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## Data from: Not just crop or forest: building an integrated land cover map for agricultural and natural areas (tabular files)

### Introduction and Rationale:

Due to our increasing understanding of the role the surrounding landscape plays in ecological processes, a detailed characterization of land cover, including both agricultural and natural habitats, is ever more important for both researchers and conservation practitioners. Unfortunately, in the United States, different types of land cover data are split across thematic datasets that emphasize agricultural or natural vegetation, but not both. To address this data gap and reduce duplicative efforts in geospatial processing, we merged two major datasets, the LANDFIRE National Vegetation Classification (NVC) and USDA-NASS Cropland Data Layer (CDL), to produce an integrated land cover map. Our workflow leveraged strengths of the NVC and the CDL to produce detailed rasters comprising both agricultural and natural land-cover classes. We generated these maps for each year from 2012-2021 for the conterminous United States, quantified agreement between input layers and accuracy of our merged product, and published the complete workflow necessary to update these data. In our validation analyses, we found that approximately 5.5% of NVC agricultural pixels conflicted with the CDL, but we resolved a majority of these conflicts based on surrounding agricultural land, leaving only 0.6% of agricultural pixels unresolved in our merged product.

### Contents:

#### *Spatial data*

1. Attribute table for merged rasters

#### *Technical validation data*

1. Number and proportion of mismatched pixels
2. Number and proportion of unresolved pixels
3. Producer's and User's accuracy values and coverage of reference data



**Data Dictionary** (</dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/5ed61680-e64a-4c2f-8788-f3af42bf2e52>) Dataset data dictionary

[See all >> /search/field\\_dkan\\_ispartof\\_ref/444838](#)

This resource is unpublished.17647

MD5: 91fb7b749618062d25c36806378c16c9

[Explore Data /dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/5ed61680-e64a-4c2f-8788-f3af42bf2e52](/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/5ed61680-e64a-4c2f-8788-f3af42bf2e52)



**Attribute table for merged rasters** (</dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/f24133d1-b448-4974-a107-440c3d59be1b>)

Raster attribute table for merged raster product. Class names and...

This resource is unpublished.17647

MD5: e8531e663c00641e12fa8f1791343e74

[Explore Data /dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/f24133d1-b448-4974-a107-440c3d59be1b](/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/f24133d1-b448-4974-a107-440c3d59be1b)



**Number and proportion of mismatched pixels** (</dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/a22818a1-28e1-4e6b-8296-daac21c6ba84>)

Number and proportion of pixels that were mismatched between the Cropland...

This resource is unpublished.17647

MD5: 3016643e00b3c62f729f1e08b0bcc3a

Explore Data (/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/a22818a1-28e1-4e6b-8296-daac21c6ba84)



**Number and proportion of unresolved pixels (/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/0705b0b5-bb14-409e-b192-d2396a329212)**

Number and proportion of unresolved pixels in the final merged rasters, per...

This resource is unpublished.17647

MD5: bacd3ea7f50dafa030bffdba7ed5378a

Explore Data (/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/0705b0b5-bb14-409e-b192-d2396a329212)



**Producer's and User's accuracy values and coverage of reference data (/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/271c442f-5580-4848-b2cd-04b7590881e9)**

Producer's and User's accuracy values and coverage of reference data, per...

This resource is unpublished.17647

MD5: b347f72cdf670e945eb1c03e4815c0c2

Explore Data (/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/271c442f-5580-4848-b2cd-04b7590881e9)

Field	Value
Tags	<div><div>EARTH SCIENCE &gt; LAND SURFACE &gt; LAND USE/LAND COVER</div><div>Cropland Data Layer</div><div>LANDFIRE</div><div>National Vegetation Classification</div><div>NP216</div></div>
Modified	2022-09-09
Release Date	2022-08-30
Frequency	Not Planned
Identifier	4f825ff4-c320-4875-bf2a-9fb20486608e
Publisher	Ag Data Commons
Spatial / Geographical Coverage Location	Conterminous United States
Temporal Coverage	January 1, 2012 to December 31, 2021
License	U.S. Public Domain ( <a href="http://www.usa.gov/publicdomain/label/1.0/">http://www.usa.gov/publicdomain/label/1.0/</a> )
Data Dictionary	<a href="https://data.nal.usda.gov/dataset/data-land-cover-conterminous-united-st...">https://data.nal.usda.gov/dataset/data-land-cover-conterminous-united-st...</a> ( <a href="https://data.nal.usda.gov/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/5ed61680-e64a-4c2f-8788-f3af42bf2e52">https://data.nal.usda.gov/dataset/data-land-cover-conterminous-united-states-2012-2021-integrating-crop-identity-us-national-vegetation-classification/resource/5ed61680-e64a-4c2f-8788-f3af42bf2e52</a> )
Contact Name	Goslee, Sarah
Contact Email	<a href="mailto:sarah.goslee@usda.gov">sarah.goslee@usda.gov</a> ( <a href="mailto:sarah.goslee@usda.gov">mailto:sarah.goslee@usda.gov</a> )
Public Access Level	Public
Program Code	005:040 - Department of Agriculture - National Research
Bureau Code	005:18 - Agricultural Research Service

Extended Metadata:

Field	Value
Authors	Kammerer, Melanie ( <a href="http://orcid.org/0000-0002-0678-9087">ORCID (http://orcid.org/0000-0002-0678-9087)</a> ) Iverson, Aaron L. ( <a href="http://orcid.org/0000-0001-6343-4226">ORCID (http://orcid.org/0000-0001-6343-4226)</a> ) Li, Kevin ( <a href="http://orcid.org/0000-0002-7677-8682">ORCID (http://orcid.org/0000-0002-7677-8682)</a> ) Goslee, Sarah C. ( <a href="http://orcid.org/0000-0002-5939-3297">ORCID (http://orcid.org/0000-0002-5939-3297)</a> )
Peer Reviewed	No
Reviewer	Goslee, Sarah C. ( <a href="http://orcid.org/0000-0002-5939-3297">ORCID (http://orcid.org/0000-0002-5939-3297)</a> )

Field	Value
Intended Use	We expect these ready-to-use rasters characterizing agricultural and natural land cover will be widely useful in many sub-fields of environmental research, such as landscape design and land use planning, modelling ecosystem services, and wildlife ecology and management.
Use Limitations	We created a new spatial dataset that integrates both agricultural and natural land cover and that can be used by environmental scientists and managers who are interested landscape-scale processes involving both land cover categories. Though we were able to limit additional inaccuracies from artifacts of our geospatial processing, the product we created is still subject to limitations of the source data. Accuracy of CDL is highest in regions dominated by agriculture and lower in states with more developed or semi-natural land cover, particularly mixed-use landscapes (Lark et al., 2021; USDA NASS, 2021a). LANDFIRE vegetation products like the NVC are designed to be used at landscape, regional, or national scales and are likely less accurate for very small spatial extents (LANDFIRE, 2016a). For rare vegetation classes, LANDFIRE does not publish data on agreement between field plots and NVC raster. If projects are targeting small spatial extents or rare vegetation types, we recommend users review our land cover maps and adjust based on local knowledge or additional vegetation surveys.
Funding Sources	Agricultural Research Service 0500-00093-001-00-D
Product Type	Dataset
Cites Other Datasets	USDA National Agricultural Statistics Service Cropland Data Layer ( <a href="https://nassgeodata.gmu.edu/CropScape/">https://nassgeodata.gmu.edu/CropScape/</a> ) Landscape Fire and Resource Management Planning Tools National Vegetation Classification ( <a href="https://www.landfire.gov/nvc.php">https://www.landfire.gov/nvc.php</a> )

Field	Value
ISO Topic(s)	<a href="#">environment (/iso-topic-category-codes/environment)</a>
State or Territory	<a href="#">Alabama (/location/alabama)</a> , <a href="#">Arizona (/location/arizona)</a> , <a href="#">Arkansas (/location/arkansas)</a> , <a href="#">California (/location/california)</a> , <a href="#">Colorado (/location/colorado)</a> , <a href="#">Connecticut (/location/connecticut)</a> , <a href="#">Delaware (/location/delaware)</a> , <a href="#">Florida (/location/florida)</a> , <a href="#">Georgia (/location/georgia)</a> , <a href="#">Idaho (/location/idaho)</a> , <a href="#">Illinois (/location/illinois)</a> , <a href="#">Indiana (/location/indiana)</a> , <a href="#">Iowa (/location/iowa)</a> , <a href="#">Kansas (/location/kansas)</a> , <a href="#">Kentucky (/location/kentucky)</a> , <a href="#">Louisiana (/location/louisiana)</a> , <a href="#">Maine (/location/maine)</a> , <a href="#">Maryland (/location/maryland)</a> , <a href="#">Massachusetts (/location/massachusetts)</a> , <a href="#">Michigan (/location/michigan)</a> , <a href="#">Minnesota (/location/minnesota)</a> , <a href="#">Mississippi (/location/mississippi)</a> , <a href="#">Missouri (/location/missouri)</a> , <a href="#">Montana (/location/montana)</a> , <a href="#">Nebraska (/location/nebraska)</a> , <a href="#">Nevada (/location/nevada)</a> , <a href="#">New Hampshire (/location/new-hampshire)</a> , <a href="#">New Jersey (/location/new-jersey)</a> , <a href="#">New Mexico (/location/new-mexico)</a> , <a href="#">New York (/location/new-york)</a> , <a href="#">North Carolina (/location/north-carolina)</a> , <a href="#">North Dakota (/location/north-dakota)</a> , <a href="#">Ohio (/location/ohio)</a> , <a href="#">Oklahoma (/location/oklahoma)</a> , <a href="#">Oregon (/location/oregon)</a> , <a href="#">Pennsylvania (/location/pennsylvania)</a> , <a href="#">Rhode Island (/location/rhode-island)</a> , <a href="#">South Carolina (/location/south-carolina)</a> , <a href="#">South Dakota (/location/south-dakota)</a> , <a href="#">Tennessee (/location/tennessee)</a> , <a href="#">Texas (/location/texas)</a> , <a href="#">Utah (/location/utah)</a> , <a href="#">Vermont (/location/vermont)</a> , <a href="#">Virginia (/location/virginia)</a> , <a href="#">Washington (/location/washington)</a> , <a href="#">West Virginia (/location/west-virginia)</a> , <a href="#">Wisconsin (/location/wisconsin)</a> , <a href="#">Wyoming (/location/wyoming)</a>

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