Climate Match / Map Results

About This Report

Region: California

Date: December 30, 2025

This report was generated by the Climate Match Tool at https://weedmap.cal-ipc.org/climatematch/. It is designed for users in the U.S. to help compare two sets of data: (1) the current known worldwide distribution of a given plant species and (2) areas of the world with climatic parameters matching a user-selected part of the U.S. This allows users to determine whether the plant is found in other areas with a similar climate to the region of interest in the U.S.

Such information is useful when assessing the potential for a plant species to be invasive in a given region. This tool was developed by the PlantRight project (www.plantright.org) to assist horticultural partners in screening potential new plant introductions. The tool is now also supported by the California Invasive Plant Council (www.cal-ipc.org) to help land managers assess the future risk of nonnative plants already found growing in the wild. The tool is built and maintained by GreenInfo Network (www.greeninfo.org).

Contact us at info@cal-ipc.org.

Data Layer Methods

To assess â€œclimate matchâ€, this tool compares the values for a set of climatic parameters in the selected region of interest with values for those same parameters around the world. The three climatic parameters considered are precipitation (in bands of 10 inches annual precipitation), USDA hardiness zone ("Hardiness"), and UN global ecological zone ("Ecozone"). By combining all three ("Combined"), the tool determines which areas around the globe match at least a part of the region of interest.

Data for precipitation bands and plant hardiness zones: "The NCEP Climate Forecast System Reanalysis," in Bulletin of the American Meteorological Society, August 2010.
https://www.cpc.ncep.noaa.gov/products/people/yxue/pub/27.pdf

Methods for precipitation bands and plant hardiness zones: "Global plant hardiness zones for phytosanitary risk analysis," in Scientia Agricola 65:54-59, 2008.
https://www.scielo.br/j/sa/a/QpBRyPmZQTXsG6VrQYmv9zy/?lang=en&format=pdf

Global ecozones: "Global ecofloristic zones mapped by the United Nations Food and Agricultural Organization," 2008.
https://databasin.org/datasets/dc4f6efd1fa84ea99df61ae9c5b3b763/

Plant species distribution: Global Biodiversity Information Facility (GBIF). https://www.gbif.org/

The data presented on the map has a resolution of 0.1 degrees (approximately 10,500m square).

Climate Match / Map Results

Selected Areas and Map Legends

Selected States

California

Precipitation

- 0-10in / 0-25cm
- 10-20in / 25-51cm
- 20-30in / 51-76cm
- 30-40in / 76-102cm
- 40-50in / 102-127cm
- 50-60in / 127-152cm
- 60-70in / 152-178cm
- 70-80in / 178-203cm
- 80-90in / 203-229cm
- 90-100in / 229-254cm
- 100+ / 254+

Plant Hardiness Zones

- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5
- Zone 6
- Zone 7
- Zone 8
- Zone 9
- Zone 10
- Zone 11
- Zone 12
- Zone 13

UN Global Ecological Zones

- Tropical rainforest
- Tropical moist forest
- Tropical dry forest
- Tropical shrubland
- Tropical desert
- Tropical mountain system
- Tropical humid forest
- Subtropical dry forest
- Subtropical steppe
- Subtropical desert
- Subtropical mountain system
- Temperate oceanic forest
- Temperate continental forest
- Temperate steppe
- Temperate desert
- Temperate mountain system
- Boreal coniferous forest
- Boreal tundra woodland
- Boreal mountain system
- Polar
- Water

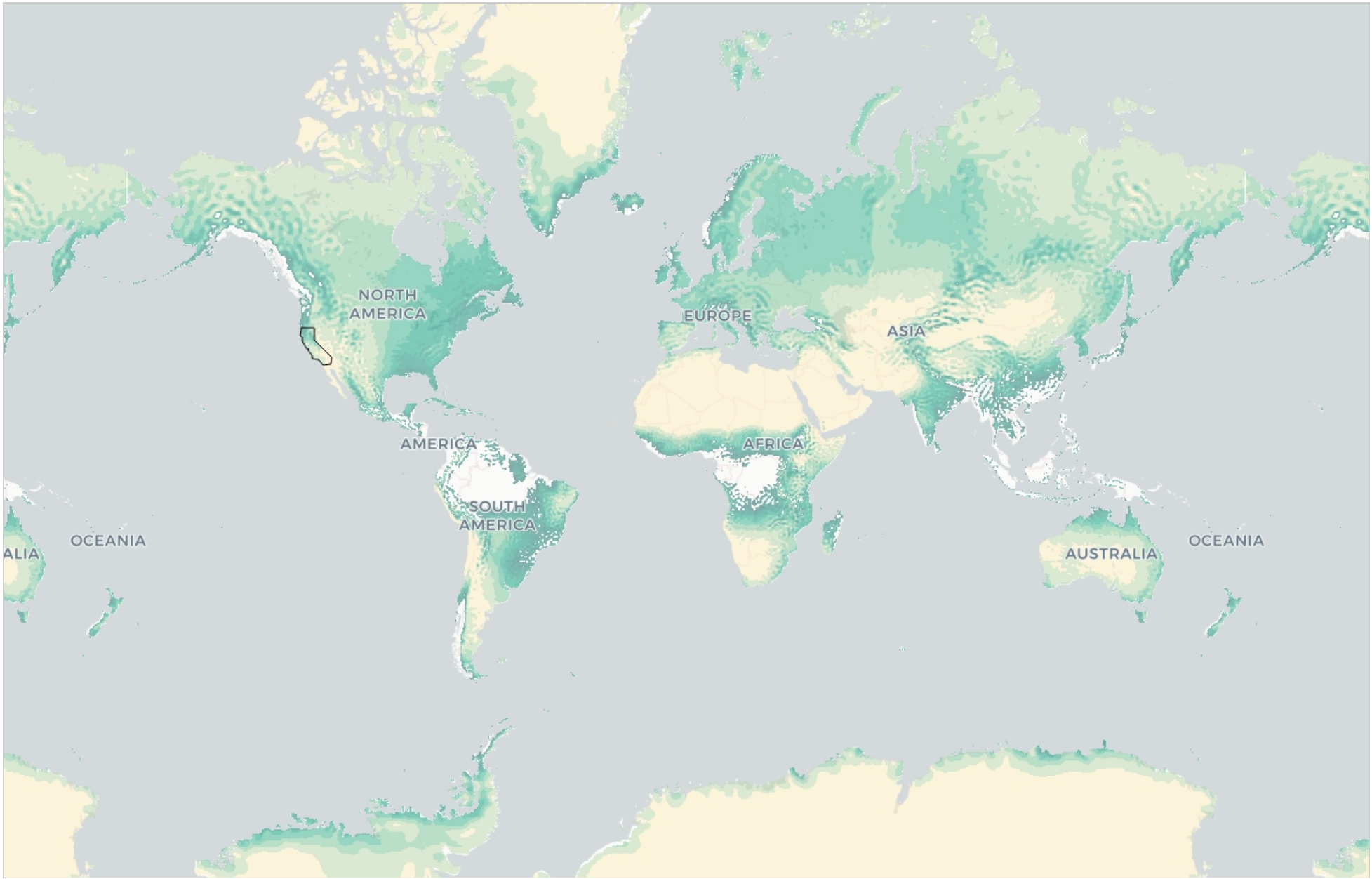
Climate Match / Map Results

PRE Combined



Climate Match / Map Results

Precipitation



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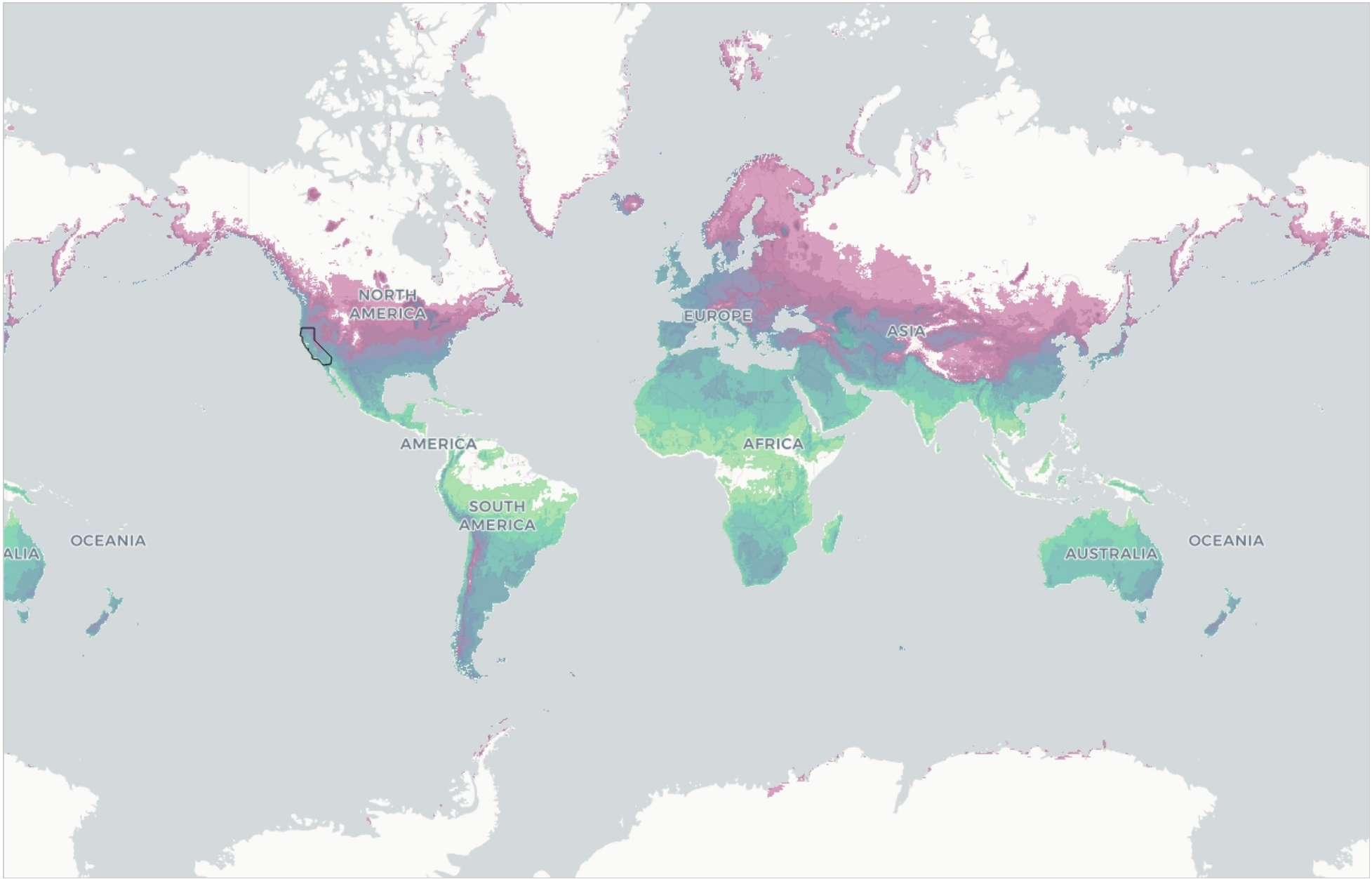
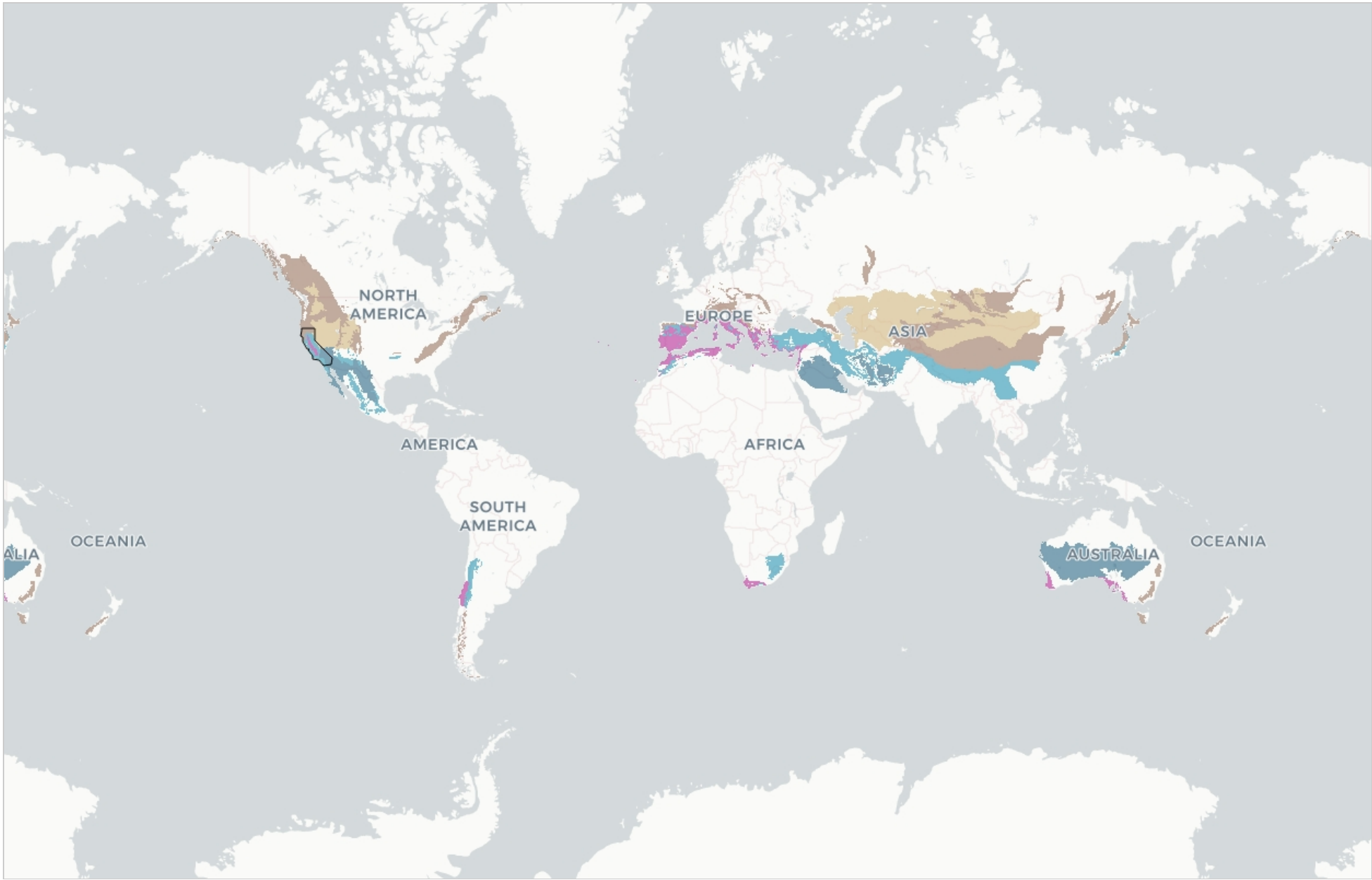
USDA Plant Hardiness Zones



Climate Match / Map Results

UN Global Ecological Zones



Climate Match / Map Results

Hardiness	Precipitation	UN Ecozone	Hardiness	Precipitation	UN Ecozone
Zone 4	10-20in / 25-51cm	Temperate desert	Zone 8	10-20in / 25-51cm	Subtropical desert
Zone 4	20-30in / 51-76cm	Temperate desert	Zone 8	10-20in / 25-51cm	Subtropical dry forest
Zone 4	30-40in / 76-102cm	Temperate desert	Zone 8	10-20in / 25-51cm	Subtropical mountain system
Zone 5	10-20in / 25-51cm	Temperate desert	Zone 8	10-20in / 25-51cm	Temperate desert
Zone 5	20-30in / 51-76cm	Subtropical desert	Zone 8	20-30in / 51-76cm	Subtropical desert
Zone 5	20-30in / 51-76cm	Subtropical mountain system	Zone 8	20-30in / 51-76cm	Subtropical mountain system
Zone 5	20-30in / 51-76cm	Temperate desert	Zone 8	20-30in / 51-76cm	Temperate desert
Zone 5	30-40in / 76-102cm	Subtropical mountain system	Zone 8	20-30in / 51-76cm	Temperate mountain system
Zone 5	30-40in / 76-102cm	Temperate desert	Zone 8	30-40in / 76-102cm	Subtropical dry forest
Zone 6	10-20in / 25-51cm	Subtropical desert	Zone 8	30-40in / 76-102cm	Subtropical mountain system
Zone 6	10-20in / 25-51cm	Subtropical mountain system	Zone 8	30-40in / 76-102cm	Temperate mountain system
Zone 6	10-20in / 25-51cm	Temperate desert	Zone 8	40-50in / 102-127cm	Subtropical mountain system
Zone 6	20-30in / 51-76cm	Subtropical desert	Zone 8	40-50in / 102-127cm	Temperate mountain system
Zone 6	20-30in / 51-76cm	Subtropical mountain system	Zone 8	50-60in / 127-152cm	Subtropical mountain system
Zone 6	20-30in / 51-76cm	Temperate desert	Zone 8	50-60in / 127-152cm	Temperate mountain system
Zone 6	20-30in / 51-76cm	Temperate mountain system	Zone 8	60-70in / 152-178cm	Temperate mountain system
Zone 6	30-40in / 76-102cm	Subtropical mountain system	Zone 9	0-10in / 0-25cm	Subtropical desert
Zone 6	30-40in / 76-102cm	Temperate desert	Zone 9	0-10in / 0-25cm	Subtropical dry forest
Zone 6	40-50in / 102-127cm	Subtropical mountain system	Zone 9	0-10in / 0-25cm	Subtropical mountain system
Zone 6	40-50in / 102-127cm	Temperate desert	Zone 9	10-20in / 25-51cm	Subtropical desert
Zone 6	50-60in / 127-152cm	Subtropical mountain system	Zone 9	10-20in / 25-51cm	Subtropical dry forest
Zone 6	60-70in / 152-178cm	Subtropical mountain system	Zone 9	10-20in / 25-51cm	Subtropical mountain system
Zone 7	0-10in / 0-25cm	Subtropical desert	Zone 9	20-30in / 51-76cm	Subtropical dry forest
Zone 7	0-10in / 0-25cm	Temperate desert	Zone 9	20-30in / 51-76cm	Subtropical mountain system
Zone 7	10-20in / 25-51cm	Subtropical desert	Zone 9	20-30in / 51-76cm	Temperate mountain system
Zone 7	10-20in / 25-51cm	Subtropical mountain system	Zone 9	30-40in / 76-102cm	Subtropical dry forest
Zone 7	10-20in / 25-51cm	Temperate desert	Zone 9	30-40in / 76-102cm	Subtropical mountain system
Zone 7	10-20in / 25-51cm	Temperate mountain system	Zone 9	30-40in / 76-102cm	Temperate mountain system
Zone 7	20-30in / 51-76cm	Subtropical desert	Zone 9	40-50in / 102-127cm	Subtropical mountain system
Zone 7	20-30in / 51-76cm	Subtropical mountain system	Zone 9	40-50in / 102-127cm	Temperate mountain system
Zone 7	20-30in / 51-76cm	Temperate desert	Zone 9	50-60in / 127-152cm	Temperate mountain system
Zone 7	20-30in / 51-76cm	Temperate mountain system	Zone 9	60-70in / 152-178cm	Temperate mountain system
Zone 7	30-40in / 76-102cm	Subtropical mountain system	Zone 10	0-10in / 0-25cm	Subtropical desert
Zone 7	30-40in / 76-102cm	Temperate desert	Zone 10	0-10in / 0-25cm	Subtropical dry forest
Zone 7	30-40in / 76-102cm	Temperate mountain system	Zone 10	0-10in / 0-25cm	Subtropical mountain system
Zone 7	40-50in / 102-127cm	Subtropical mountain system	Zone 10	10-20in / 25-51cm	Subtropical dry forest
Zone 7	40-50in / 102-127cm	Temperate desert	Zone 10	10-20in / 25-51cm	Subtropical mountain system
Zone 7	40-50in / 102-127cm	Temperate mountain system	Zone 10	10-20in / 25-51cm	Temperate mountain system
Zone 7	50-60in / 127-152cm	Subtropical mountain system	Zone 10	20-30in / 51-76cm	Subtropical dry forest
Zone 7	50-60in / 127-152cm	Temperate mountain system	Zone 10	20-30in / 51-76cm	Subtropical mountain system
Zone 7	60-70in / 152-178cm	Subtropical mountain system	Zone 10	20-30in / 51-76cm	Temperate mountain system
Zone 7	60-70in / 152-178cm	Temperate mountain system	Zone 10	30-40in / 76-102cm	Subtropical mountain system
Zone 7	70-80in / 178-203cm	Temperate mountain system	Zone 10	30-40in / 76-102cm	Temperate mountain system
Zone 8	0-10in / 0-25cm	Subtropical desert	Zone 10	40-50in / 102-127cm	Temperate mountain system
Zone 8	0-10in / 0-25cm	Subtropical mountain system	Zone 10	50-60in / 127-152cm	Temperate mountain system

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Hardiness	Precipitation	UN Ecozone
Zone 10	60-70in / 152-178cm	Temperate mountain system
Zone 11	0-10in / 0-25cm	Subtropical mountain system
Zone 11	10-20in / 25-51cm	Subtropical mountain system
Zone 11	10-20in / 25-51cm	Temperate mountain system
Zone 11	20-30in / 51-76cm	Subtropical mountain system
Zone 11	20-30in / 51-76cm	Temperate mountain system
Zone 11	30-40in / 76-102cm	Temperate mountain system
Zone 11	40-50in / 102-127cm	Temperate mountain system
Zone 11	50-60in / 127-152cm	Temperate mountain system
Zone 12	0-10in / 0-25cm	Subtropical mountain system
Zone 12	10-20in / 25-51cm	Subtropical mountain system