

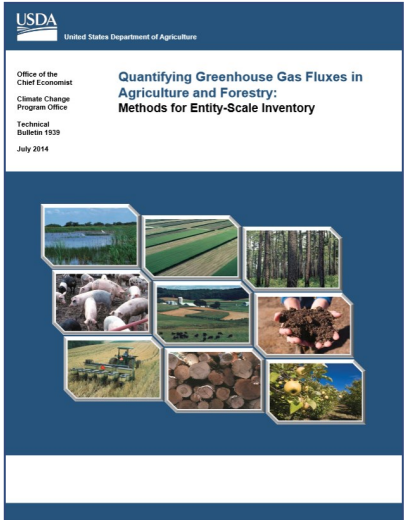
COMET-Farm & COMET-Planner

Tools for conservation planning and greenhouse gas mitigation in Agriculture and Forestry

What are the COMET-Tools?



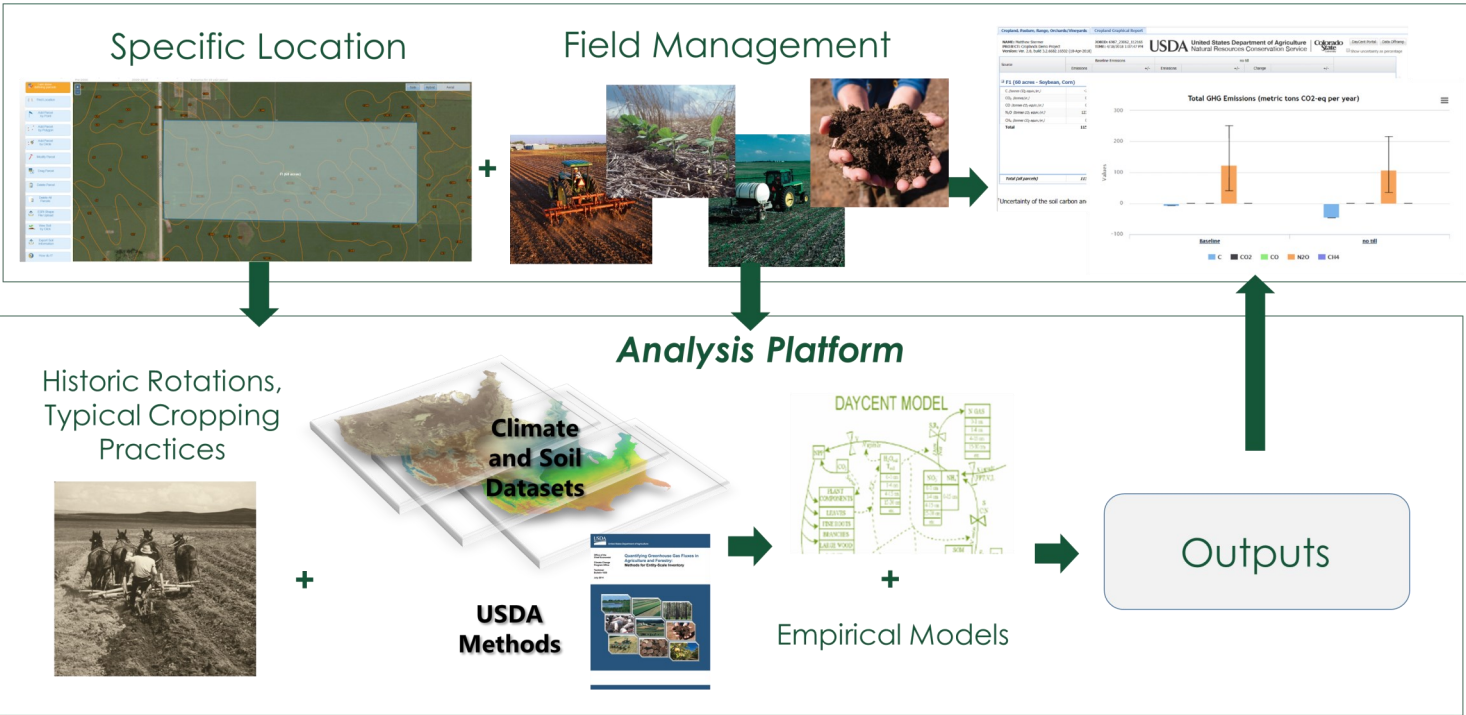
- Developed with a cooperative agreement between Colorado State University and the United States Department of Agriculture, COMET-Tools includes models and databases that implement more than 40 USDA, peer-reviewed methods and models that estimate greenhouse gas emissions within a farm or ranch.
- The tools provide carbon dioxide, methane, and nitrous oxide estimates based on management, soils, and climate.
- **COMET-Farm** provides a farm-to-field specific analysis whereas **COMET-Planner** provides regional average estimates tied to conservation practice adoption.



USDA Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory

COMET-Farm: How it works

User Interface



Accounting Activities

COMET-Farm allows users to estimate how conservation practices can reduce GHG emissions and sequester carbon on a farm/ranch. Reports are based on user's location and management practices for crops, livestock, and windbreak/shelterbelt management.



Cropland, pasture,
range, orchard/vineyard



Animal Agriculture

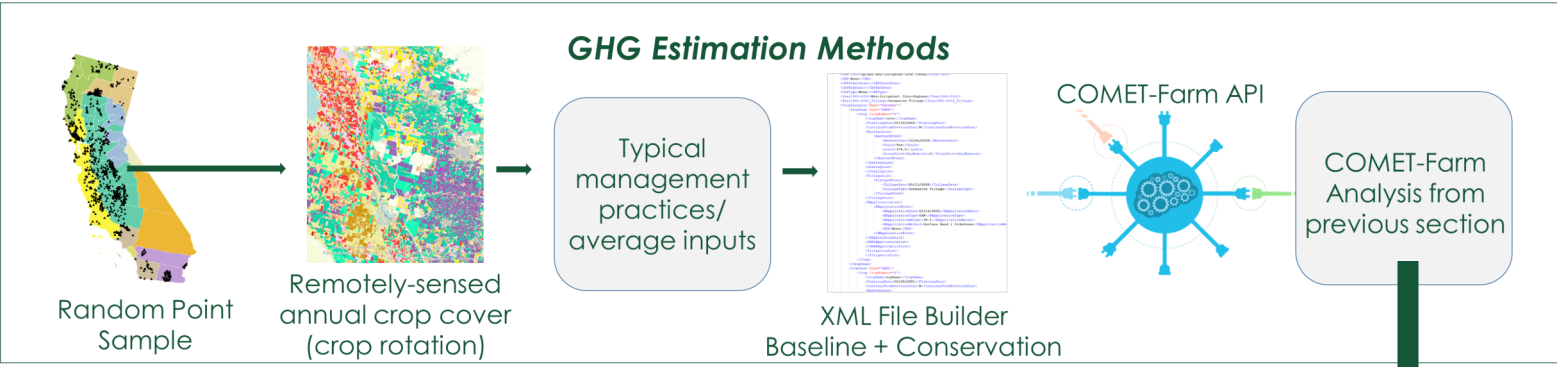


Agroforestry
and Forestry

COMET-Farm & COMET-Planner

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COMET-Planner How it works



COMET-Planner Interface

Step 1: Begin by naming your project and selecting your state and county

Project Name: State: County:

County selection

Step 2: Select the class of conservation practices that best describes the practice you would like to evaluate

CPS grouped in broad categories for easier selection

Step 3: Select a NCRS Conservation Practice Standard and a Practice Implementation that best describes your system. You may add multiple practices. If you would like to add a practice under a different class of practices, return to Step 2.

NCRS CPS

- Conservation Crop Rotation (CPS 328)
- Residue and Tillage Management - No-Till (CPS 329)**
- Cover Crop (CPS 340)
- Residue and Tillage Management - Reduced Till (CPS 345)
- Combustion System Improvement (CPS 372)
- Mulching (CPS 484)
- Stripcropping (CPS 585)
- Nutrient Management (CPS 590)
- Multiple Conservation Practices

Description of conservation practice implementation

- Intensive Till to No Till or Strip Till on Irrigated Cropland
- Intensive Till to No Till or Strip Till on Non-Irrigated Cropland
- Reduced Till to No Till or Strip Till on Irrigated Cropland
- Reduced Till to No Till or Strip Till on Non-Irrigated Cropland

Step 4: Enter the acreage associated with each conservation practice you selected

Approximate Carbon Sequestration and Greenhouse Gas Emission Reductions* (tonnes CO₂ equivalent per year/ha)

NCRS Conservation Practices (Click Practice Name for Documentation)	Enter Acreage	Carbon Dioxide	Nitrous Oxide	Methane	Total CO ₂ -Equivalent
345 Residue and Tillage Management - No-Till (CPS 329) - Intensive Till to No Till or Strip Till on Irrigated Cropland	100	51	5	0	56
Totals:	100.00	51	5	0	56

*Negative values indicate a loss of carbon or increased emissions of greenhouse gases
**Values were not calculated due to limited data on reductions of greenhouse gas emissions from this practice

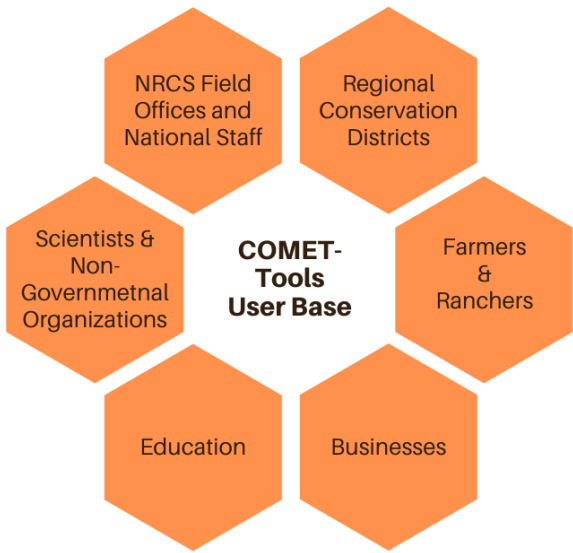
[Download COMET-Planner Results](#)

On-the-fly results and report generation

Users & Outreach

Users as of June 2023

- ~6,300 Registered COMET-Farm Users
- ~53,000 COMET-Planner Sessions
- ~1,200 User support, Trainings, and/or Webinars
- ~300 Organizations using tools



A collage of outreach materials including: **Shelburne Farms: Taking the Next Step to Inspire Action**, **COMET-Farm Team Spotlight** featuring Sabha Ariapillai, Haley Nagle, and Valayudhan, **Award from COMET-Users**, **COMET QUARTERLY** newsletter, and **COMET QUARTERLY** What's Inside section.

Stay up to date by subscribing to the COMET-Quarterly Newsletter through the "Need Help?" Widget.

Contact

Contact the COMET-Team at appnrel@colostate.edu or using the **"Need Help?" widget** in the bottom right corner of any page on COMET. Register for free COMET-Trainings at www.comet-farm.com/helppage.