**Data source:** CropScape (USDA NASS)

**Facet:** behavioral change

**Access:** Direct download <https://www.nass.usda.gov/Research_and_Science/Cropland/Release/index.php>

**Description:**

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

Layers:

1. Crop Frequency Layers identify crop specific planting frequency for the Continental United States and are based on land cover information derived from the 2008 through 2020 USDA, NASS Cropland Data Layers (CDL). The Crop Frequency Layers are raster, geo-referenced data layers that have a ground resolution of 30 meters. There are currently four individual crop frequency data layers that represent four major crop types: corn, cotton, soybeans and wheat.
2. Cultivated Layer identifies cultivated and non-cultivated land cover for the Continental United States and is based on land cover information derived from the 2016 through 2020 USDA, NASS Cropland Data Layers (CDL). The Cultivated Layer is a raster, geo-referenced data layer that has a ground resolution of 30 meters.

**Data Source:** USDA ERS-ARMS

**Facet:** behavioral change

**Access:** API (access script has been written)

<https://www.ers.usda.gov/developer/data-apis/arms-data-api/>

**Description:**

ARMS is a multiphase series of interviews with farm operators about their cropping practices, farm businesses, and households.

Phases:

1. Screening survey - Farmers and ranchers selected for the survey are contacted to verify that they still qualify as a farm and that they produce the specific commodities targeted by Phase II that year.
2. Production Practices and Costs Report
   1. Field characteristics: field acreage, ownership, seed use and costs, yield, organic practices, conservation practices, crop rotations, and crop insurance.
   2. Nutrient or fertilizer applications: applications of synthetic and organic nutrients, including application costs, amounts, methods, and timing; as well as manure, compost, and soil testing practices.
   3. Bio-control or pesticide applications, and other pest management practices: applications of biological and chemical pesticides, including costs, amounts, methods, and timing; as well as various pest management practices such as scouting, assessment of pest problems, use of tillage and crop rotation, maintenance of equipment.
   4. Field operations: use of machinery and labor in the field. Tillage, technical services, and the use of precision technologies are included in this section. Associated costs for fuel and labor are documented.
   5. Irrigation: irrigation practices such as amount of water used, system type, and related expenses.
3. Farm Business and Farm Household Information
   1. Land in farm/ranch: acres of land owned or rented, rents paid or received.
   2. Acreage and production: acres harvested and total production.
   3. Livestock: quantity sold or removed and ending quantity.
   4. Commodity marketing and income: quantities and prices associated with marketing contracts, production contracts, cash or open market sales.
   5. Other farm-related income: Federal farm programs, custom work, energy lease and royalty payments.
   6. Operating and capital expenditures: livestock purchases, feed, seed, fertilizer, chemicals, fuel, labor, taxes, etc.
   7. Farm assets: dwellings, farm buildings, land, inventory, equipment.
   8. Farm debt: outstanding loans and their terms.
   9. Farm management and use of time: farm legal organization, farm business ownership, number of operators, time allocation of operator and spouse.
   10. Farm household: age and education of the operator and spouse, nonfarm income, assets, and debt.

### Survey Scope:

1. Time: Each year's survey asks for information from the prior year. For Phase II, the reference year corresponds to the crop's production cycle (from one harvest season to the next); for Phase III, the reference year is the calendar year (Jan. 1 to Dec. 31). ARMS has been administered every year since 1996, when it replaced the Farm Costs and Returns Survey.
2. Geography: ARMS collects information from farms in the 48 contiguous States. Some agriculturally important States are oversampled to provide enough sample coverage to allow representative selected State-level estimates. The larger samples were started in 2003 and data were first available in 2004. States that are oversampled are Arkansas, California, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Carolina, Texas, Washington, and Wisconsin.
3. Farms: ARMS samples and collects information from farms of all sizes, family and nonfamily farms, and corporate and unincorporated farms.
4. Households: ARMS only collects household information for the households of principal operators of family farms.
5. Commodities: While farms growing all types of commodities are sampled every year, each year ARMS oversamples farms in one or more commodity specialization in order to produce [Costs and Returns estimates](https://www.ers.usda.gov/data-products/commodity-costs-and-returns/).

**Data Source:** American Community Survey 1-Year Data (2005-2019) (US Census)

**Facet:** beneficial for adopters

**Access:** API (access script has to be written)

<https://www.ers.usda.gov/developer/data-apis/arms-data-api/>

**Description:**

<https://www.census.gov/programs-surveys/acs/guidance/handbooks/general.html>

The American Community Survey (ACS) is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year.

Spatial scope: congressional districts, Public Use Microdata Areas (PUMAs), counties, and census tracts.

Variables:

* Social Characteristics Economic Characteristics Plumbing Facilities6
* Ancestry Class of Worker Rent
* Citizenship Status Commuting (Journey to Work) Rooms/Bedrooms
* Citizen Voting-Age Population Employment Status Selected Monthly Owner Costs
* Disability Status
* Educational Attainment
* Fertility
* Grandparents as Caregivers
* Language Spoken at Home
* Marital History2
* Marital Status
* Migration/Residence 1 Year Ago
* Period of Military Service
* Place of Birth
* School Enrollment
* Undergraduate Field of
* Degree
* Veteran Status
* Food Stamps/Supplemental
* Nutrition Assistance Program
* (SNAP)4
* Health Insurance Coverage
* Income and Earnings
* Industry and Occupation
* Place of Work
* Poverty Status
* Work Status Last Year
* Housing Characteristics
* Computer and Internet Use
* House Heating Fuel
* Kitchen Facilities
* Telephone Service Available
* Tenure (Owner/Renter)
* Units in Structure
* Value of Home
* Vehicles Available
* Year Householder Moved Into
* Unit
* Year Structure Built
* Demographic Characteristics
* Age and Sex
* Group Quarters Population
* Hispanic or Latino Origin
* Race
* Year of Entry Occupancy/Vacancy Status
* Occupants Per Room
* Relationship to Householder
* Total Population

**Data Source:** American Business Survey (US Census)

**Facet:** beneficial for adopters

**Access:** API (access script has to be written)

<https://www.ers.usda.gov/developer/data-apis/arms-data-api/>

**Description:**<https://www.census.gov/data/developers/data-sets/abs.html>

Temporal scope: 2018-2019

Spatial scope: nation, state, metro area

Industries:

* Crop and Animal Production (NAICS 111 and 112)
* Rail Transportation (NAICS 482)
* Postal Service (NAICS 491)
* Monetary Authorities-Central Bank (NAICS 521)
* Funds, Trusts, and Other Financial Vehicles (NAICS 525)
* Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)
* Private Households (NAICS 814)
* Public Administration (NAICS 92)

Variables:

* Company Summary: Provides data for employer businesses by sector, sex, ethnicity, race, veteran status, years in business, receipts size of firm, and employment size of firm for the U.S., states, and metro areas. Data for counties and economic places are available for 2018.
* Characteristics of Businesses: Provides data for respondent employer firms by sector, sex, ethnicity, race, veteran status, years in business, receipts size of firm, and employment size of firm for the U.S., states, and metro areas, including detailed business characteristics. Data for counties and economic places are available for 2018.
* Characteristics of Business Owners: Provides data for owners of respondent employer firms by sector, sex, ethnicity, race, and veteran status for the U.S., states, and metro areas, including detailed owner characteristics. Data for counties and economic places are available for 2018.

**Data Source:** SEDAC/CEISIN  
Effects of Climate Change on Global Food Production from SRES Emissions and Socioeconomic Scenarios, v1 (1970 – 2080)

**Facet:** socio-economic predictors

**Access:** Download xlsx

<https://sedac.ciesin.columbia.edu/data/set/crop-climate-effects-climate-global-food-production/data-download>

**Description:**Results from the crop models, calibrated and validated in the major crop-growing regions, are then used to test functional forms describing the response of yield changes in the climate and environmental conditions. This updated version is based on HadCM3 model output along with GHG concentrations from the Special Report on Emissions Scenarios (SRES). The crop yield estimates incorporate some major improvements: 1) consistent crop simulation methodology and climate change scenarios; 2) weighting of model site results by contribution to regional and national, and rainfed and irrigated production; 3) quantitative foundation for estimation of physiological CO2 effects on crop yields; 4) Adaptation is explicitly considered; and 5) results are reported by country rather than by Basic Linked System region.  
Country level, polygon dataVariables: Emission, Crop yields, socioeconomic

**Data Source:** SEDAC/CEISIN  
Potential Impacts of Climate Change on World Food Supply, v1 (1995 – 2110)

**Facet:** socio-economic predictors

**Access:** Download xlsx

<https://sedac.ciesin.columbia.edu/data/set/crop-climate-potential-impacts-world-food-supply/data-download>

**Description:**To provide an assessment of potential climate change impacts on world crop production, including quantitative estimates of yield changes of major food. crop yield estimates of wheat, rice, coarse grains (barley and maize), and protein feed (soybean) at 125 agricultural sites representing major world agricultural regions. Projected yields at the agricultural sites were aggregated to major trading regions, and fed into the Basic Linked Systems (BLS) global trade model to produce country and regional estimates of potential price increases, food shortages, and risk of hunger.

Country level, polygon data

**Data Source:** SEDAC/CEISIN  
Altimeter Corrected Elevations (ACE2), v2 (1994 – 2005)

**Facet:** socio-economic predictors

**Access:** Download xlsx

<https://sedac.ciesin.columbia.edu/data/set/dedc-ace-v2/data-download>

**Description:**To provide satellite altimeter corrected digital elevation data for environmental, socioeconomic, climate and other related research, such as flood risk assessment, land deformations, landslide modelling, urban planning, and sea level rise impacts.

Resolutions of 3, 9 and 30 arc-seconds, and 5 arc-minutes. The data are distributed in little-endian format as 15 degree by 15 degree tiles, with the file name referring to the southwestern edge of the southwestern most pixel.

Global elevation data

**Data Source:** SEDAC/CEISIN  
Global Gridded Geographically Based Economic Data (G-Econ), v4 (1990, 1995, 2000, 2005)

**Facet:** socio-economic predictors

**Access:** Download xlsx

<https://sedac.ciesin.columbia.edu/data/set/spatialecon-gecon-v4/data-download>

**Description:**Variables:

* gross value added at a 1-degree longitude by 1-degree latitude resolution at a global scale for all terrestrial cells.
* Temperature (monthly)
* Precipitation (monthly)
* Elevation
* Roughness
* Vegetation
* Soil Types

**Data Source:** Gelfand  
Tightness–looseness across the 50 united states

**Facet:** socio-economic predictors

**Access:** Download scrape

<https://www.pnas.org/content/111/22/7990/tab-figures-data#fig-data-tables>

**Description:**The 50 states of the United States of America show great diversity in ecological and historical conditions, personality characteristics, and outcomes. Still, little insight exists that explains this variation. We argue that there is a common principle by which we can understand these differences: namely, that the states differ in tightness (many strongly enforced rules and little tolerance for deviance) versus looseness (few strongly enforced rules and greater tolerance for deviance). We develop a valid and reliable state-level tightness–looseness index, provide state rankings, and show how tightness is related to ecological and man-made threats, personality characteristics, and state-level outcomes. Ultimately, this substantiates theory suggesting that tightness–looseness is an adaptation to local environments and, therefore, is beneficial in understanding cultural variation across numerous levels of analysis.