

Stephen J. Vasquez,  
Viticulture Farm Advisor

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## The Hilgardia Project

*Hilgardia* journal was the primary, technical publication of UC Agriculture and Natural Resources for 70 years. Although production ceased in 1995, its 900-plus titles are the cornerstones of modern agricultural, environmental and nutritional research. These publications are frequently cited in scientific literature. Established in May 1925, *Hilgardia* succeeded the *Technical Paper* series, which ceased with issue No. 20 (April 1925). *Hilgardia* commemorates Dr. Eugene Woldemar Hilgard

(1833-1916), founding director of the California Agricultural Experiment Station, forerunner of UC ANR. Professor Hilgard also organized the Agriculture Department of the University of California.

Many of the [classical pieces](#) of work of former UC faculty in Viticulture and Enology were published in *Hilgardia*. When these works are digitized, they will be posted here, freely available to scholarly and lay readers worldwide.

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## Rising Labor Costs Could Trigger Changes in Produce Industry

Immigration reform and stricter enforcement of current immigration laws could significantly boost labor costs for California's \$20 billion fresh fruit, nut and vegetable crops, according to agricultural economists at UC Davis and the U.S. Department of Agriculture.

This, in turn, would likely prompt the industry to adjust by increasing mechanization and introducing harvesting aids to boost laborers' productivity, they predict. Imports may also rise. "California's produce industry

depends on a constant influx of new, foreign-born laborers, and more than half of those are unauthorized laborers, primarily from Mexico," says Phillip Martin, a professor of agricultural and resource economics and one of the nation's leading authorities on agricultural labor.

"The cost of hiring these laborers will likely rise as the U.S. government ramps up enforcement of immigration laws by installing more physical barriers along the U.S.-Mexico border and requiring

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### Additional Web News

University of California  
Agriculture and Natural Resources

San Joaquin Valley Viticulture Blog

Making a Difference  
for California

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# Hilgardia

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Following are a few of the titles that have played a pivotal role in improving conditions of production viticulture:

- Phloem structure in the grapevine and its seasonal changes. 1948. K. Esau—v18n01p423
- Effects of gibberellin on seedless *Vitis vinifera*. 1959. R.J. Weaver—v29n06p247
- Vineyard trials in California with nematode-resistant grape rootstocks. 1960. L.A. Lider—v30n04p123
- Biological control of western grape leaf skeletonizer. 1961. D.P. Clausen—v31n16p613
- Grapevine leafroll virus—history and anatomic effects. 1967. W.C. Batiste—v38n01p403

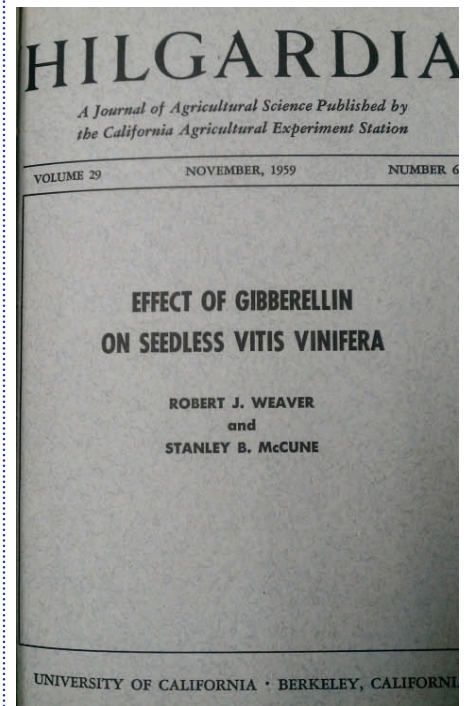
In spite of its scientific preeminence, *Hilgardia* has no organized presence on the Worldwide Web, and it is now in danger of falling into obscurity and becoming virtually invisible to the lay and scholarly audiences. Fully one-half of all *Hilgardias*, the first 24 volumes and 58 other editions, are out of print entirely. While copies of the print journals exist in a few UC libraries, they are incomplete, difficult to access and subject to physical degradation.

A group of UC faculty and staff are spearheading a project to scan and digitize the entire *Hilgardia* series (more than 31,000 pages), bringing these scarce pub-

lications to light. The goal is to raise \$30,000 to make these publications fully and freely accessible on the Worldwide Web. Each article will be posted as a high-resolution PDF with a searchable text layer, and its essential headings (title, authors, abstract, references) will also be posted in 'html' form. As they are digitized, *Hilgardia* editions will be posted on a separate section of the web site of [California Agriculture](#), a current UC ANR peer-reviewed periodical and sister publication. Through the search engines and databases that now index [California Agriculture](#), *Hilgardia* will become fully discoverable and searchable on the Worldwide Web.



Significant progress has already been made, creating a high-resolution PDF of the *Hilgardia* catalog with a searchable text layer, completing an inventory of the UC ANR supply of *Hilgardias*, now in storage, compiling the inventory on an Excel spreadsheet, which includes other descriptive data, and creating a page for the [Hilgardia Project](#). (<http://californiaagriculture.ucanr.org/hilgardia.cfm>)



Parties interested in making a donation to the *Hilgardia* digitizing project should contact:

Dr. Deborah Golino  
Foundation Plant Services  
University of California-Davis  
One Shields Avenue  
Davis, CA 95616-8600

You may also contact Dr. Golino by email at [dagolino@ucdavis.edu](mailto:dagolino@ucdavis.edu)

Please join us to accomplish this goal. A contribution of any amount will be appreciated.

Donation of \$1,000 or more will be acknowledged on the *Hilgardia* Website.

We greatly appreciate any help you can provide in spreading the word about this fundraising effort.

## Rising Labor Costs

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more audits of workers' I-9 employment verification forms," Martin says. He notes that such audits often cause workers to quit their jobs rather than clear up discrepancies in their documents. As a result, some farm employers already are making plans to hire higher-paid, legal guest workers, who must be provided with government-approved housing.

He projects that immigration reform could result in legalization of currently unauthorized farmworkers, again encouraging farm employers to turn to the higher paid guest workers to tend and harvest their crops.

If labor costs do rise, Martin suggests that three major adjustments could occur: mechanization to reduce hand labor, an increase in produce imports if rising costs make U.S. produce less competitive, and introduction of more harvesting aids to increase the efficiency of laborers.

For example, there could be wider use of mechanized raisin harvesting, a shift to more imports in the asparagus industry, and the use of harvesting aids — such as in-field conveyor belts — to speed strawberry harvest.

Martin's study, conducted with Linda Calvin of the USDA was supported by USDA and the UC Giannini Foundation of Agricultural Economics. The report, "Labor Trajectories in California's Produce Industry," can be found at: <http://agecon.ucdavis.edu/extension/update/>

## New Changes in Aluminum Phosphide Labels

Roger Baldwin, UC IPM Advisor

The California ground squirrel (*Spermophilus beecheyi*) and pocket gopher (*Thomomys* spp.) are widely considered to be the two most damaging wildlife pests in California agriculture. Numerous techniques are available for controlling ground squirrels and gophers including trapping, anticoagulant baits, acute toxicant baits, and burrow fumigants. Trapping can be an effective method to remove small to medium size populations of gophers and ground squirrels but often becomes too time consuming for large acreage. Both anticoagulant (e.g., diphacinone and chlorofacinone) and acute toxicant baits (e.g., zinc phosphide) can be quite effective at controlling ground squirrels when used appropriately. These rodenticides are less consistent but can still be effective when baiting for pocket gophers. Baiting is typically considered the cheapest and least time-consuming method for controlling both gophers and ground squirrels. However, there are potential concerns for non-target poisonings when using rodenticides which can limit their applicability in some situations.

Burrow fumigants, such as gas cartridges and aluminum phosphide, do not typically pose as great of a concern for non-target exposure as baits, and usually involve shorter application times than trapping. Aluminum phosphide is particularly effective at controlling gophers and ground

squirrels. Recent studies on ground squirrels and gophers indicated excellent control for both species (reduction in ground squirrel population = 97–100%; reduction in gopher population = 100%). Aluminum phosphide is a restricted use material; specific guidelines must be adhered to when using this material. Additionally, fumigation is generally only effective when soil is moist. Therefore, fumigation is restricted to late winter and spring or following irrigation. Nonetheless, aluminum phosphide fumigation is a very valuable part of an IPM program for controlling gophers and ground squirrels; its continued availability to growers is needed to maximize control efforts in many situations.

Unfortunately, recent changes in aluminum phosphide labels have been implemented due to the gross misuse of this product that led to the death two young girls in Utah. These changes include the following:

1. Use is strictly prohibited around all residential areas, including single and multi-family residential properties, nursing homes, schools (except athletic fields, where use may continue), day care facilities, and hospitals.

2. The products must only be used outdoors for the control of burrowing pests, and are for the use on agricultural areas, orchards, non-crop areas (such as pasture

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# Aluminum Phosphide

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and rangeland), golf courses, athletic fields, parks, and other non-residential institutional or industrial sites.

3. Products must not be applied in a burrow system that is within 100 feet of a building that is or may be occupied by people or domestic animals. This buffer zone for treatment around non-residential buildings that could be occupied by people or animals has been increased from 15 to 100 feet.

4. When this product is used in athletic fields or parks, the applicator must post a sign at entrances to the treatment site containing the signal word DANGER/PELIGRO, skull and crossbones, the words: DO NOT ENTER/NO ENTRE, FIELD NOT FOR USE, the name and EPA registration number of the fumigant, and a 24-hour emergency response number. Signs may be removed 2 days after the final treatment.

5. When this product is used out of doors in a site frequented by people, other than an athletic field or park (such as agricultural fields), the applicator shall post a sign at the application site containing the signal word DANGER/PELIGRO, skull and crossbones, the name and EPA registration number of the fumigant, and a 24-hour emergency response number. Signs may be removed 2 days after the final treatment.

Because of these changes, I have developed a questionnaire

designed to develop accurate facts on various methods, including fumigation with aluminum phosphide, for controlling burrowing mammals in California. The information will be provided to registrants, the U.S. EPA, and others to help develop use policies, labels, etc. My primary objectives are to:

1. Identify the level of use of aluminum phosphide for various burrowing mammals in agricultural areas prior to the new aluminum phosphide label restrictions.

2. Identify how new aluminum phosphide label restrictions will alter use of a variety of control methods.

3. Identify the potential impact of the new aluminum phosphide label restrictions on burrowing mammal populations.

4. See if there is support to further increase safety for residents and other public bystanders by requiring a new Certified Applicator Category for use of aluminum phosphide fumigants for burrowing pest control IF such a category would ease restrictions set forth in the most recent aluminum phosphide labels.

The data collected should provide a much clearer picture of use patterns and importance of several methods, including aluminum phosphide, for controlling agricultural populations of burrowing pests in California. The survey can be accessed at the following web address:

Aluminum Phosphide Survey For Agricultural Users: <http://ucanr.org/sites/AluminumPhosphideSurvey/files/73830.pdf>

Aluminum Phosphide Survey residential/urban/suburban settings:

<http://ucanr.org/sites/AluminumPhosphideSurvey/files/71411.pdf>

Two surveys are found at this website; one is for agricultural users, the other is for rodent control professionals who control burrowing mammals in urban/residential areas. Be sure you complete the appropriate survey. Once completed, the survey can either be: 1) saved and e-mailed to me, or 2) mailed to me via USPS. My e-mail address, mailing address, and phone number are provided at the end of this article. If you do not have internet access, give me a call or send a letter and I will mail a copy of the survey to you.

I must emphasize the importance of your participation in this survey if you use aluminum phosphide for burrowing mammal control. Data needs to be collected and subsequent results provided to the pertinent regulatory agencies to show the importance of aluminum phosphide for burrowing mammal control.

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## Aluminum Phosphide

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Otherwise, there is a real possibility that we may completely lose aluminum phosphide for burrowing mammal control.

For additional information contact:

Roger A. Baldwin  
Phone: 559-646-6583  
E-mail: [rbaldwin@uckac.edu](mailto:rbaldwin@uckac.edu)



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### 4th Annual Viticultural Research Roadshow & Educational Wine Tasting Event

Bullfrog Bar & Grill, HWY 99  
& Ave. 384, Kingsburg, CA

Thursday, June 30, 2011

1:00-5:00PM

Contact SJV WINEGROWERS  
ASSOCIATION:  
(559) 354-1409

## Weed Day 2011 comes to UC Davis July 14

The latest developments in weed control will take center stage at UC Davis once again when scores of scientists, students, regulators and more gather July 14 for the 55<sup>th</sup> annual Weed Day.

"We look forward to another great turnout with a wide range of weed-control demonstrations," said Cooperative Extension Specialist Brad Hanson from the UC Davis Department of Plant Sciences, who is chairing this year's popular event. "Weed Day provides a great opportunity to see, first hand, weed research being conducted on campus and to find out what we are doing throughout the state."

Among the presentations will be weed control in fresh-market tomato, residual herbicides in almonds and walnut orchards, symptomology of herbicide drift in row crops, thermal soil disinfection research, weed-risk assessment for the horticulture industry and many more ongoing projects with other crops and non-crops. For a full agenda, [click here](#) or visit:

<http://wric.ucdavis.edu>.



Weed Day is held each July to give pest control advisors, farm advisors, chemical company cooperators, college faculty, students and regulatory officials the opportunity to learn more about current weed science research at UC Davis. The event begins at 7:30 a.m. with registration and a morning bus tour to the campus research fields to view demonstrations and research in terrestrial and aquatic weed control. Lunch and afternoon presentations will be held indoors and will wrap up by 4:30 p.m. Continuing education credits have been requested from the Department of Pesticide Regulation.

Cost is \$65 for those who register and pay before July 6 and \$90 for those register after that date. The cost for students with ID is \$20. Class size is limited so early enrollment is encouraged.

Registration is open:

[On-line registration](#) (credit card only)

[Print registration form](#) to fax or mail.

For more information contact Brad Hanson: (530) 752-8115 or [bhanson@ucdavis.edu](mailto:bhanson@ucdavis.edu)

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# GRAPE DAY 2011

University of California Kearney Research and Extension Center  
Parlier, CA

August 16, 2011

7:30 am – 12:00 pm

\$10/person includes: refreshments, meeting and proceeding

**Registration: 7:30 am-8:00 am**

**Program: 8:00 am-12:00 pm**

## **Field tours:**

**Understanding water use of grapevines**

Andrew McElrone, USDA-ARS, Davis CA

**Using the 'Paso Panel' to aid in irrigation scheduling**

Mark Battany, UCCE, San Luis Obispo County

**New wine grape varieties for the San Joaquin Valley**

James Wolpert, UC Davis

**The development of new grape rootstocks for the San Joaquin Valley**

Peter Cousins, USDA-ARS, Geneva, NY

## **Classroom presentations:**

**Trapping and baiting for gopher control in vineyards**

Roger Baldwin, UC IPM Advisor, Parlier, CA

**Critical weed free periods in vineyard development**

Kurt Hembree, UCCE, Fresno County

**Fruitfulness of DOV raisin cultivars**

Matthew Fidelibus, UC Davis and UC Kearney Ag Center

**ONLINE REGISTRATION:** <http://ucanr.org/grape-day>

Contact: Matthew Fidelibus at (559) 646-6500

## CALENDAR OF EVENTS

### Local Meetings and Events

#### Kearney Grape Day

August 16, 2011

7:30 a.m. — 12:00 p.m.

Kearney Agricultural Center

9240 S. Riverbend Avenue

Parlier, CA 93648

Contact: Matthew Fidelibus

(559) 646-6500

Cost: \$10/person

### U.C. Davis University Extension Meetings

(800) 752-0881

#### Description Analysis of White and Red Table Wines

June 18-19, 2011

9:00 a.m. — 4:00 p.m.

1632 Da Vinci Ct.

Davis, CA

Section: 111VIT217

#### Advanced Tasting Seminar

August 6, 2011

9:00 a.m. — 4:00 p.m.

1632 Da Vinci Ct.

Davis, CA

Section: 111VIT216

#### Winery Accounting and Finance for Executives

August 12, 2011

8:30 a.m.— 4:30 p.m.

Wine Business Center

899 Adams St. Saint Helena, CA

Section: 111VIT214

#### Rootstock Workshop: Identification and Use

August 15, 2011

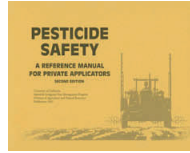
8:30 a.m.— 4:00 p.m.

UC Davis Plum Room, DANR Building

1 Hopkins Road

Section: 111VIT219

## Publications from the University of California

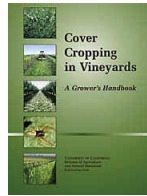


### Pesticide Safety: A Reference Manual for Private Applicators

ANR Publication 3383

Price - \$7.00 + tax and shipping

Updated in 2006, this manual covers information essential for anyone using pesticides on California farms, including growers, managers and employees. The manual covers pesticide labels, worker safety (handlers and fieldworkers), how to mix and apply pesticides, calibration, the hazards of pesticide use including heat related illness, and pesticide emergencies.



### Cover Cropping In Vineyards

ANR Publication 3338

Price - \$20.00 + tax and shipping

This guide features cutting-edge methods for using cover crops to enhance vineyard performance. Based on extensive research, this guide details technical and theoretical information on how cover crops affect vineyards and promote ecological stability.

### Order Form

Publication	Qty.	Price	Subtotal
Pesticide Safety		\$ 7.00	
Cover Cropping in Vineyards		\$ 20.00	

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\$100+	\$15		

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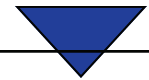


# Vine Lines

Produced by UC Cooperative Extension Farm Advisor Stephen J. Vasquez. Contact me for further article information, or to be added to the mailing list.

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Fresno, CA 93702  
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