mint	14	402	82.5%	17.5%	0.825	76.9%	23.1%	0.769
Barley	21	16,542	74.3%	25.7%	0.743	65.1%	34.9%	0.650
Durum Wheat	22	16,332	72.0%	28.0%	0.720	62.6%	37.4%	0.625
Spring Wheat	23	110,760	82.9%	17.1%	0.828	86.7%	13.3%	0.866
Winter Wheat	24	204,900	87.1%	12.9%	0.869	81.1%	18.9%	0.809
Other Small Grains	25	90	33.2%	66.8%	0.332	54.5%	45.5%	0.545
Dbl Crop WinWht/Soybeans	26	36,376	78.4%	21.6%	0.783	81.6%	18.4%	0.815
Rye	27	2,895	54.7%	45.3%	0.546	36.1%	63.9%	0.360
Oats	28	6,701	57.3%	42.7%	0.573	36.2%	63.8%	0.362
Millet	29	5,076	64.7%	35.3%	0.647	52.3%	47.7%	0.523
Speltz	30	29	15.4%	84.6%	0.154	30.9%	69.1%	0.309
Canola	31	28,077	93.8%	6.2%	0.938	89.1%	10.9%	0.891
Flaxseed	32	1,003	61.2%	38.8%	0.612	51.4%	48.6%	0.514
Safflower	33	1,363	75.4%	24.6%	0.754	77.2%	22.8%	0.772
Rape Seed	34	25	25.5%	74.5%	0.255	50.0%	50.0%	0.500
Mustard	35	1,657	82.9%	17.1%	0.829	73.3%	26.7%	0.733
Alfalfa	36	88,352	79.6%	20.4%	0.795	60.3%	39.7%	0.601
Other Hay/Non Alfalfa	37	13,256	46.8%	53.2%	0.464	8.3%	91.7%	0.082
Camelina	38	165	44.6%	55.4%	0.446	39.0%	61.0%	0.390
Buckwheat	39	311	57.9%	42.1%	0.579	71.0%	29.0%	0.710
Sugarbeets	41	11,233	95.6%	4.4%	0.956	91.1%	8.9%	0.911
Dry Beans	42	14,668	80.6%	19.4%	0.806	77.0%	23.0%	0.770
Potatoes	43	8,489	89.7%	10.3%	0.897	87.1%	12.9%	0.871

Crop	#	Value	%	%	Dec	%	%	Dec
Other Crops	44	731	46.0%	54.0%	0.460	54.3%	45.7%	0.543
Sugarcane	45	13,498	88.5%	11.5%	0.885	90.0%	10.0%	0.900
Sweet Potatoes	46	935	83.8%	16.2%	0.838	77.6%	22.4%	0.776
Misc Vegs & Fruits	47	62	9.8%	90.2%	0.098	24.5%	75.5%	0.245
Watermelons	48	268	45.9%	54.1%	0.459	55.4%	44.6%	0.554
Onions	49	923	70.1%	29.9%	0.701	76.8%	23.2%	0.768
Cucumbers	50	306	56.5%	43.5%	0.565	68.0%	32.0%	0.680
Chick Peas	51	5,280	77.7%	22.3%	0.777	81.7%	18.3%	0.817
Lentils	52	10,012	82.2%	17.8%	0.822	77.6%	22.4%	0.776
Peas	53	10,544	81.8%	18.2%	0.818	73.0%	27.0%	0.730
Tomatoes	54	1,893	78.0%	22.0%	0.780	86.1%	13.9%	0.861
Caneberries	55	62	51.2%	48.8%	0.512	49.2%	50.8%	0.492
Hops	56	594	88.9%	11.1%	0.889	81.5%	18.5%	0.815
Herbs	57	615	53.2%	46.8%	0.532	38.7%	61.3%	0.387
Clover/Wildflowers	58	490	41.7%	58.3%	0.417	34.8%	65.2%	0.348
Sod/Grass Seed	59	4,068	60.1%	39.9%	0.600	49.6%	50.4%	0.496
Switchgrass	60	33	18.8%	81.3%	0.187	30.0%	70.0%	0.300
Fallow/Idle Cropland	61	68,594	84.1%	15.9%	0.840	67.7%	32.3%	0.676
Shrubland	64	18,064	72.3%	27.7%	0.723	49.2%	50.8%	0.492
Cherries	66	805	52.9%	47.1%	0.529	47.0%	53.0%	0.470
Peaches	67	597	45.5%	54.5%	0.455	48.4%	51.6%	0.484
Apples	68	2,715	63.5%	36.5%	0.635	74.8%	25.2%	0.747
Grapes	69	10,441	71.9%	28.1%	0.719	76.3%	23.7%	0.763
Christmas Trees	70	68	9.7%	90.3%	0.097	14.3%	85.7%	0.143
Other Tree Crops	71	275	30.8%	69.2%	0.308	44.0%	56.0%	0.440
Citrus	72	3,974	58.5%	41.5%	0.585	75.1%	24.9%	0.751

Pecans	74	2,706	76.6%	23.4%	0.766	49.9%	50.1%	0.499
Almonds	75	23,975	86.3%	13.7%	0.863	86.5%	13.5%	0.865
Walnuts	76	5,826	88.7%	11.3%	0.887	72.3%	27.7%	0.723
Pears	77	293	56.0%	44.0%	0.560	52.6%	47.4%	0.526
Aquaculture	92	4,555	85.3%	14.7%	0.853	80.7%	19.3%	0.807
Pistachios	204	8,607	88.9%	11.1%	0.889	85.7%	14.3%	0.857
Triticale	205	2,559	46.5%	53.5%	0.465	25.7%	74.3%	0.257
Carrots	206	147	54.6%	45.4%	0.546	56.5%	43.5%	0.565
Asparagus	207	17	34.0%	66.0%	0.340	54.8%	45.2%	0.548
Garlic	208	144	66.4%	33.6%	0.664	76.6%	23.4%	0.766
Cantaloupes	209	57	34.8%	65.2%	0.348	60.0%	40.0%	0.600
Prunes	210	245	54.1%	45.9%	0.541	36.5%	63.5%	0.365
Olives	211	479	73.6%	26.4%	0.736	45.7%	54.3%	0.457
Oranges	212	3,617	61.0%	39.0%	0.610	58.5%	41.5%	0.585
Honeydew Melons	213	2	10.5%	89.5%	0.105	11.1%	88.9%	0.111
Broccoli	214	61	36.7%	63.3%	0.367	47.7%	52.3%	0.477
Avocados	215	353	69.9%	30.1%	0.699	48.9%	51.1%	0.489
Peppers	216	108	38.3%	61.7%	0.383	54.5%	45.5%	0.545
Pomegranates	217	206	83.7%	16.3%	0.837	51.2%	48.8%	0.512
Nectarines	218	1	5.3%	94.7%	0.053	14.3%	85.7%	0.143
Greens	219	63	39.1%	60.9%	0.391	40.9%	59.1%	0.409
Plums	220	20	14.6%	85.4%	0.146	5.7%	94.3%	0.057
Strawberries	221	26	15.7%	84.3%	0.157	45.6%	54.4%	0.456
Squash	222	51	24.4%	75.6%	0.244	45.1%	54.9%	0.451
Apricots	223	5	7.5%	92.5%	0.075	6.2%	93.8%	0.062
Vetch	224	64	57.7%	42.3%	0.577	59.8%	40.2%	0.598
Dbl Crop WinWht/Corn	225	1,796	46.1%	53.9%	0.460	48.5%	51.5%	0.485
Dbl Crop Oats/Corn	226	315	47.9%	52.1%	0.479	48.8%	51.2%	0.488

Crop	Code	Count	%	%	Value	%	%	Value
Lettuce	227	97	41.6%	58.4%	0.416	27.1%	72.9%	0.271
Dbl Crop Triticale/Corn	228	1,841	47.0%	53.0%	0.469	61.8%	38.2%	0.618
Pumpkins	229	226	36.3%	63.7%	0.363	57.1%	42.9%	0.571
Dbl Crop Lettuce/Durum Wht	230	0	0.0%	100.0%	0.000	n/a	n/a	n/a
Dbl Crop Lettuce/Cantaloupe	231	56	48.7%	51.3%	0.487	90.3%	9.7%	0.903
Dbl Crop Lettuce/Cotton	232	97	68.3%	31.7%	0.683	84.3%	15.7%	0.843
Dbl Crop Lettuce/Barley	233	1	20.0%	80.0%	0.200	25.0%	75.0%	0.250
Dbl Crop WinWht/Sorghum	236	1,725	56.4%	43.6%	0.564	33.3%	66.7%	0.333
Dbl Crop Barley/Corn	237	187	39.0%	61.0%	0.390	57.9%	42.1%	0.579
Dbl Crop WinWht/Cotton	238	407	32.9%	67.1%	0.329	18.2%	81.8%	0.182
Dbl Crop Soybeans/Cotton	239	0	0.0%	100.0%	0.000	n/a	n/a	n/a
Dbl Crop Soybeans/Oats	240	160	29.5%	70.5%	0.295	37.0%	63.0%	0.370
Dbl Crop Corn/Soybeans	241	31	32.6%	67.4%	0.326	48.4%	51.6%	0.484
Blueberries	242	368	45.4%	54.6%	0.454	39.1%	60.9%	0.391
Cabbage	243	90	49.2%	50.8%	0.492	46.9%	53.1%	0.469
Cauliflower	244	10	28.6%	71.4%	0.286	20.4%	79.6%	0.204
Celery	245	6	14.3%	85.7%	0.143	25.0%	75.0%	0.250
Radishes	246	28	46.7%	53.3%	0.467	50.9%	49.1%	0.509
Turnips	247	19	38.8%	61.2%	0.388	48.7%	51.3%	0.487
Eggplants	248	1	10.0%	90.0%	0.100	50.0%	50.0%	0.500
Gourds	249	3	17.6%	82.4%	0.176	60.0%	40.0%	0.600
Cranberries	250	18	17.6%	82.4%	0.176	69.2%	30.8%	0.692
Dbl Crop Barley/Soybeans	254	433	47.5%	52.5%	0.475	63.0%	37.0%	0.630

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

**The Overall Accuracy represents only the FSA row crops and annual fruit and vegetables (codes 1-61, 66-80, 92 and 200-255).

FSA-sampled grass and pasture. Non-agricultural and NLCD-sampled categories (codes 62-65, 81-91 and 93-199) are not included in the Overall Accuracy.

The accuracy of the non-agricultural land cover classes within the Cropland Data Layer is entirely dependent upon the USGS, National Land Cover Database. Thus, the USDA NASS recommends that users consider the NLCD for studies involving non-agricultural land cover. For more information on the accuracy of the NLCD please reference <https://www.mrlc.gov/>.

Quantitative_Attribute_Accuracy_Assessment:

Attribute_Accuracy_Value:

Classification accuracy is generally 85% to 95% correct for the major crop-specific land cover categories.

Attribute_Accuracy_Explanation:

The strength and emphasis of the CDL is crop-specific land cover categories. The accuracy of the CDL non-agricultural land cover classes is entirely dependent upon the USGS, National Land Cover Database. Thus, the USDA NASS recommends that users consider the NLCD for studies involving non-agricultural land cover.

These definitions of accuracy statistics were derived from the following book: Congalton, Russell G. and Kass Green. Assessing the Accuracy of Remotely Sensed Data: Principles and Practices. Boca Raton, Florida: CRC Press, Inc. 1999. The 'Producer's Accuracy' is calculated for each cover type in the ground truth and indicates the probability that a ground truth pixel will be correctly mapped (across all cover types) and measures 'errors of omission'. An 'Omission Error' occurs when a pixel is excluded from the category to which it belongs in the validation dataset. The 'User's Accuracy' indicates the probability that a pixel from the CDL classification actually matches the ground truth data and measures 'errors of commission'. The 'Commission Error' represent when a pixel is included in an incorrect category according to the validation data. It is important to take into consideration errors of omission and commission. For example, if you classify every pixel in a scene to 'wheat', then you have 100% Producer's Accuracy for the wheat category and 0% Omission Error. However, you would also have a very high error of commission as all other crop types would be included in the incorrect category. The 'Kappa' is a measure of agreement based on the difference between the actual agreement in the error matrix (i.e., the agreement between the remotely sensed classification and the reference data as indicated by the major diagonal) and the chance agreement which is indicated by the row and column totals. The 'Conditional Kappa Coefficient' is the agreement for an individual category within the entire error matrix.

Logical_Consistency_Report:

The Cropland Data Layer (CDL) has been produced using training and independent validation data from the Farm Service Agency (FSA) Common Land Unit (CLU) Program and United

States Geological Survey (USGS) National Land Cover Database (NLCD). More information about the FSA CLU Program can be found at <https://www.fsa.usda.gov/>. More information about the NLCD can be found at <https://www.mrlc.gov/>. The CDL encompasses the entire Continental United States unless noted otherwise in the 'Completeness Report' section of this metadata file.

Completeness_Report: The 2024 CDL covers the Continental United States.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

The Cropland Data Layer retains the spatial attributes of the input imagery. The Landsat 8 and 9 OLI/TIRS imagery uses the Collection 2 Level-1 specifications. Please reference the metadata on the USGS Glovis website for the positional accuracy of each Landsat scene. The Sentinel 2A and 2B imagery uses using the S2MSI1C product type which is orthorectified Top-of-Atmosphere reflectance. Please reference the metadata on the Copernicus website for positional accuracy details.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: European Space Agency (ESA)

Publication_Date: 2024

Title: SENTINEL-2

Geospatial_Data_Presentation_Form: remote-sensing image

Publication_Information:

Publication_Place: European Commission, Brussels (Belgium)

Publisher: Copernicus - European Commission

Other_Citation_Details:

The ESA SENTINEL-2 satellite sensor operates in twelve spectral bands at spatial resolutions varying from 10 to 60 meters. Additional information about the data can be obtained at <http://www.esa.int/>. Refer to the 'Supplemental Information' Section of this metadata file for specific scene date, path, row and quadrants used as classification inputs.

Source_Scale_Denominator: 10 meter

Type_of_Source_Media: online download

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 20231001

Ending_Date: 20241231

Source_Currentness_Reference: ground condition

Source_Citation_Abbreviation: SENTINEL-2
Source_Contribution: Raw data used in land cover spectral signature analysis
Source_Information:
Source_Citation:
Citation_Information:
Originator:
United States Geological Survey (USGS) Earth Resources Observation and Science (EROS)
Publication_Date: 2024
Title:
Landsat 8 and 9 Operational Land Imager and Thermal Infrared Sensor (OLI/TIRS)
Geospatial_Data_Presentation_Form: remote-sensing image
Publication_Information:
Publication_Place: Sioux Falls, South Dakota 57198-001
Publisher: USGS, EROS
Other_Citation_Details:
The Landsat 8 and 9 OLI/TIRS data are free for download through the following website
<https://glovis.usgs.gov/>. Additional information about Landsat data can be obtained at
<https://www.usgs.gov/centers/eros>. Refer to the 'Supplemental Information' Section of this
metadata file for specific scene date, path and rows used as classification inputs.
Source_Scale_Denominator: 30 meter
Type_of_Source_Media: online download
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: 20231001
Ending_Date: 20241231
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: Landsat 8 and Landsat 9
Source_Contribution: Raw data used in land cover spectral signature analysis
Source_Information:
Source_Citation:
Citation_Information:
Originator:
United States Geological Survey (USGS) National Geospatial Program
Publication_Date: 2024
Title: 3D Elevation Program (3DEP)
Geospatial_Data_Presentation_Form: remote-sensing image
Publication_Information:
Publication_Place: Sioux Falls, South Dakota 57198 USA
Publisher: USGS

Other_Citation_Details:
The 3D Elevation Program (3DEP) is used as an ancillary data source in the production of the Cropland Data Layer. More information can be found at <https://www.usgs.gov/3d-elevation-program>. Refer to the 'Supplemental Information' Section of this metadata file for the complete list of ancillary data sources used as classification inputs.
Source_Scale_Denominator: 24000
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: unknown
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: 3DEP
Source_Contribution:
spatial and attribute information used in land cover spectral signature analysis
Source_Information:
Source_Citation:
Citation_Information:
Originator:
United States Geological Survey (USGS) Earth Resources Observation and Science (EROS) Data Center
Publication_Date: 2021
Title: National Land Cover Database 2021 (NLCD 2021)
Geospatial_Data_Presentation_Form: remote-sensing image
Publication_Information:
Publication_Place: Sioux Falls, South Dakota 57198 USA
Publisher: USGS, EROS Data Center
Other_Citation_Details:
The NLCD 2021 land cover was used as ground training and validation for non-agricultural categories. Additionally, the USGS NLCD 2021 Imperviousness layer was used as ancillary data sources in the Cropland Data Layer classification process. More information on the NLCD can be found at <https://www.mrlc.gov/>. Refer to the 'Supplemental Information' Section of this metadata file for the complete list of ancillary data sources used as classification inputs.
Source_Scale_Denominator: 30 meter
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: unknown
Source_Currentness_Reference: ground condition

Source_Citation_Abbreviation: NLCD
Source_Contribution: Raw data used in land cover spectral signature analysis
Source_Information:
Source_Citation:
Citation_Information:
Originator:
United States Department of Agriculture (USDA) Farm Service Agency (FSA)
Publication_Date: 2024
Title: USDA, FSA Common Land Unit (CLU)
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Salt Lake City, Utah 84119-2020 USA
Publisher: USDA, FSA Aerial Photography Field Office
Other_Citation_Details:
Access to the USDA, Farm Service Agency (FSA) Common Land Unit (CLU) digital data set is currently limited to FSA and Agency partnerships. During the current growing season, producers enrolled in FSA programs report their growing intentions, crops and acreage to USDA Field Service Centers. Their field boundaries are digitized in a standardized GIS data layer and the associated attribute information is maintained in a database known as 578 Administrative Data. This CLU/578 dataset provides a comprehensive and robust agricultural training and validation data set for the Cropland Data Layer. Additional information about the CLU Program can be found at <https://www.fsa.usda.gov/>.
Source_Scale_Denominator: 4800
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2024
Source_Currentness_Reference: ground condition, updated annually
Source_Citation_Abbreviation: FSA CLU
Source_Contribution:
spatial and attribute information used in the spectral signature training and validation of agricultural land cover
Source_Information:
Source_Citation:
Citation_Information:
Originator: California Department of Water Resources (DWR)
Publication_Date: 2024
Title: Statewide Land Use 2023 (Provisional)

Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Sacramento, California 94236-0001 USA
Publisher: California Department of Water Resources (DWR)
Other_Citation_Details:
(California only dataset) The California Department of Water Resources Land Use Program data is used as additional crop-specific ground reference training and validation for tree crops and vineyards in California. More information about California Department of Water Resources Land Use Program can be found online at <https://data.cnra.ca.gov/dataset/statewide-crop-mapping> and <https://www.landiq.com/>.
Source_Scale_Denominator: 4800
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2023
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: LandIQ
Source_Contribution:
spatial and attribute information used in the spectral signature training and validation of agricultural land cover
Source_Information:
Source_Citation:
Citation_Information:
Originator:
United States Department of Interior, Bureau of Reclamation, Lower Colorado Region
Publication_Date: 2024
Title:
Lower Colorado River Water Accounting System (LCRAS) GIS data layer
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Boulder City, NV 89006-1470, USA
Publisher:
United States Department of Interior, Bureau of Reclamation, Lower Colorado Region
Other_Citation_Details:
(Arizona and California only dataset) The Lower Colorado River Water Accounting System (LCRAS) GIS data layer contains an annually updated record of crop types that was used to supplement the training and validation of the Cropland Data Layer. The area covered is Southern California and Southwest Arizona. For more details, please reference the Bureau of Reclamation website <https://www.usbr.gov/lc/>.

Source_Scale_Denominator: 4800
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2024
Source_Currentness_Reference: ground condition, updated annually
Source_Citation_Abbreviation: LCRAS GIS Data
Source_Contribution:
spatial and attribute information used in the spectral signature training and validation of agricultural land cover
Source_Information:
Source_Citation:
Citation_Information:
Originator:
United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS)
Publication_Date: 2024
Title: USDA NASS Citrus Grove Data Layer
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Maitland, Florida 32751-7057 USA
Publisher: USDA NASS Florida Field Office
Other_Citation_Details:
(Florida only dataset) The Citrus Grove Data Layer is used as additional citrus training and validation ground reference data. Access to the USDA National Agricultural Statistics Service (NASS) Citrus Grove Data Layer is unpublished, for internal NASS use only.
Source_Scale_Denominator: 4800
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2024
Source_Currentness_Reference: ground condition, updated annually
Source_Citation_Abbreviation: NASS Citrus Grove Data Layer
Source_Contribution:
spatial and attribute information used in the spectral signature training and validation of agricultural land cover
Source_Information:
Source_Citation:

Citation_Information:
Originator: Florida Department of Agriculture and Consumer Services
Publication_Date: 2020
Title:
Florida Statewide Agricultural Irrigation Demand (FSAID) Geodatabase
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Tallahassee, Florida 32399-0800 USA
Publisher: Florida Department of Agriculture and Consumer Services
Other_Citation_Details:
(Florida only dataset) The Florida Statewide Agricultural Irrigation Demand (FSAID)
Geodatabase provides additional training and validation ground reference for Florida specialty
tree crops. More information about this data set can be found online at
<https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Water-Supply-Planning>.
Source_Scale_Denominator: 4800
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2020
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: FSAID
Source_Contribution:
spatial and attribute information used in the spectral signature training and validation of
agricultural land cover
Source_Information:
Source_Citation:
Citation_Information:
Originator: Cornell Cooperative Extension, Lake Erie Regional Grape Program
Publication_Date: 2024
Title: GIS Mapping of Lake Erie Vineyards
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Portland, NY, 14769 USA
Publisher: Lake Erie Regional Grape Program at CLEREL - Cornell University
Other_Citation_Details:
(New York, Ohio and Pennsylvania only dataset) The Lake Erie Vineyards GIS data provides
additional training and validation data for vineyards. More information can be found at
<https://lergp.cce.cornell.edu/>.

Source_Scale_Denominator: 4800
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2024
Source_Currentness_Reference: ground condition
Source_Citation_Abbreviation: Lake Erie Vineyards GIS data
Source_Contribution:
spatial and attribute information used in the spectral signature training and validation of
agricultural land cover
Source_Information:
Source_Citation:
Citation_Information:
Originator: Utah Division of Water Resources
Publication_Date: 2024
Title: Agriculture Check Polygons
Geospatial_Data_Presentation_Form: vector digital data
Publication_Information:
Publication_Place: Salt Lake City, Utah 84116 USA
Publisher: Utah Division of Water Resources
Other_Citation_Details:
(Utah only dataset) The Utah Division of Water Resources Agriculture Check Polygon data
provides additional training and validation data for Utah's cropland.
Source_Scale_Denominator: 4800
Type_of_Source_Media: online
Source_Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 2024
Source_Currentness_Reference: ground condition, updated annually
Source_Citation_Abbreviation: Utah DWR Agriculture Check Polygons
Source_Contribution:
spatial and attribute information used in the spectral signature training and validation of
agricultural land cover
Source_Information:
Source_Citation:
Citation_Information:
Originator: Washington State Department of Agriculture (WSDA)
Publication_Date: 2024

Title: WSDA Crop Geodatabase

Geospatial_Data_Presentation_Form: vector digital data

Publication_Information:

Publication_Place: Olympia, WA 98504-2560 USA

Publisher: Washington State Department of Agriculture

Other_Citation_Details:

(Washington only dataset) The WSDA Crop Geodatabase provides additional training and validation data for Washington's orchards, vineyards and small acreage crops. More information about the WSDA Crop Geodatabase can be found at <https://agr.wa.gov/>.

Source_Scale_Denominator: 4800

Type_of_Source_Media: online

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 2024

Source_Currentness_Reference: ground condition, updated annually

Source_Citation_Abbreviation: WSDA Crop Geodatabase

Source_Contribution:

spatial and attribute information used in the spectral signature training and validation of agricultural land cover

Process_Step:

Process_Description:

OVERVIEW: NEW 10-METER CDL: The crop classification utilized remote sensing data from harmonized Sentinel-2 MSI Level-2A, Landsat 8, and Landsat 9 Level-2 Collection 2 Tier-1 products, providing surface reflectance (SR) data across multiple spectral bands, including GREEN, RED, NIR, SWIR1, SWIR2, and RedEdge bands 1-4. To mitigate cloud cover, 10-day median composites of surface reflectance and NDVI were created from the cloud-masked Landsat-Sentinel multi-sensor data for the growing season of 2024. An impervious layer from USGS NLCD 2021 and a digital elevation model from USGS 3DEP were also included ancillary input variables. In addition, mixed sampling strategies and localized training and were applied to the 2024 10m CDL production. Additional information: Z. Li, R. Mueller, Z. Yang, D. Johnson and P. Willis, "Cloud-Powered Agricultural Mapping: A Revolution Toward 10m Resolution Cropland Data Layers," IGARSS 2024 - 2024 IEEE International Geoscience and Remote Sensing Symposium, Athens, Greece, 2024, pp. 4081-4084, doi: 10.1109/IGARSS53475.2024.10641079. PDF available at <https://www.nass.usda.gov/Research_and_Science/Cropland/docs/IGARSS2024_Proceedings_10mCDL_Li_etal.pdf>.

FOR MORE TECHNICAL DETAILS AND PROGRAM HISTORY: <https://www.nass.usda.gov/Research_and_Science/Cropland/sarsfaqs2.php> The United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS) Cropland

Data Layer (CDL) Program is a unique agricultural-specific land cover geospatial product that is produced annually in participating states. The CDL Program builds upon NASS' traditional crop acreage estimation program and integrates Farm Service Agency (FSA) grower-reported field data with satellite imagery to create an unbiased statistical estimator of crop area at the state and county level for internal use. It is important to note that the internal CDL acreage estimates, which most closely aligned with planted acres, are not simple pixel counting but regression estimates using NASS survey data. It is more of an 'Adjusted Census by Satellite.'

SOFTWARE: New for the 2024 CDL a random forest classifier in Google Earth Engine was used to create the classification. ERDAS Imagine is used in the pre- and post- processing of all raster-based data. ESRI ArcGIS is used to prepare the vector-based training and validation data.

RANDOM FOREST CLASSIFIER: The 2024 Cropland Data Layer uses a random forest classifier approach. This is a departure from previous CDLs (2008-2023) that used a decision tree classifier using See5 software. Older CDLs (pre-2007) had limited ground reference training and less satellite imagery inputs and used a maximum likelihood classifier approach.

GROUND TRUTH: As with the maximum likelihood method and decision tree classifiers, random forest is a supervised classification technique. Thus, it relies on having a sample of known ground reference areas in which to train the classifier. Older versions of the CDL (prior to 2006) utilized ground reference from the annual June Agricultural Survey (JAS). Beginning in 2006, the CDL utilizes the very comprehensive ground reference provided from the FSA Common Land Unit (CLU) Program as a replacement for the JAS data. The FSA CLU data have the advantage of natively being in a GIS and containing magnitudes more of field level information. Disadvantages include that it is not truly a probability sample of land cover and has bias toward subsidized program crops. Additional information about the FSA data can be found at <https://www.fsa.usda.gov/>. The most current version of the NLCD is used as non-agricultural training and validation data.

INPUTS: The 2024 CDL has a spatial resolution of 10 meters and was produced using satellite imagery from Landsat 8 and 9 OLI/TIRS and ESA SENTINEL-2A and -2B collected throughout the growing season. Additional ancillary inputs were used to supplement and improve the land cover classification including the United States Geological Survey (USGS) 3D Elevation Program (3DEP) data and the USGS National Land Cover Database imperviousness data. Agricultural training and validation data are derived from the Farm Service Agency (FSA) Common Land Unit (CLU) Program. The USGS NLCD is used as non-agricultural training and validation data. Please visit the CDL FAQs and metadata webpages at <https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php> to view complete lists of imagery, ancillary inputs and training and validation used for a specific state and year.

ACCURACY: The accuracy of the land cover classifications are evaluated using independent validations data sets generated from the FSA CLU data (agricultural categories) and the NLCD (non-agricultural categories). The Producer's Accuracy is generally 85% to 95% correct for the major crop-specific land cover categories. Please visit the CDL FAQs and metadata webpages at

<https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php> to view or download full accuracy reports by state and year.

Process_Date: 2024
Process_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA NASS, Spatial Analysis Research Section
Contact_Person: USDA NASS, Spatial Analysis Research Section staff
Contact_Address:
Address_Type: mailing and physical address
Address: 1400 Independence Avenue, SW, Room 5029 South Building
City: Washington
State_or_Province: District of Columbia
Postal_Code: 20250-2001
Country: USA
Contact_Voice_Telephone: 800-727-9540
Contact_Facsimile_Telephone: 855-493-0447
Contact_Electronic_Mail_Address: SM.NASS.RDD.GIB@usda.gov
Cloud_Cover: 0
Spatial_Data_Organization_Information:
Indirect_Spatial_Reference: Continental United States
Direct_Spatial_Reference_Method: Raster
Raster_Object_Information:
Raster_Object_Type: Pixel
Row_Count: 289567
Column_Count: 461431
Spatial_Reference_Information:
Horizontal_Coordinate_System_Definition:
Planar:
Map_Projection:
Map_Projection_Name: Albers Conical Equal Area as used by mrlc.gov (NLCD)
Albers_Conical_Equal_Area:
Standard_Parallel: 29.500000
Standard_Parallel: 45.500000

Longitude_of_Central_Meridian: -96.000000
Latitude_of_Projection_Origin: 23.000000
False_Easting: 0.000000
False_Northing: 0.000000
Planar_Coordinate_Information:
Planar_Coordinate_Encoding_Method: row and column
Coordinate_Representation:
Abscissa_Resolution: 10
Ordinate_Resolution: 10
Planar_Distance_Units: meters
Geodetic_Model:
Horizontal_Datum_Name: North American Datum of 1983
Ellipsoid_Name: Geodetic Reference System 80
Semi-major_Axis: 6378137.000000
Denominator_of_Flattening_Ratio: 298.257223563
Entity_and_Attribute_Information:
Overview_Description:
Entity_and_Attribute_Overview:
The Cropland Data Layer (CDL) is produced using agricultural training data from the Farm Service Agency (FSA) Common Land Unit (CLU) Program and non-agricultural training data from the most current version of the United States Geological Survey (USGS) National Land Cover Database (NLCD). The strength and emphasis of the CDL is crop-specific land cover categories. The accuracy of the CDL non-agricultural land cover classes are entirely dependent upon the NLCD. Thus, the USDA NASS recommends that users consider the NLCD for studies involving non-agricultural land cover.
Entity_and_Attribute_Detail_Citation:
If the following table does not display properly, then please visit the following website to view the original metadata at
<https://www.nass.usda.gov/Research_and_Science/Cropland/metadata/meta.php>.
 Data Dictionary: USDA National Agricultural Statistics Service, Cropland Data Layer

 Source: USDA National Agricultural Statistics Service

 The following is a cross reference list of the categorization codes and land covers.
 Note that not all land cover categories listed below will appear in an individual state.

 Raster
 Attribute Domain Values and Definitions: NO DATA, BACKGROUND 0

 Categorization Code   Land Cover

"0"   Background

Raster
Attribute Domain Values and Definitions: CROPS 1-60

Categorization Code   Land Cover
"1"   Corn
"2"   Cotton
"3"   Rice
"4"   Sorghum
"5"   Soybeans
"6"   Sunflower
"10"   Peanuts
"11"   Tobacco
"12"   Sweet Corn
"13"   Pop or Orn Corn
"14"   Mint
"21"   Barley
"22"   Durum Wheat
"23"   Spring Wheat
"24"   Winter Wheat
"25"   Other Small Grains
"26"   Dbl Crop WinWht/Soybeans
"27"   Rye
"28"   Oats
"29"   Millet
"30"   Speltz
"31"   Canola
"32"   Flaxseed
"33"   Safflower
"34"   Rape Seed
"35"   Mustard
"36"   Alfalfa
"37"   Other Hay/Non Alfalfa
"38"   Camelina
"39"   Buckwheat
"41"   Sugarbeets
"42"   Dry Beans
"43"   Potatoes
"44"   Other Crops

"45"	Sugarcane
"46"	Sweet Potatoes
"47"	Misc Vegs & Fruits
"48"	Watermelons
"49"	Onions
"50"	Cucumbers
"51"	Chick Peas
"52"	Lentils
"53"	Peas
"54"	Tomatoes
"55"	Caneberries
"56"	Hops
"57"	Herbs
"58"	Clover/Wildflowers
"59"	Sod/Grass Seed
"60"	Switchgrass

Raster
Attribute Domain Values and Definitions: NON-CROP 61-65

Categorization Code   Land Cover
"61"	Fallow/Idle Cropland
"62"	Pasture/Grass
"63"	Forest
"64"	Shrubland
"65"	Barren

Raster
Attribute Domain Values and Definitions: CROPS 66-80

Categorization Code   Land Cover
"66"	Cherries
"67"	Peaches
"68"	Apples
"69"	Grapes
"70"	Christmas Trees
"71"	Other Tree Crops
"72"	Citrus
"74"	Pecans
"75"	Almonds

"76"   Walnuts
"77"   Pears

Raster
Attribute Domain Values and Definitions: OTHER 81-109

Categorization Code   Land Cover
"81"   Clouds/No Data
"82"   Developed
"83"   Water
"87"   Wetlands
"88"   Nonag/Undefined
"92"   Aquaculture

Raster
Attribute Domain Values and Definitions: NLCD-DERIVED CLASSES 110-195

Categorization Code   Land Cover
"111"   Open Water
"112"   Perennial Ice/Snow
"121"   Developed/Open Space
"122"   Developed/Low Intensity
"123"   Developed/Med Intensity
"124"   Developed/High Intensity
"131"   Barren
"141"   Deciduous Forest
"142"   Evergreen Forest
"143"   Mixed Forest
"152"   Shrubland
"176"   Grassland/Pasture
"190"   Woody Wetlands
"195"   Herbaceous Wetlands

Raster
Attribute Domain Values and Definitions: CROPS 195-255

Categorization Code   Land Cover
"204"   Pistachios
"205"   Triticale
"206"   Carrots

"207"	Asparagus
"208"	Garlic
"209"	Cantaloupes
"210"	Prunes
"211"	Olives
"212"	Oranges
"213"	Honeydew Melons
"214"	Broccoli
"215"	Avocados
"216"	Peppers
"217"	Pomegranates
"218"	Nectarines
"219"	Greens
"220"	Plums
"221"	Strawberries
"222"	Squash
"223"	Apricots
"224"	Vetch
"225"	Dbl Crop WinWht/Corn
"226"	Dbl Crop Oats/Corn
"227"	Lettuce
"228"	Dbl Crop Triticale/Corn
"229"	Pumpkins
"230"	Dbl Crop Lettuce/Durum Wht
"231"	Dbl Crop Lettuce/Cantaloupe
"232"	Dbl Crop Lettuce/Cotton
"233"	Dbl Crop Lettuce/Barley
"234"	Dbl Crop Durum Wht/Sorghum
"235"	Dbl Crop Barley/Sorghum
"236"	Dbl Crop WinWht/Sorghum
"237"	Dbl Crop Barley/Corn
"238"	Dbl Crop WinWht/Cotton
"239"	Dbl Crop Soybeans/Cotton
"240"	Dbl Crop Soybeans/Oats
"241"	Dbl Crop Corn/Soybeans
"242"	Blueberries
"243"	Cabbage
"244"	Cauliflower
"245"	Celery
"246"	Radishes

"247"	Turnips
"248"	Eggplants
"249"	Gourds
"250"	Cranberries
"254"	Dbl Crop Barley/Soybeans

Distribution_Information:

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: USDA NASS Customer Service

Contact_Person: USDA NASS Customer Service Staff

Contact_Address:

Address_Type: mailing and physical address

Address: 1400 Independence Avenue, SW, Room 5038-S

City: Washington

State_or_Province: District of Columbia

Postal_Code: 20250-9410

Country: USA

Contact_Voice_Telephone: 800-727-9540

Contact_Facsimile_Telephone: 855-493-0447

Contact_Electronic_Mail_Address: SM.NASS.RDD.GIB@usda.gov

Contact_Instructions:

Please visit the official website
<https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php> for distribution
details. The Cropland Data Layer is available free for download at CroplandCROS
<https://croplandcros.scinet.usda.gov/> and the Geospatial Data Gateway
<https://datagateway.nrcs.usda.gov/>. Distribution issues can also be directed to the NASS
Customer Service Hotline at 1-800-727-9540.

Resource_Description: 2024 Cropland Data Layer

Distribution_Liability:

Disclaimer: Users of the Cropland Data Layer (CDL) are solely responsible for interpretations
made from these products. The CDL is provided 'as is' and the USDA NASS does not warrant
results you may obtain using the Cropland Data Layer. Contact our staff at
(SM.NASS.RDD.GIB@usda.gov) if technical questions arise in the use of the CDL. NASS
maintains a Frequently Asked Questions (FAQ's) section at
<https://www.nass.usda.gov/Research_and_Science/Cropland/SARS1a.php>.

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Format_Name: GEOTIFF
Format_Version_Date: 2024
Format_Information_Content: GEOTIFF
Digital_Transfer_Option:
Online_Option:
Computer_Contact_Information:
Network_Address:
Network_Resource_Name: <https://croplandcros.scinet.usda.gov/>
Access_Instructions:
The CDL is available online and free for download at CroplandCROS
<https://croplandcros.scinet.usda.gov/> and the Geospatial Data Gateway
<https://datagateway.nrcs.usda.gov/>.
Fees:
The CDL is available online and free for download at CroplandCROS
<https://croplandcros.scinet.usda.gov/>, the Geospatial Data Gateway
<https://datagateway.nrcs.usda.gov/>, and the NASS CDL website
<https://www.nass.usda.gov/Research_and_Science/Cropland/Release/>. Distribution questions
can be directed to the NASS Customer Service Hotline at 1-800-727-9540.
Ordering_Instructions:
The CDL is available online and free for download at CroplandCROS
<https://croplandcros.scinet.usda.gov/>, the Geospatial Data Gateway
<https://datagateway.nrcs.usda.gov/>, and the NASS CDL website
<https://www.nass.usda.gov/Research_and_Science/Cropland/Release/>. Distribution questions
can be directed to the NASS Customer Service Hotline at 1-800-727-9540.
Technical_Prerequisites:
If the user does not have software capable of viewing GEOTIF (.tif) or ERDAS Imagine (.img)
file formats then we suggest using CroplandCROS <https://croplandcros.scinet.usda.gov/>.
Metadata_Reference_Information:
Metadata_Date: 20250227
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: USDA NASS, Spatial Analysis Research Section
Contact_Person: USDA NASS, Spatial Analysis Research Section Staff
Contact_Address:
Address_Type: mailing and physical address
Address: 1400 Independence Avenue, SW, Room 5029 South Building
City: Washington
State_or_Province: District of Columbia

Postal_Code: 20250-2001
Country: USA
Contact_Voice_Telephone: 800-727-9540
Contact_Facsimile_Telephone: 855-493-0447
Contact_Electronic_Mail_Address: SM.NASS.RDD.GIB@usda.gov
Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001-1998
Metadata_Access_Constraints: No restrictions on the distribution or use of the metadata file
Metadata_Use_Constraints: No restrictions on the distribution or use of the metadata file
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