

IMPACT

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IMPACT is a series of publications highlighting how UC Davis' College of Agricultural and Environmental Sciences makes a difference in the lives of Californians. Through research, teaching, and outreach programs, UC Davis research touches almost all aspects of Californian life. Today, millions of people eat safer foods, breathe cleaner air, and drink healthier water with the help of our researchers. We're making discovery work – for California and the world.

THE GREENING OF HOME LANDSCAPES

THE ISSUE

Residential landscapes are an essential part of the quality of life in California. They can provide refuge, solace, and food. But they also add to demands for scarce water resources. According to a 2010 study for the California Homebuilding Foundation, a new three-bedroom home will use approximately 174,000 gallons of water per year, more than half of it for landscaping.

Runoff from landscaping also is a source of environmental pollutants such as pesticides and fertilizers that threaten fish and wildlife in rivers and streams. Researchers in the College of Agricultural and Environmental Sciences at UC Davis recognized the need to make horticulture research and education more available for Californians to address these concerns.

WHAT WE'RE DOING

The college established the California Center for Urban Horticulture (CCUH) at UC Davis to help people get the most out of their landscapes by learning environmentally sound gardening practices and encouraging better plant materials for sustainable urban landscapes. CCUH holds numerous outreach and support events for both the industry and the general public.

Your Sustainable Backyard — Home gardening has become increasingly popular with Americans. A



UC DAVIS ARBORETUM

survey by the National Gardening Association found that seven million more households planned to grow their own fruits, vegetables, herbs, or berries in 2009 than in 2008 — a 19-percent increase. CCUH created the “Your Sustainable Backyard” program, an ongoing series of workshops developed with master gardeners in mind. Master gardeners are public educators trained by University of California experts in horticulture, pest management, and related home gardening topics who extend this information to the general public. In the center’s first two years, more than 800 people attended workshops on horticultural care of fruit trees, roses, and edible plants.

Arboretum All-Stars — The horticultural staff at the UC Davis Arboretum identified 100 tough, reliable plants that are easy to grow, don’t need a lot of water, have few problems with pests or diseases, and have outstanding qualities in the garden. They include

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trees, shrubs, vines, groundcovers, and perennials. Many of them are California native plants and support native birds and insects. CCUH has been instrumental in promoting these plants, which are available at Arboretum plant sales on campus and at an increasing number of retail nurseries throughout California. Arboretum horticulturists are also testing plant species that have demonstrated tolerance to summer heat and drought under different irrigation frequencies and in a variety of climate zones around the state.

Helping honey bees — The center coordinated the design and installation of a demonstration garden called “Honey Bee Haven” with the support of Häagen-Dazs and the UC Davis Department of Entomology. The half-acre garden and adjacent wildflower meadow on the UC Davis campus provide bees and other pollinators with a year-round food source, raise public awareness about disappearing honey bees, and encourage visitors to plant bee-friendly gardens of their own.

Horticulture industry partnerships — Another way CCUH is helping green California landscapes is through its work with industry, such as its “quality tree initiative” to improve nursery stock, promotion of water-conserving UC Verde buffalograss, and leadership of the UC Nursery and Floriculture Alliance. A Water Wise Symposium has helped industry professionals learn new approaches to water management, including planning and designing for water efficiency ordinances and management to reduce water use and runoff.

Research on runoff — A study led by UC Davis plant sciences specialist Loren Oki and UC Cooperative Extension water resources advisor Darren Haver found 11 pest control chemicals in storm drain water samples from eight selected California neighborhoods virtually year-round, including some products no longer commercially available. The main ingredients of typical lawn and garden fertilizers were also detected in water samples at all sites. Master gardeners are providing education to residents in the test neighborhoods to reduce runoff water and its potentially harmful contaminants. Computer models of flows and loads from the study will aid future urban planning. CCUH provides a forum to report on this important research.

A SHARED VISION

The California Center for Urban Horticulture came about as a result of careful planning and research with UC Cooperative Extension, the UC Davis Arboretum, the Department of Plant Sciences, the Department of Landscape Architecture, and representatives from the horticulture industry and professional horticulture associations. Learn more at <http://ccuh.ucdavis.edu>.

In just a few short years the power of this partnership is evident in more widely adopted horticultural practices that are conserving water, reducing pesticide and fertilizer use, and introducing Californians to attractive plants better adapted to California’s mediterranean climate.

That’s impact — enhancing urban living through horticulture.

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