



Features

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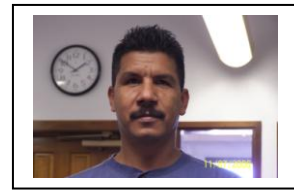
November, 2012

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INSECTICIDE EFFICACY AGAINST APHIDS IN CAULIFLOWER, 2012

Eric T. Natwick
Martin I. Lopez



The objective of the study was to evaluate the efficacy of insecticides for control of aphids on cauliflower under desert growing conditions. Cauliflower (Minuteman) plants were transplanted on 1 Dec 2011 at the University of California Desert Research and Extension Center, El Centro, CA into double row beds on 40 inch centers. Stand establishment was achieved using overhead sprinkler irrigation, and irrigated with furrow irrigation thereafter. Plots were four beds 13.3 ft wide by 40 ft long and bordered by one untreated bed. Included were four foliar insecticide spray treatments and an untreated check in a RCB design experiments with five replicates. Insecticidal compounds, formulations, and application rates are provided in the tables. Insecticide treatments were applied on 30 Jan and 13 Feb 2012. Foliar sprays were applied using a Lee Spider Spray Tractor with a spray boom that included three TJ-60 11003VS nozzles per bed, covering four beds (twelve nozzles on the boom) applying 50.6 gpa at 25 psi. Alate aphids/10 plants and apterous aphids/ 10 plants in each plot were counted. There were two aphid species present; initially only GPA, *Myzus persicae* and later CA, *Brevicoryne brassicae* colonies were detected in low numbers. Therefore, the two aphid species were not separated, but pooled for statistical analysis. Cauliflower heads were harvested from 0.001 acre (13.1 row feet) from the center of each plot on 15 March 2012, culled heads due to aphid contamination were counted separately from market quality heads and the market quality heads were weighted in kg.

There were no differences among the treatments for alate (winged) aphids on any of the sampling dates (Table 1). On 26 Jan, four days prior to insecticide applications, there were no differences among the treatment means for apterous (wingless) aphids (Table 2). On all of the sampling dates following insecticide applications, all of the insecticide treatments had fewer apterous aphids compared to the check. There were no differences among the treatment means for total cauliflower heads, numbers of market quality cauliflower heads, nor kg of market quality heads (Table 3). All of the insecticide treatments had fewer culled cauliflower heads due to aphid contamination as compared to the check. Percentages for market quality cauliflower heads were greater for each of the insecticide treatments as compared to the check. No phytotoxicity symptoms were observed following any of the insecticide treatments. This research was supported by industry gifts. This research was supported by industry gifts.

Table 1.

Alate aphids per 10 plants

Treatment	fl oz/acre	26 Jan	2 Feb	5 Feb	10 Feb	17 Feb	21 Feb	27 Feb	PTA ^z
Closer SC	1.43	0.90	0.58	0.20	0.66	0.44	0.38	0.40	0.44
Closer SC	2.14	0.58	0.82	0.12	0.80	0.38	0.30	0.04	0.41
Closer SC	2.85	0.96	0.66	0.30	0.76	0.34	0.34	0.28	0.45
Movento	5.00	0.84	0.74	0.26	0.96	0.58	0.56	0.44	0.59
Check	-----	0.72	1.28	0.32	0.98	0.70	0.50	0.64	0.74

Means within columns followed by the same letter are not significantly different; LSD, P>0.05.

^z PTA is the post treatment average.

Table 2.

Apterous aphids per 10 plants

Treatment	fl oz/acre	26 Jan	2 Feb	5 Feb	10 Feb	17 Feb	21 Feb	27 Feb	PTA ^z
Closer SC	1.43	2.90	2.60 b	0.04 b	0.28 b	0.50 b	0.34 b	0.08 b	0.64 b
Closer SC	2.14	5.92	3.08 b	0.00 b	0.40 b	0.36 b	0.10 b	0.02 b	0.66 b
Closer SC	2.85	5.30	2.68 b	0.00 b	0.24 b	0.04 b	0.02 b	0.20 b	0.53 b
Movento	5.00	5.06	4.64 b	0.00 b	0.16 b	0.10 b	0.02 b	0.00 b	0.82 b
Check	-----	5.20	10.02 a	9.08 a	7.36 a	7.58 a	7.94 a	7.16 a	8.19 a

Means within columns followed by the same letter are not significantly different; LSD, P>0.05.

^z PTA is the post treatment average.

Table 3.

Cauliflower Heads per 0.001 Acre

Treatment	oz/acre	Total heads	Aphid culls	Market heads	Kg Market heads	% Market heads
Closer SC	1.43	23.20	0.60 b	22.60	13.17	97.06 b
Closer SC	2.14	22.60	0.20 b	22.40	13.08	99.09 b
Closer SC	2.85	24.40	0.40 b	24.00	13.48	98.69 b
Movento	5.00	22.20	0.60 b	21.60	12.51	97.00 b
Check	-----	23.20	2.80 a	20.40	11.72	88.35 a

Means within columns followed by the same letter are not significantly different; LSD, P>0.05.



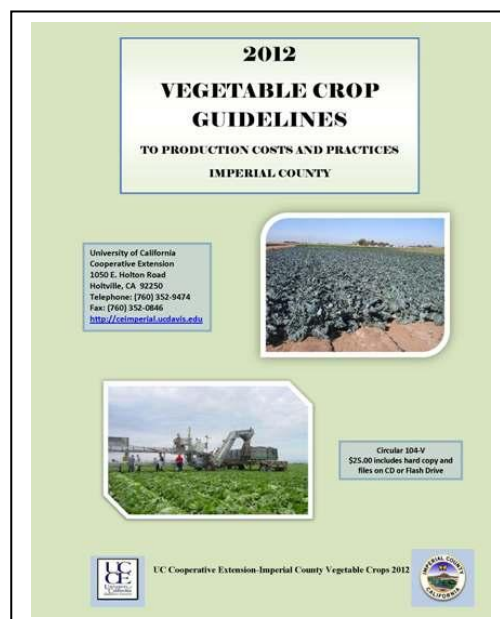
2012 GUIDELINES TO PRODUCTION COSTS AND PRACTICES IMPERIAL COUNTY- VEGETABLE CROPS

Khaled M. Bali



The new 2012 Guidelines to Production Costs and Practices in Imperial County - Vegetable Crops are now available from the UC Cooperative Extension, Imperial County office. The information presented in the vegetable crops guidelines allows one to get a "ballpark" idea of field crop production costs and practices in the Imperial County. Most of the information was collected through verbal communications via office visits and personal phone calls. The information does not reflect the exact values or practices of any one grower, but are rather an average of countywide prevailing costs and practices. Exact costs incurred by individual growers depend upon many variables such as weather, land rent, seed, choice of chemicals, location, time of planting, etc. No exact comparison with individual grower practices is possible or intended. The budgets do reflect, however, the prevailing industry trends within the region.

The cost of the Guidelines to Production Costs and Practices for Imperial County Vegetable Crops circular (104-V) will be \$25. This includes a hard copy of the Guidelines, electronic version on a CD or USB thumb drive (Text in PDF and budget files in Excel format) and shipping cost. The publication is available from the UCCE. If ordering by mail, please make checks payable to: UCCE-Imperial County and mail to Annette Tietz, UCCE, 1050 E. Holton Rd. Holtville, CA 92250. Please specify if you want a CD or USB thumb drive in addition to the hard copy. Please feel free to call (760-352-9474) or email (kmbali@ucdavis.edu) if you have any questions.



THE 23st ANNUAL FALL DESERT CROPS WORKSHOP
November 27, 2012
House of Steaks, 215 N Imperial Ave El Centro, CA

- 7:00 **Registration**
- 7:10 **Welcome from Western Farm Press** – Cary Blake, Associate Editor, Western Farm Press, Gilbert, AZ;
- 7:15 **Invasive Pests in Threatening Imperial County Agriculture; Asian citrus psyllid, Huanglongbing, Red Palm weevil and South American Palm Weevil** - Rachel Nilson, Entomologist/Plant Pathologist, Imperial County Agricultural Commissioner’s Office, El Centro, CA;
- 7:35 **California Ground Squirrel A New Invasive Species In Imperial County**, Reyes Triviso Agricultural Biologist/Standards Specialist IV, El Centro, CA;
- 7:55 **Management Tips for Insects in Vegetables crops** – John Palumbo – University of Arizona Entomologist, UA Yuma Ag Center, Yuma County, AZ;
- 8:15 **Disease/Pest Update: Lettuce, Okra and Peppers** – Jose Aguiar, Vegetable Crops Farm Advisor, Cooperative Extension Riverside County, Indio, CA Office;
- 8:35 **Impact of Hydrogels on Soil Water Retention and Water Conservation** – Khaled Bali, Irrigation/Water Management Advisor & County Director, University of California Desert and Extension Center, Holtville, CA;
- 8:50 **Neonicotinoids and their use in melons: Are we harming the bees?**- Vonny Barlow, Entomology/Agronomy Farm Advisor, Cooperative Extension Riverside County, Blythe, CA Office;
- 9:10 **The future of chemical and non-chemical weed control in vegetables** - Barry Tickes, Weed Science Extension Agent, UA Yuma Ag Center, Yuma County, AZ;
- 9:30 **Break**
- 9:40 **CA Leafy Greens Research Program Update** - Mary Zischke , CEO, CA Leafy Greens Research Board, Salinas.
- 9:50 **Crops, Pests, and Invasive Species in China** – Milton E McGiffen Jr, CE Specialist and Plant Physiologist, University of California Riverside, Riverside, CA;
- 10:10 **Whitefly Transmitted Viruses Affecting Desert Crops** – Eric T. Natwick, Entomology Farm advisor, University of California Desert and Extension Center, Holtville, CA;
- 10:25 **Recent developments in vegetable crop diseases**, Steve Koike, Farm Advisor Plant Pathology, University of California Cooperative Extension Monterey County;
- 10:45 **Pest Management Updates on Crop Protection Chemicals** – **Craig Pauly, BASF and Gary Major, FMC**

11: 10 **Survival of E. coli and Salmonella in Contaminated Soil and Current Research Towards Remediation and On-farm and Postharvest Sources of Listeria Contamination** – Trevor V Suslow, Department of Plant Sciences, UC Davis, Davis, CA; (Q & A for Dr. Suslow will continue during the lunch period)

12:05 **Lunch** - provided at no charge for those who RSVP – courtesy of Western Farm Press and commercial suppliers.

Organizers: Eric Natwick & Khaled Bali (UCCE) & Cary Blake (Western Farm Press)

Sponsors: Western Farm Press commercial suppliers

Moderators: Vonny Barlow & Jose Aguiar

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CIMIS REPORT AND UC DROUGHT MANAGEMENT PUBLICATIONS

Khaled Bali and Sharon Sparks*



California Irrigation Management Information System (CIMIS) is a statewide network operated by California Department of Water Resources. Estimates of the daily reference evapotranspiration (ET_o) for the period of November 1 to January 31 for three locations in the Imperial County are presented in Table 1. ET of a particular crop can be estimated by multiplying ET_o by crop coefficients. For more information about ET and crop coefficients, contact the UC Imperial County Cooperative Extension Office (352-9474) or the IID, Irrigation Management Unit (339-9082). Please feel free to call us if you need additional weather information, or check the latest weather data on the worldwide web (visit <http://tmdl.ucdavis.edu> and click on the CIMIS link).

Table 1. Estimates of daily Evapotranspiration (ET_o) in inches per day

Station	November		December		January	
	1-15	16-30	1-15	15-31	1-15	16-31
Calipatria	0.14	0.10	0.07	0.07	0.08	0.09
El Centro (Seeley)	0.13	0.09	0.06	0.06	0.08	0.09
Holtville (Meloland)	0.13	0.10	0.06	0.06	0.08	0.09

*Imperial Irrigation District.

Link to UC Drought Management Publications

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