Imperial County Agricultural Briefs

Features

From your Farm Advisors

January, 2013

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Greetings from your new Agronomy Advisor

Oli Bachie, Agronomy Advisor

I am the new agronomy advisor serving Imperial, Riverside and San Diego counties. I am pleased to have accepted the position and will attempt to discharge my responsibilities with full capacity. My immediate objective is to acclimatize myself to the desert ecosystem and search for valuable information on agricultural crops, growers, partners, and concerned organizations and individuals. Other immediate tasks will be identifying crop production needs in the region, conducting and cooperating to conduct research on crop productivity, varietal trials, crop nutrition, and pest management issues of known and newly introduced species. I will also cooperate to work on areas of soil management, crop irrigation trials and surveying of growers fields for current and unforeseen problems.

Obtaining all information, availability of resources and providing immediate services would not be that easy. The challenges however are the driving force for effective planning and strategic execution of the plans. Yet, effective planning and performances could not be achieved without the involvement of other agricultural experts, researchers, advisors in many other fields, growers and the agricultural industry in the region. The dynamic nature of cropping systems would definitely require cooperation among concerned partners to resolve any new and incoming challenges. By pulling our knowledge, information and resources together, we will be able to continue to maintain a viable and sustainable farming in our agriculturally rich region. I am looking forward to working with all of you in the near future.

Please feel free to contact me by phone (760-352-9474) email ((obachie@ucanr.edu) or stop by our office.

THRIPS CONTROL IN ICEBERG LETTUCE 2012

Eric T. Natwick

The objective of this study was to evaluate the efficacy of insecticides for control of western flower thrips (WFT) on iceberg head lettuce under desert growing conditions. Head lettuce (GRIZZLY) was direct seeded on 19 Oct 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 thereafter, irrigated via furrow. Plots were four beds 13.3 ft wide by 50 ft long and bordered by one untreated buffer bed. The experiment included seven insecticidal treatments and a water treated check. Four replications of each treatment were arranged as a RCB design. Insecticides and the treatment rates are shown in the tables. All insecticide treatments were applied on 18 Jan, 25 Jan and 7 Feb 2012 except the treatment of MustangMax @ 4 fl oz/acre (applied on 18 Jan and 7 Feb) rotating with (r/w) Lannate LV (applied on 25 Jan). All insecticide treatments were foliar sprays applied with a Lee Spider Spray Trac Tractor, 4-row sprayer with three TJ-60 11003VS nozzles per row, a total of 12 nozzles that delivered 50.6 gpa at 25 psi. The adjuvant, DyneAmic (Helena Chemical Co.), was added to all insecticidal spray mixtures at 0.25% vol/vol with the exception of the two Assail 70 WP treatments. Numbers of WFT from ten plants per replicate were recorded on each sampling date. WFT were sampled pre-treatment (PT) on 10 Jan 2012. WFT sampling days after treatment (DAT) included: 23 Jan (5DAT1), 2 Feb (8DAT2) and 15 Feb (8DAT3). All lettuce heads were harvested from 13.1 row ft (0.001 acre) on 17 Feb 2012 and examined for thrips feeding damage, and for market quality heads (no thrips damage). Undamaged head were weighed in kg. Data were recorded as total heads, thrips damaged heads, marketable heads, and kg of marketable heads. Percentages of market quality heads were calculated. Data were analyzed using ANOVA. Differences among means on each sampling date were determined using Least Significant Difference Test (α=0.05).

WFT population levels were moderate during this trial. There were no differences among the treatments for WFT larval means from the PT or 8DAT13 samples (Table 1). All insecticide treatments except the two Assail treatments and the Athena treatment had fewer WFT larvae than the water check at 5DAT1. All insecticidal treatments except Assail + Silwet-L77 had lower WFT larval means than the water check on 8DAT2. All insecticide treatments except the two Assail treatments had fewer WFT larvae than the water check for their post-treatment averages (PTA).

There were no differences among the treatments for WFT adult means from the PT or 8DAT3 samples (Table 2). All insecticide treatments except the two Assail treatments had fewer WFT adults than the water check at 5DAT1. The water check had more adult WFT than any of the insecticide treatments for the 8DAT2 samples and for the PTA.

There were no differences among treatments for total numbers of lettuce heads (Table 3). Only the MustangMax r/w Lannate LV and Radiant insecticide treatments had have fewer thrips damaged lettuce heads than the water check. Only the Radiant, MustangMax r/w Lannate LV, and Athena treatments had more market quality heads and higher percentages of market heads than the water check. Only Radiant and Athena treatments had more kg of market heads than the water check.

Table 1.

		WFT larvae per plant				
Treatment	oz/acre	PT[x]	5DAT[y]1	8DAT2	8DAT3	PTA[z]
MustangMax r/w Lannate LV	4.0 f/b 40.0	2.58 a	0.63 d	0.38 d	0.80 a	0.60 c
Assail 70 WP + Silwet-L77	1.7 + 0.10% vol/vol	2.70 a	1.85 ab	1.33 abc	1.18 a	1.45 a
Assail 70 WP + Induce	1.7 + 0.25% vol/vol	1.75 a	2.08 a	0.95 bc	0.70 a	1.24 ab
Radiant	7.0	2.53 a	0.70 cd	0.35 d	0.55 a	0.53 c
Hero EW	11.2	1.50 a	0.35 d	0.45 d	0.85 a	0.55 c
Beleaf + Mustang	2.8 + 4.3	2.08 a	1.03 bcd	0.45 d	0.63 a	0.70 c
Athena	17.0	2.28 a	1.55 abc	0.60 cd	0.45 a	0.87 bc
Water Check	--------	2.23 a	2.23 a	1.73 a	1.00 a	1.65 a

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

[x] PT = pre-treatment; [y] DAT = days after treatment; [z] PTA = post treatment average

Table 2.

		WFT adults per plant				
Treatment	oz/acre	PT[x]	5DAT[y]1	8DAT2	8DAT3	PTA[z]
MustangMax r/w Lannate LV	4.0 f/b 40.0	11.83 a	7.80 b	4.85 c	4.98 a	5.88 c
Assail 70 WP + Silwet-L77	1.7 + 0.10% vol/vol	12.45 a	10.98 a	13.00 b	6.55 a	10.18 b
Assail 70 WP + Induce	1.7 + 0.25% vol/vol	13.33 a	9.73 ab	13.10 b	6.43 a	9.75 b
Radiant	7.0	12.40 a	4.20 c	2.98 c	4.70 a	3.96 d
Hero EW	11.2	11.20 a	2.75 c	5.18 c	7.13 a	5.02 cd
Beleaf + Mustang	2.8 + 4.3	10.28 a	4.08 c	5.05 c	4.90 a	4.68 cd
Athena	17.0	13.93 a	4.20 c	5.08 c	4.53 a	4.60 cd
Water Check	--------	12.25 a	12.43	16.70 a	6.98 a	12.03 a

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

[x] PT = pre-treatment; [y] DAT = days after treatment; [z] PTA = post treatment average

Table 3.

		Lettuce heads per 0.001 acre				
Treatment	oz/acre	Total heads	Thrips damage heads	Market quality heads	Kg market heads	% Market heads
MustangMax r/w Lannate LV	4.0 f/b 40.0	28.75 a	12.00 b	16.75 b	8.47 bc	58.94 b
Assail 70 WP + Silwet-L77	1.7 + 0.10% vol/vol	29.00 a	22.25 a	6.75 c	1.76 e	21.85 c
Assail 70 WP + Induce	1.7 + 0.25% vol/vol	27.25 a	18.75 a	8.50 c	5.34 cde	31.81 c
Radiant	7.0	28.50 a	1.50 c	27.00 a	17.61 a	94.63 a
Hero EW	11.2	29.25 a	19.50 a	9.75 c	3.72 de	33.77 c
Beleaf + Mustang	2.8 + 4.3	29.75 a	19.75 a	10.00 c	5.82 cde	33.95 c
Athena	17.0	29.50 a	12.00 b	17.50 b	11.04 b	59.45 b
Water Check	--------	29.00 a	19.00 a	10.00 c	6.13 cd	34.46 c

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

EVENT ANNOUNCEMENT // UC Soil Fertility Short Course Feb. 2013

Mark your calendar!

If you missed… the February 2012 AND November 2012 courses, be sure to sign up for this one. The **UC Soil Fertility Short Course** will be repeated on **Tuesday, February 19, 2013** at the Buehler Alumni & Visitor Center, UC Davis. Register early before the course sells out—enrollment is limited to 70 participants.

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Event: **UC Soil Fertility Short Course 2013**
Date: Tuesday, February 19, 2013
Location: Buehler Alumni & Visitor Center, UC Davis

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The UC Vegetable Research & Information Center (VRIC) will sponsor the **UC Soil Fertility Short Course** on **Tuesday, February 19, 2013** at the Buehler Alumni & Visitor Center, UC Davis. The short course will focus on the practical aspects of soil fertility management in an era of escalating fertilizer costs and increasing government regulation of nutrient inputs for environmental water quality protection. The topics covered will include getting the maximum value from soil testing, interpretation of laboratory soil test results, comparing fertilizer sources, developing crop nutrient management plans, and fertilizer management and environmental protection. Although the focus will be on nutrient management in annual cropping systems, much of the material presented will be relevant to perennial crops as well. The course will not directly address organic fertility management issues, but organic growers may still benefit from attending; the majority of day will be spent covering basic soil fertility concepts, which are equally applicable to organic and conventional production. The content will be geared toward commercial scale production, and will assume a general knowledge of soil science; this course is not appropriate for home gardeners.

The program is intended for growers, certified crop advisers (CCA), pest control advisers, government agency personnel, and others involved in fertility management planning. Take advantage of the early-bird registration fee ($150.) The fee goes up on Jan. 31 to $175. The registration fee includes lunch, refreshments and study materials. UC Farm Advisors can attend at the special rate of $90.

Cooperative Extension specialists **Tim Hartz** (vegetable crops) and **Stu Pettygrove** (soils) are the instructors.

The course is approved for California CCA continuing education credits.

More information, visit the VRIC website (http://vric.ucdavis.edu).

UC ***Vegetable*** Research & Information Center (VRIC)
▪ Phone: (530) 752-1748 ▪ Fax: (530) 752-4604 ▪ http://vric.ucdavis.edu

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 January 1 to March 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	January		February		March	
	1-15	16-31	1-15	15-28	1-15	16-31
Calipatria	0.08	0.09	0.12	0.14	0.18	0.22
El Centro (Seeley)	0.08	0.09	0.12	0.14	0.16	0.20
Holtville (Meloland)	0.08	0.09	0.12	0.14	0.17	0.21

* Ag Water Science Unit, Imperial Irrigation District.

Link to UC Drought Management Publications

http://ucmanagedrought.ucdavis.edu/