

Data & APIs for Growers

From The Agriculture Resource Library at openagriculturetechnology.com/resources/data/

47 entries

RESOURCE	WHAT IT IS	WHAT YOU GET
Ask Extension https://ask.extension.org	The national ask-an-expert service that routes your question, photos included, to Extension staff.	Submit a question, get an answer from a local expert in days, free.
Bugwood Image Database https://images.bugwood.org	Three hundred thousand curated, identification-verified photos of pests, diseases, and weeds.	Compare your mystery damage against verified reference photos.
Climate Engine https://app.climateengine.org	On-demand maps and charts of satellite and climate data for any polygon you draw, powered by Earth Engine, no coding.	Chart drought, NDVI, and precipitation history for your exact ground.
Climate Smart Farming (Cornell) https://climatesmartfarming.org	Cornell's suite of climate decision tools for Northeast farms: growing degree days, water deficit, freeze risk.	Run the water deficit calculator and know when to irrigate.
CoCoRaHS https://www.cocorahs.org	The volunteer precipitation observer network: join with a forty-dollar gauge and see hyperlocal rainfall maps your neighbors report.	Rainfall truth for your neighborhood, and a citizen-science community to join.
Copernicus Browser https://dataspace.copernicus.eu	ESA's free portal for Sentinel satellite imagery: ten meter resolution, roughly five-day revisit, with vegetation indexes built in.	NDVI of your own fields every few days, free, no GIS degree needed.
Cornell CASH soil health test https://soilhealth.cals.cornell.edu	The standard comprehensive soil health assessment, biological and physical indicators included, with a free interpretation manual.	A soil test that measures health, not just fertility, and the free manual to understand it.
Cornell Vegetable Varieties for Gardeners https://vegvariety.cce.cornell.edu	The citizen-science database of vegetable variety ratings: taste, yield, and ease from real gardens.	Check the ratings before betting a season on an unknown variety.
Cornell Vegetables (commercial) https://www.vegetables.cornell.edu	Commercial variety trial results, planting dates, and disease-resistance tables.	The disease-resistant variety list for each crop, before you order seed.
data.gov agriculture https://catalog.data.gov/dataset?groups=agriculture8571	The federal open-data catalog's agriculture group: thousands of datasets, one search, with a CKAN API.	If a federal agency published it, it is findable here.
EDDMaps https://www.eddmaps.org	The early detection and mapping system for invasive species: see what is confirmed in your county and report sightings.	Which invasives have reached your county, mapped.
FAOSTAT https://www.fao.org/faostat/	FAO's global food and agriculture statistics for two hundred forty-five countries, with an API.	The world picture on any crop, for market context.
FieldWatch (DriftWatch and BeeCheck) https://fieldwatch.com	The national map registry of specialty crop fields and apiaries that commercial spray applicators check before they spray, covering about twenty-seven states.	Register your farm and hives so the sprayer sees you first. The highest-leverage free action near row-crop country.
GARDIAN https://gardian.bigdata.cgiar.org	The pan-CGIAR search engine over a hundred thousand publications and thousands of datasets from fifteen research centers.	Global crop research data, one search.

GRIN-Global germplasm system https://npgsweb.ars-grin.gov/gringlobal/search	The US National Plant Germplasm System: six hundred thousand seed accessions, and yes, they will mail you samples of rare varieties for trial and breeding, free.	Request seed of landraces you cannot buy anywhere. Most growers have no idea this exists.
iNaturalist https://www.inaturalist.org	The global crowdsourced species identification platform, computer vision plus experts, with an open API.	Snap any unknown insect or weed and get an identification.
NASA FIRMS fire information https://firms.modaps.eosdis.nasa.gov	Fire detection from satellites in near real time, free with a key.	Active-fire alerts for your area, from orbit.
NASA POWER https://power.larc.nasa.gov	NASA's agroclimatology data service: solar radiation, temperature, and humidity for any point on earth, with a clean REST API.	Solar data for greenhouse siting or panel sizing, anywhere, free.
National Plant Diagnostic Network https://www.npdn.org	The lab network behind the land-grant plant clinics: a real diagnostic lab in every state.	Mail a sample, get a definitive disease identification, usually for a token fee.
National Weather Service API https://www.weather.gov/documentation/services-web-api	The National Weather Service's free forecast and alerts API, no key required.	Official forecasts and frost warnings wired straight into your own dashboard or automation.
NEWA https://newa.cornell.edu	The Network for Environment and Weather Applications: seven hundred on-farm stations across twenty states driving forty-plus disease and insect forecast tools.	Research-grade apple scab, fire blight, and late blight risk forecasts from a station near your farm, free.
NOAA Climate Data Online https://www.ncdc.noaa.gov/cdo-web/	Historical US station climate records: the archive behind thirty-year normals and frost-date history.	The real frost dates for your nearest station, not the folklore ones.
NOAA Storm Events Database https://www.ncdc.noaa.gov/stormevents/	The historical record of storms, hail, and severe weather by county.	Documentation for insurance and the honest history of what weather your county gets.
NRCS Soil Data Access https://sdmdataaccess.nrcs.usda.gov	Direct query access to the national soils database: SQL over REST.	Soil properties for any field polygon, programmatically.
Open-Meteo https://open-meteo.com	An open-source weather API blending fifteen-plus national models, no key required, with soil temperature, soil moisture, and reference evapotranspiration among its variables.	The easiest forecast feed for an ESP32 or Home Assistant dashboard; there is already an HA integration.
OpenET https://etdata.org	Satellite-measured evapotranspiration at field scale across forty-eight states, with the FARMS tool for individual farmers and a REST API.	See how much water your fields actually consumed, monthly, free. This was thousands of dollars a field a decade ago.
Plants For A Future https://pfaf.org	A database of seven thousand edible and useful plants with cultivation details.	Research the uncommon perennial and permaculture crops nobody else documents.
PlantVillage https://plantvillage.psu.edu	AI plant disease diagnosis, trained on more than fifty thousand images, that runs on a phone even offline.	Photograph a sick leaf and get a diagnosis on the spot.
PRISM Climate Group https://prism.oregonstate.edu	Gridded US climate normals and dailies at eight hundred meter resolution.	The true thirty-year precipitation and temperature normals for your exact parcel.
SeedLinked https://seedlinked.com	A crowdsourced variety-trial platform: ratings from dozens of real farms per variety.	How a variety actually performed across farms in your climate.
SoilGrids https://soilgrids.org	Global machine-learning soil property maps at two hundred fifty meters, with a REST API.	Soil estimates for anywhere on earth the US survey does not reach.

SoilWeb https://casoilresource.lawr.ucdavis.edu/gmap/	The soil survey on a map: tap anywhere and see the full soil profile, on the web or the phone app.	Stand in a field and see the mapped soil under your boots, in real time.
State agricultural mesonets https://www.mesonet.org	Many states run agricultural weather networks: Oklahoma's Mesonet is the gold standard, with AgWeatherNet in Washington, FAWN in Florida, CIMIS in California, and AgriMet in the Northwest.	Hourly soil moisture, ET, and frost data from real stations in your state, usually free.
Synoptic Data https://synopticdata.com	An aggregator API over a hundred thousand US weather stations, including many mesonets.	One API call to the nearest station of any network.
UC IPM https://ipm.ucanr.edu	The most complete free integrated pest management encyclopedia: identification, thresholds, and management by crop, plus degree-day tools and bee precaution ratings.	Look up any pest and get research-backed thresholds and least-toxic controls first.
USA National Phenology Network https://www.usanpn.org	Daily gridded accumulated growing degree day maps and pest emergence forecasts, plus the Nature's Notebook citizen science program.	National degree-day maps and pheno-forecasts you can pull by point through their geoserver.
USDA Ag Data Commons https://agdatacommons.nal.usda.gov	USDA's public repository of research datasets: the raw data behind the papers, from trials to soils to genomics.	Pull the actual datasets behind USDA research instead of just reading summaries.
USDA AMS Market News https://www.ams.usda.gov/market-news	Daily wholesale and terminal-market price reports for produce, livestock, and grain, with a free API.	What your crop actually sold for at the nearest terminal market, so you never price blind.
USDA CropScape and the Cropland Data Layer https://croplandcros.scinet.usda.gov	The annual satellite-derived crop map of the entire country, now at ten meter resolution, going back more than fifteen years.	See what every field around you grew for the last fifteen years. Rotation intel nobody realizes is public.
USDA ERS Data Products https://www.ers.usda.gov/data-products/	The Economic Research Service's datasets: costs of production, the food dollar, and market outlooks.	Benchmark your enterprise budget against national cost-of-production data.
USDA Local Food Portal https://www.usdalocalfoodportal.com	USDA's directories of farmers markets, CSAs, food hubs, and on-farm markets, with an API. The same well our Ag Atlas draws from.	List your operation where the government looks, and find every market within driving distance.
USDA NASS Quick Stats https://quickstats.nass.usda.gov	The most comprehensive US agricultural statistics database: every crop, county, and year, including the Census of Agriculture, with a free keyed API.	County-level yields, acreage, and prices to benchmark your own operation against.
USDA PLANTS Database https://plants.usda.gov	The authoritative US plant database: taxonomy, distribution by county, and characteristics.	Verify any plant's identity, native status, and range.
USGS EarthExplorer https://earthexplorer.usgs.gov	The full Landsat archive, more than fifty years of it, free to download.	Decades of imagery of your land, for documenting long-term change.
uspest.org degree-day models https://uspest.org	A hundred and fifty degree-day pest and plant models runnable against twenty thousand US stations, with maps.	When does this pest hatch at MY place, answered for the whole country.
Veggie Compass https://cias.wisc.edu/our-work/compass-tools/veggie-compass/	The UW-Madison whole-farm profit-management tool for diversified vegetable farms. Its old standalone domain was dropped and squatted; this is the real home.	Work out your true cost and profit per crop per sales channel.
Web Soil Survey https://websoilsurvey.nrcs.usda.gov	The official USDA soil survey for nearly every American acre: draw your boundary, get a custom soil report.	Your soil series, drainage class, and capability rating, mapped before you dig.

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