Climate Match / Map Results

About This Report

This report was generated for PlantRight's Plant Risk Evaluator (PRE). This climate match tool is designed for PRE users and plant scientists involved in the development, production, and distribution of horticultural plants. The climate match tool allows evaluators to quickly and consistently answer PRE's climate-related questions.

Horticultural growers or plant scientists interested in PRE and in promoting non-invasive plants for regional markets are invited to join the growing PRE community. Joining PRE is free and supports a collaborative approach to preventing new, regional plant invasions. Contact us below to get more information on how to join.

This toolkit is a collaboration between GreenInfo Network, PlantRight, Cal-IPC, and Agricultural Sustainability Institute at UC Davis. Funding is provided by Sustainable Conservation.

Contact us at PlantRight@suscon.org   Learn more at www.PlantRight.org.

Data Layer Methods

The PRE Combined layer shows areas in the world where three variables (Plant Hardiness, Ecozones, and Precipitation) all match the conditions found in selected search geometry.

The PRE Combined layer was generated by merging together three input datasets (Plant Hardiness, Ecozones, and Precipitation) into a single three-band raster layer. To combine these three different datasets, they were each converted to raster format with the Precipitation dataset used as reference for cell size and extent. The three layers were combined into a single three-band raster layer using the Composite tool in Desktop ArcMap. The three-band raster was exported to .tif format for use in the web map. To generate lookup tables for the unique three-value combinations per state and ecoregion, the combined raster data was converted to point format, then joined with the states and ecoregion layers (Spatial Join tool) to generate summary tables.

Data methods guided by CAL-IPC and USDA recommendations. Precipitation Zones and Plant Hardiness Zones data: SAHA, SURANJANA, AND COAUTHORS, 2010: The NCEP Climate Forecast System Reanalysis. Bull. Amer. Meteor. Soc., 91, 1015.1057. doi: 0.1175/2010BAMS3001.1, 2010. Precipitation Zones and Plant Hardiness Zones methods: Magarey, R. D., D. M. Borchert, and J. Schlegel. 2008. Global plant hardiness zones for phytosanitary risk analysis. Scientia Agricola 65(Special Issue):54-59. Global Ecozones: United Nations, 2010, WGS84.

Please Note

There are many climate match tools in use, each with varying criteria and degrees of specificity. We chose this tool for two reasons: 1) it aligns with the criteria used by the USDA's weed risk assessment for matching climate; and 2) it provides sufficient data for PRE users to answer the PRE climate related questions in a consistent, if not confident manner. Is this, or any climate match method perfect? No. Does this meet our needs for answering PRE questions? Yes. As PRE research continues, we shall look for ways to strengthen our PRE resources even further. We always welcome constructive feedback from our constituents.

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Selected Areas and Map Legends

Selected States	Precipitation	Plant Hardiness Zones	UN Global Ecological Zones
Washington	0-10in / 0-25cm	Zone 1	Tropical rainforest
	10-20in / 25-51cm	Zone 2	Tropical moist forest
	20-30in / 51-76cm	Zone 3	Tropical dry forest
	30-40in / 76-102cm	Zone 4	Tropical shrubland
	40-50in / 102-127cm	Zone 5	Tropical desert
	50-60in / 127-152cm	Zone 6	Tropical mountain system
	60-70in / 152-178cm	Zone 7	Tropical humid forest
	70-80in / 178-203cm	Zone 8	Subtropical dry forest
	80-90in / 203-229cm	Zone 9	Subtropical steppe
	90-100in / 229-254cm	Zone 10	Subtropical desert
	100+ / 254+	Zone 11	Subtropical mountain system
		Zone 12	Temperate oceanic forest
		Zone 13	Temperate continental forest
			Temperate steppe
			Temperate desert
			Temperate mountain system
			Boreal coniferous forest
			Boreal tundra woodland
			Boreal mountain system
			Polar
			Water

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PRE Combined
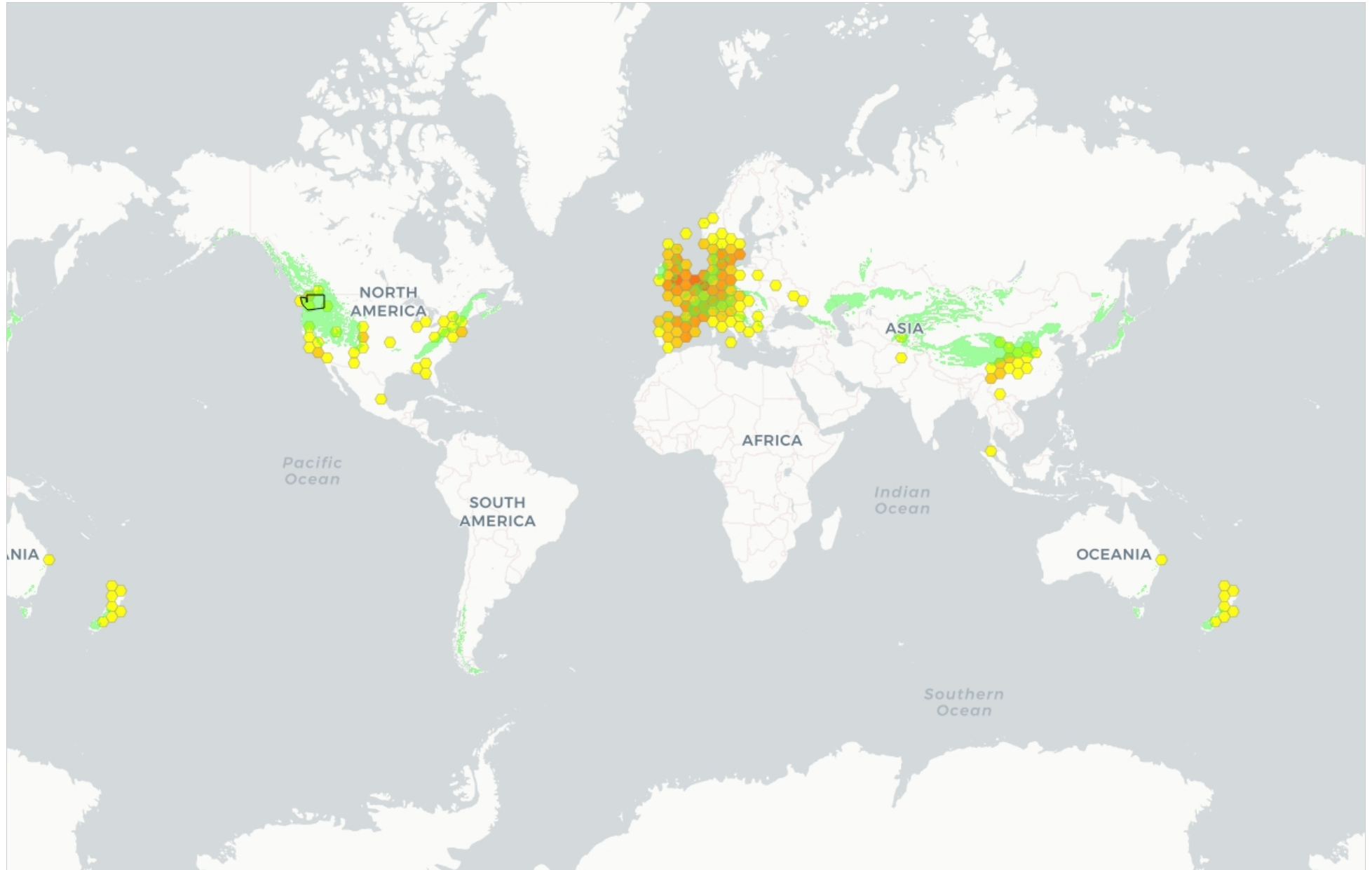
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Precipitation

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USDA Plant Hardiness Zones

Climate Match / Map Results

UN Global Ecological Zones

Learn more at www.PlantRight.org/PRE

Climate Match / Map Results

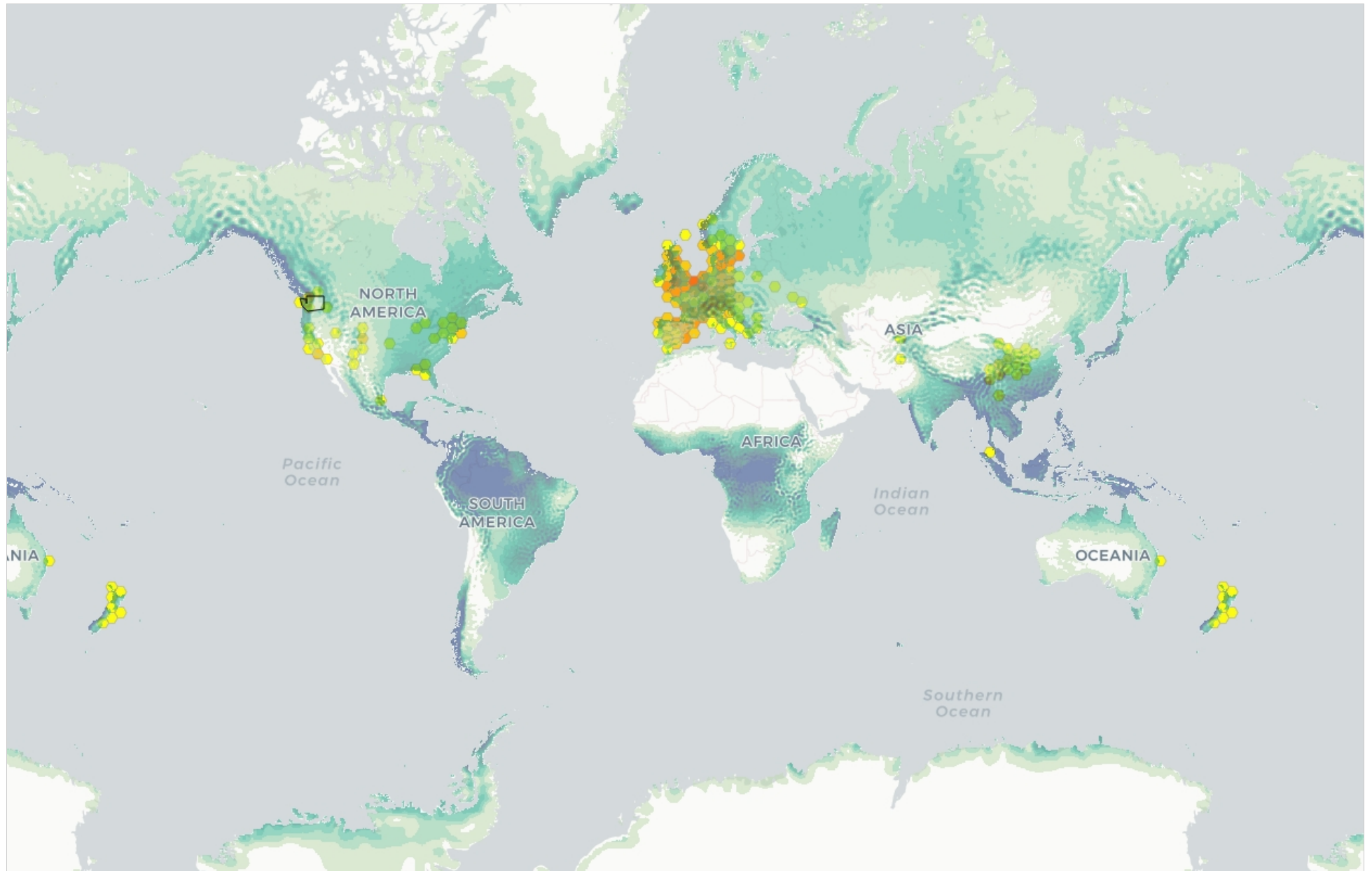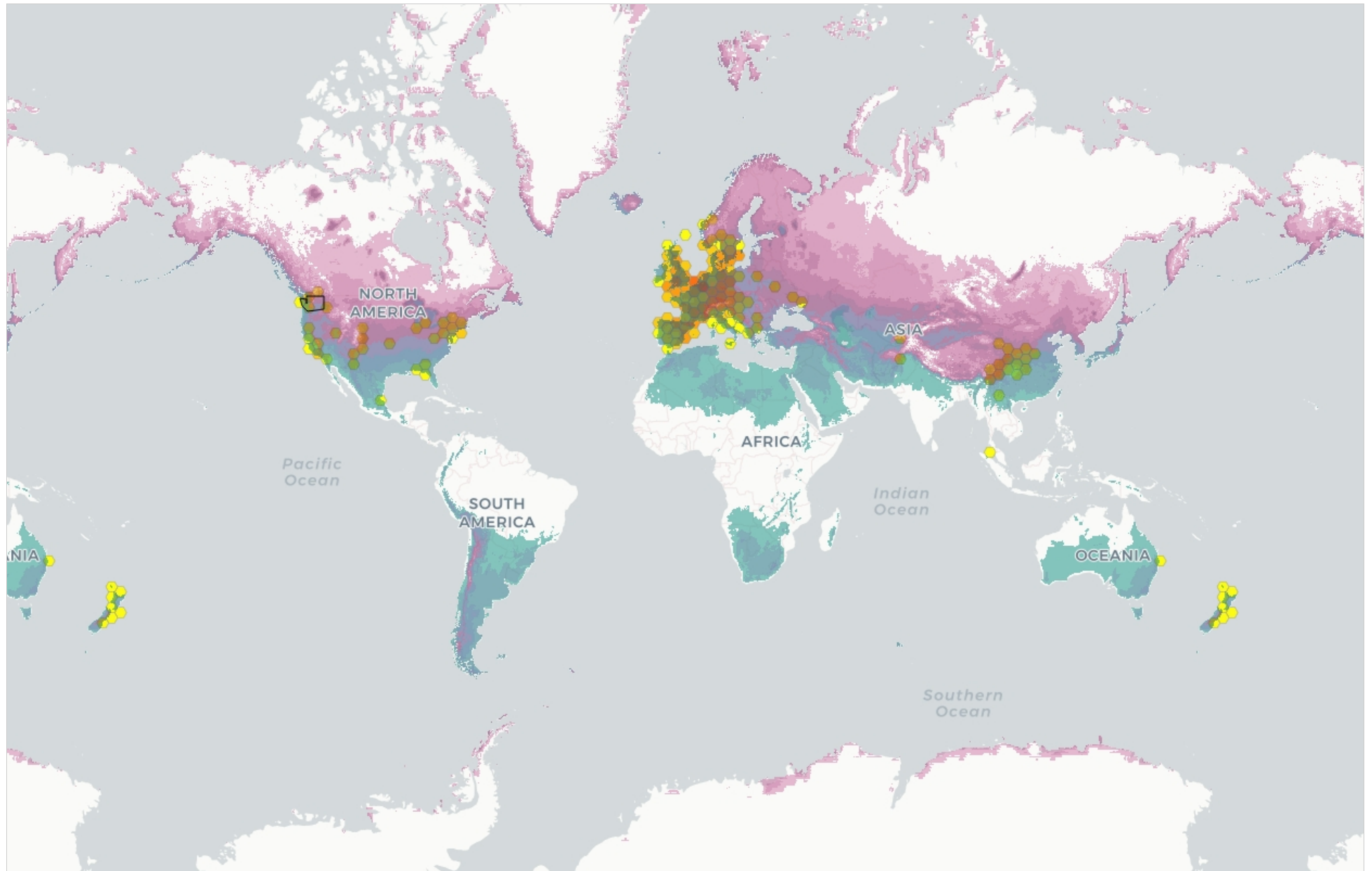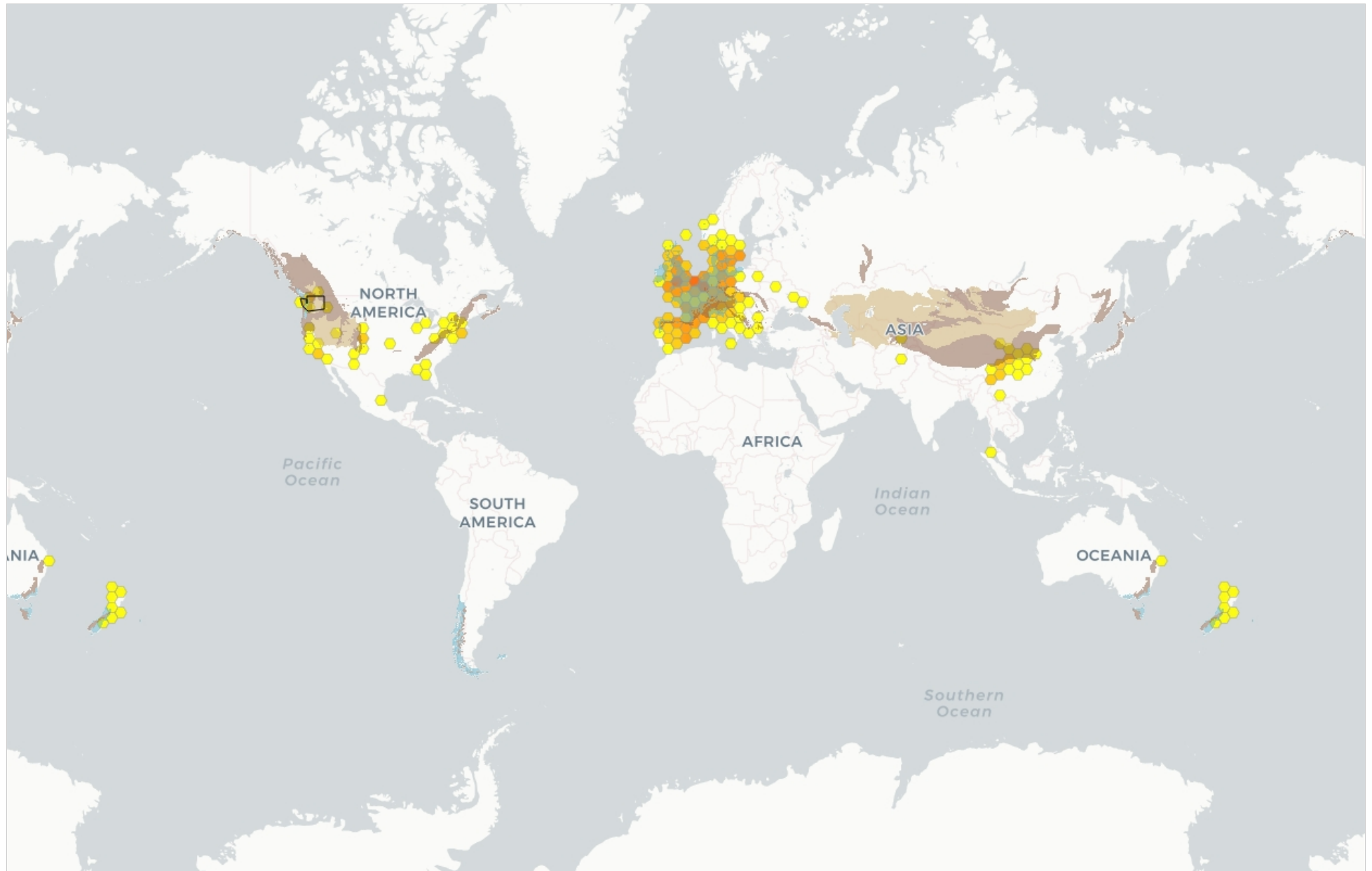| Hardiness	Precipitation	UN Ecozone	Hardiness	Precipitation	UN Ecozone
Zone 3	20-30in / 51-76cm	Temperate mountain system	Zone 7	20-30in / 51-76cm	Temperate desert
Zone 4	10-20in / 25-51cm	Temperate desert	Zone 7	20-30in / 51-76cm	Temperate mountain system
Zone 4	10-20in / 25-51cm	Temperate mountain system	Zone 7	30-40in / 76-102cm	Temperate desert
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Zone 4	40-50in / 102-127cm	Temperate desert	Zone 7	40-50in / 102-127cm	Temperate oceanic forest
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Zone 5	10-20in / 25-51cm	Temperate mountain system	Zone 8	100in+ / 254cm+	Temperate mountain system
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Zone 5	90-100in / 229-254cm	Temperate mountain system	Zone 8	80-90in / 203-229cm	Temperate mountain system
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Zone 7	10-20in / 25-51cm	Temperate mountain system			
Zone 7	100in+ / 254cm+	Temperate mountain system			
Zone 7	100in+ / 254cm+	Temperate oceanic forest			