



LIVING LABORATORIES



The Living Laboratories

The Living Laboratories are part of the University of California, Riverside Agricultural Experimental Stations that serve the UCR community. Research in these laboratories address climate change and the discovery of sustainable approaches to ensure an abundant and nutritious food supply, protection of natural resources, healthy people and communities, and economic and ecological sustainability for the future of California, the nation, and the world.

Plant Research 1

Plant Research 1 (PR1) is a state-of-the-art facility that includes 16 greenhouse modules that allow for different climate zone ranges. Each module is programmed to control humidity, temperature, lighting, and other conditions and can maintain environmental conditions from tropical/temperate forest, savanna, scrubland, desert to tundra ecosystems. The settings can be controlled and monitored remotely. PR1 also includes plant growth chambers for specialized research, headhouse space for setting up experiments, and lab space housing equipment enabling biotechnology research.

Botanic Gardens

The UCR Botanic Gardens is a 40-acre living plant museum with more than 3,500 plant species and thousands of specimens from around the world, focusing on plants from Mediterranean climate and arid lands, similar to California and the desert southwestern U.S. The Botanic Gardens is utilized for teaching, research, and demonstration purposes, as well as for enjoyment and appreciation of nature. The variable elevation and topography of the Gardens and Riverside's subtropical climate create numerous microclimates that allow for the notable diversity of plantings as well as an abundance of wildlife.

UCR Natural Reserves

UC Riverside administers eight natural reserves including four reserves that have research facilities which are: Boyd Deep Canyon Desert Research Center, Sweeney Granite Mountains Research Center, Motte Rimrock Reserve, and James San Jacinto Mountains Reserve. Within the nearly 11,400 hectares (28,000 acres) included in the UC Riverside-managed reserves is a broad representation of Southern California's flora, fauna, and major ecosystems. These lands are an invaluable outdoor laboratory for teaching and research, used by scientists throughout the world. In addition, many endangered or diminishing species are protected from the urbanization occurring in Southern California on "habitat islands" preserved within the reserve boundaries.





Plant Variety Collections

The plant variety collections are used by UC Riverside and visiting scientists engaged in crop improvement through breeding resilient varieties with resistance to diseases, adaptation to adverse climate, and other environmental conditions such as salinity and drought.

Givaudan Citrus Variety Collection

As part of its robust citrus research programs, UCR has one of the largest and most diverse collections of citrus in the world — the Givaudan Citrus Variety Collection (CVC). The CVC includes commercial, historic, novel cultivars, and related species of citrus, with approximately 4,500 trees of nearly 1,100 cultivars and species of citrus and related taxa. Investigations on Huanglongbing or citrus greening disease, the most destructive disease of citrus worldwide, is a major focus of current research.

Date Palm Collection

The desert research station has one of the largest germplasm collections of date palms in the world. This collection contains approximately 130 accessions, many of which are unique and no longer available in the Middle East.

Avocado Collection

The avocado collection is one of the world's premier avocado germplasm collections. It houses material collected throughout the world as well as conserving important varietal material selected for California conditions and bred by UCR researchers.

Turfgrass Collection

A collection of drought tolerant species and cultivars that can also tolerate saline soil conditions is the core of this collection. Breeding for new varieties that have a tolerance to extreme drought conditions with better retention of green color during winter is ongoing.

UCR Agricultural Operations

Agricultural Operations oversees greenhouses, Plant Research 1 growth facility (PR1), and two research stations that are representative of two unique California ecosystems: the desert and inland Southern California. Faculty, staff, and students actively conduct research utilizing greenhouses, PR1, and the research stations. Research topics include climate change, carbon sequestration, drought and salinity tolerance, sustainable pest and disease control, utilization of biotechnology to enhance productivity under drought conditions as well as many other issues affecting our world. Four additional specialized plant growth quarantine facilities include: Citrus Clonal Protection, insects, nematodes, and for citrus pathogens and pests.

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