

Title: Purchase of Interactive IPM Kiosks for IPM Outreach to Gardeners

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Introduction

In 2007 the University of California Statewide Integrated Pest Management Program (UC IPM) in collaboration with the Healthy Garden/Healthy Home Project (HGHH) managed by UCCE San Diego County developed a user-friendly, stand-alone, touch-screen IPM Kiosk to help educate home gardeners in solving pest problems, preventing runoff from residential landscapes, and protecting the environment.

The UC IPM Kiosk contains information on approximately 60 common home and garden pests, their identification and management, least toxic pest control, alternatives to pesticides, and safe use and disposal of pesticides. The kiosk also includes tips on proper watering, fertilizing, and avoiding runoff of garden chemicals. Kiosk users can look up a pest by category and name, or diagnose a problem on plants. Kiosk content screens are brief and accompanied by numerous color photo images to aid in identification and understanding. The kiosk also contains about 45 separate printable handouts. Visitors to the kiosk can watch short pest videos, print and take home information, as well as find their local University of California Cooperative Extension and Master Gardener contact information for additional pest management help in their county.

The kiosks are portable tabletop computer displays designed to be a stand-alone information source for use in locations lacking public Internet access. The kiosk content is derived primarily

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from the peer-reviewed UC IPM publication series called *Pest Notes*. See more information about the kiosks at <http://www.ipm.ucdavis.edu/FAQ/kiosk.html>.

UC IPM made the kiosks available on loan to UCCE offices, Master Gardener programs and retail stores, and from the beginning, the kiosks have been very popular. The first group of kiosks included 6 units managed by UCIPM from UCCE San Diego for use in San Diego, Los Angeles and Orange Counties and 6 units managed by UCIPM at UC Davis for use by northern California counties. Although this arrangement worked well for some counties and events, there simply were not enough units to meet demand in busy months. More importantly, it was difficult for counties that were not near Davis or in the 3 southern California counties to borrow the units because they were too far away.

For this project, funds were requested from the Slosson Fund to purchase 4 additional kiosks to increase the use of the kiosks statewide, especially in the Central Valley, coastal areas and southern California.

Goals and Objectives

The objectives of this project included

- Purchasing 4 additional kiosks to serve new areas, especially San Bernardino/Riverside/Imperial; Coastal California: Ventura/Santa Barbara/San Luis Obispo; Central Valley: Fresno/Kern/Tulare; and other underserved areas including Inyo/Mono;
- Using the new kiosks to expand the kiosk as a method for information delivery to home gardeners;
- Expanding the reach of University of California IPM information and resources to the general public;
- Identifying local issues via the user-inputted comments and report sections in the kiosk;
- Increasing awareness of IPM and water quality issues to non-professional gardeners.

Discussion

Four new UC IPM kiosks were purchased in the summer of 2008. Three units were delivered to regional locations to be shared on a cross-county basis and the fourth was kept at UC Davis for loan to remote areas on request. These new units have greatly enhanced the availability of the kiosks to local UCCE programs. UC IPM Kiosks are now in the following UCCE locations:

- four in San Diego County
- one each in Los Angeles and Orange counties
- one unit based in Riverside and shared with San Bernardino and Imperial counties
- one unit based in San Luis Obispo and shared with Ventura and Santa Barbara counties
- one unit based in Fresno and shared with Tulare, Kern, Kings, and Madera counties
- seven units based at UC IPM in Davis and shared with northern California, SF Bay Area, Sacramento Valley and foothill areas.

Three additional UC IPM Kiosks are owned and managed by the California Department of Pesticide Regulation for use by State of California agencies.

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The kiosks are monitored to evaluate usage and effectiveness. We require counties with shared units to report use information and user feedback, find suitable placement locations, and communicate placement details to UC IPM. We support these programs by providing kiosk-related materials and advising them on ways to enhance kiosk use and movement. Based on our monitoring of use and demand, over time UC IPM may decide to relocate kiosks to different regions.

For the new units based in Riverside, Fresno and San Luis Obispo, we recruited and trained Master Gardener Coordinators at each location to supervise the use of the kiosks and download and upload information on to kiosks. UC IPM at UC Davis maintains ownership and oversight but local coordination is essential to keep the kiosks running and to get optimum utilization.

UC IPM Associate Director Mary Louise Flint delivered each kiosk and carried out a half-day training at each of the three locations for Master Gardeners and Master Gardener Coordinators from surrounding counties to instruct them on use of the kiosk, suggested ways to increase use in their communities and how the kiosk relates to other UC IPM resources and outreach materials.

To promote and advertise the kiosks, UC IPM maintains a schedule for all placement locations statewide on our Web site (www.ipm.ucdavis.edu), which includes the county, dates of use, and location details.

The popularity of the kiosks continues to increase part of UC Master Gardener outreach events (Figure 1) and by their placement in nurseries, libraries (Figure 2), county fairs (Figure 3), garden exhibits, and plant clinics. During the period of July 1, 2008 to June 30, 2009, the 10 kiosks managed by the UC IPM Program were placed in approximately 85 locations from Trinity County to Ventura County. Since 2007, 42 county UCCE or Master Gardener programs have used the kiosks (Table 1, Figure 4). Fifteen new counties used the kiosks in 40 new locations since this grant began, many because of the availability of the new regionally based kiosks purchased through this Slosson grant. In addition to in-state locations, the kiosk was displayed at the International IPM Symposium in Portland, Oregon in March 2009 and the national Entomological Society of America meeting in Reno, Nevada in November 2008. The most popular pests viewed by users remain similar to data from past years' kiosk reports. Ants, Snails and Slugs, Aphids, and Gophers continue to be the top subjects sought after by kiosk visitors. Other popular topics include Safe Use and Disposal of Pesticides, Rodents and other Vertebrate pests, and General Weed Management.

The kiosks placed in the shared regions of Riverside, Fresno, and San Luis Obispo, are seeing an increase in use requests as more Master Gardeners and local businesses are aware of their availability. It has taken these counties a little time to work out the issues about how to coordinate kiosk movement in these areas. UC IPM will continue working with these counties to facilitate kiosk placement and in streamlining the process for promotion, reservation, and reporting their use.

Although the original proposal suggested permanent placement of a unit in Inyo/Mono counties, we decided to instead keep one of the new units at UC Davis with the understanding that it could be borrowed by that county on request. This decision was justified by the high demand from Master Gardener programs statewide for the kiosks from March to September. In the past, there

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had been numerous situations when we could not accommodate all the kiosk requests, either because a kiosk was not available or transportation was too difficult. With the addition of the new units, the 7 kiosks now housed at UC Davis serve all Northern, Bay Area, Foothill, and other central California counties, giving us the ability to accommodate nearly all requests for kiosk use in 2008-09, including longer term placement at more remote Master Gardener programs such as Mendocino and Humboldt.

In addition to the purchase of the 4 kiosk units for this project, a portable power source was purchased to make it possible to use at events where electrical access is unavailable. The power source will further expand the venues where kiosks can be displayed. We plan to soon update kiosk content, adding more pests and educational materials such as videos and printable Quick Tips. In the future, we also hope to translate the kiosk content into Spanish to further serve California's home gardening audiences.



Figure 1. The IPM Kiosk as part of UC Master Gardener booth at a Home & Landscape trade show.



Figure 2. Kiosk users at a retail garden center.



Figure 3. UCCE booth at 2009 Trinity County Fair showcasing the UC IPM kiosk and other outreach materials.

Alameda	Mariposa*	San Luis Obispo
Amador	Mendocino*	San Mateo
Butte*	Merced*	Santa Clara
Calaveras	Monterey	Santa Cruz
Colusa*	Napa	Shasta*
Contra Costa*	Nevada	Solano
El Dorado	Orange	Sonoma
Fresno	Placer	Sutter
Humboldt*	Riverside*	Trinity*
Imperial	Sacramento	Tulare
Lake	San Bernardino*	Tuolumne*
Los Angeles	San Diego	Ventura*
Madera	San Francisco*	Yolo
Marin*	San Joaquin	Yuba

*indicates new user in 2008-09



Figure 4. Map of California showing counties that have borrowed the IPM kiosks. Counties in green are those that have used a kiosk since this project was funded. Counties in blue first used a kiosk prior to July 2008.