Sacramento Valley Field Crops Newsletter Winter 2015

UC CE University of California Agriculture and Natural Resources | Cooperative Extension Sutter-Yuba Counties

Tomato Production Meeting Recap

Some readers of this newsletter were likely in attendance at the recent Southern Sacramento Valley Processing Tomato Production Meeting, which was held in Woodland on January 8th. Information on tomato-related nutrient, irrigation, pest and disease management was presented from a range of UC Cooperative Extension projects. In addition, TS&L and Ag Seeds presented data from their variety evaluations. For those of you who were unable to attend or those who did attend and would like to access the information presented, the talks have been posted and are available at the UCCE Yolo County website, here:

http://ceyolo.ucanr.edu/Vegetable_Crops/Meeting_Powerpoints/

One of the topics presented at the meeting was information about **CropManage**, *a web-based decision support tool for improved nutrient and irrigation management* developed by Mike Cahn, who is a UCCE Irrigation and Water Resource Advisor based in Monterey County. The presentation (http://ceyolo.ucanr.edu/files/204717.pdf) was followed by a survey of the audience in order to gauge whether there was interest among those within the industry in adapting CropManage for use in the processing tomato context.

Daniel Geisseler, who is a new Nutrient Management CE Specialist based on the UC-Davis campus, led this survey. Below, he provides more detail on CropManage and a summary of the survey results:

Would a computer-based program be useful to improve irrigation and nitrogen management in processing tomatoes?

California growers are facing increasing pressure to improve nitrogen use efficiency in crop production. To achieve high yields while reducing the risk of nitrogen losses, the time and quantity of irrigation water and fertilizer applications need to match crop demand. Adjustments to general irrigation and fertilization programs are often needed for individual fields. Computer-based tools that track water and fertilizer applications and predict plant demand can greatly assist growers making irrigation and fertilization decisions.

One such decision support tool is **CropManage**. CropManage is an online database-driven tool that assists growers and farm managers in determining water and nitrogen fertilizer applications for cool season vegetables on a field-by-field basis. The application can be accessed using a smart phone, laptop, or tablet computer. The program uses data from CIMIS weather stations to calculate water need and N uptake curves combined with soil nitrate tests to determine crop N supply and demand. The web application helps growers track irrigation schedules and nitrogen fertilizer applications on multiple fields. It also allows users from the same farming operations to view and share data. An increasing number of vegetable growers on the Central Coast are using CropManage. The program is free to use and can be adapted for other crops.

At the Southern Sacramento Valley Processing Tomato Production Meeting, Mike Cahn, a UC farm advisor in Monterey County and the driving force behind CropManage, introduced the tool. Following his presentation, we handed out a questionnaire to the attendees to learn more about their interest in a computer based tool. Forty questionnaires were returned; 21 growers and farm managers, 12 consultants and CCA, and 7 people in other functions responded.

Interest in a decision support tool was large, especially among growers. Out of the 21 growers, 20 and 19 responded that such a tool would be valuable for irrigation and nitrogen management, respectively. Fifteen growers also responded that a decision support tool would be valuable for record keeping.

Most people responded that they would be willing to spend either up to 10 or 10-20 minutes per field every week to update a decision support tool. As to the costs per field per year, 13 growers responded that they would be willing to spend between $ 100 and 200, while 6 growers wouldn't want to spend more than $ 100. Among consultants, costs below $100 were clearly preferred.

All the participating growers were familiar with soil nitrate and plant tissue analyses. The frequency with which samples are taken, however, differed. For site-specific nitrogen recommendations, a decision support tool would likely require growers to take at least a pre-transplant soil nitrate sample in every field on an annual basis.

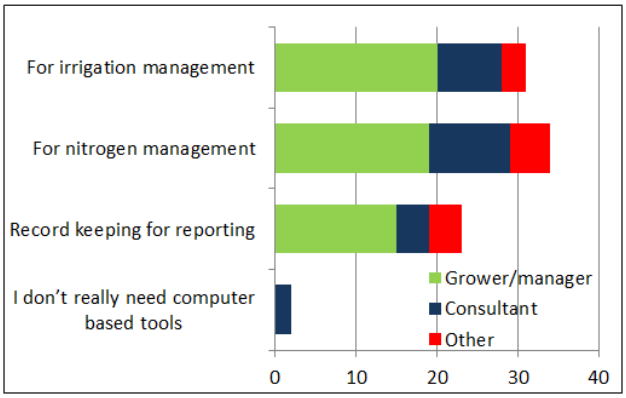

Figure 1: Response to the question "For which aspects of processing tomato production would a decision support tool be most valuable for you (choose all that apply)?"

Overall, the response of the growers and consultants was very encouraging and we plant to work with the CropManage development team to discuss what work is needed to adapt CropManage to processing tomatoes.

For comments and suggestion, feel free to contact us:

Daniel Geisseler, Nutrient Management Specialist, UC Davis (530-574 9637) djgeisseler@ucdavis.edu

Mark Lundy, UC Farm Advisor, Colusa, Sutter & Yuba Counties (melundy@ucanr.edu).

Gene Miyao, UC Farm Advisor, Yolo, Solano & Sacramento Counties (emmiyao@ucanr.edu)

New Positions Announced for the Sacramento Valley

During the Fall of 2014, UCCE initiated a process to prioritize new positions for recruitment. UC ranked positions through a process that sought out, considered and incorporated public comments into the position decisions. The entire list of the CE

positions that will move forward and a rough timetable for the recruitment can be found here:

http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=16109

Positions that may be of particular interest to our Field Crops clientele in the Sacramento Valley:

Area Vegetable Crops Advisor
(Colusa, Sutter-Yuba)

Area Agronomy Advisor
(Capitol Corridor Multi-County Partnership)

Area Agronomic Cropping / Weed Science Advisor
(Glenn, Butte, Tehama)

Area Rice Advisor
(Sutter-Yuba, Placer, Sacramento)

Thank you to those individuals in the Sacramento Valley who participated in this process. Your input was appreciated!

Notes on Current Wheat Crop

Although it's starting to seem like a distant memory, we did receive a good dose of rain in the Sacramento Valley in mid-December. Because so much of it came all at once, there were some fields affected by waterlogging. Also, the spate of below-freezing temperatures between Christmas and the first week of January likely contributed to some yellowing wheat. Finally, the several inches of rain that fell in the space of a few days provided a good opportunity for some loss of pre-plant applied N fertilizer. Assuming that the effects from these early-season factors were not devastating, the crop may be able make up some ground as the season warms up and plants begin to tiller actively. Given that, a topdress of N fertilizer ahead of some water could be put to good use at this stage of growth. Please contact me if you would like to discuss!

Meeting announcements

The 50th **Colusa Farm Show** will be held at the Colusa Fairgrounds from **Feb. 3rd-5th**. For a schedule of events, maps and other information go to:

http://www.colusafarmshow.com/

There will be a **Crop Pollination Workshop** held at the Colusa Farm Show on **Feb. 3rd**. The workshop is being presented by UCCE, Colusa County RCD, and the Xerces Society. An agenda for the workshop is included as the final page of this newsletter.

Hope to see you there!

A digital copy of this newsletter is available at this link:

http://cecolusa.ucanr.edu/Field_Crops/Newsletter_805/

Stay up to date on information between quarterly Newsletters at the Sacramento Valley Field Crops Blog:

http://ucanr.edu/blogs/SacValleyFieldCrops/index.cfm

Don't hesitate to contact me with questions, concerns or ideas:

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Crop Pollination Workshop

Tuesday, February 3, 2015, 1:00pm - 3:30pm
Colusa County Fairgrounds

1 CE Hour (DPR approved)

Onion seed pollination

Hedgerows supporting beneficial insects

Squash pollination

This workshop will focus on pollinators, crop pollination and hedgerows for beneficial insect habitat. For more information, contact Rachael Long, 530-666-8734, rflong@ucanr.edu. No need to RSVP

1:00	Welcome
1:05	Multiple stresses impact honey bees, *Dr. Elina Niño, CE Apiculturist, Dept. of Entomology and Nematology, UC Davis*
1:25	Insecticides reduce honeybee visitation and pollen germination in hybrid onion seed production, *Rachael Long, Farm Advisor, UCCE, Yolo County*
1:50	Best management practices for squash and pumpkin pollinators, *Katharina Ullmann, Pollinator Conservation Specialist, Xerces Society*
2:15	Enhancing habitat in almonds and almond pollination, *Kimiora Ward, Staff Research Associate, Dept. of Entomology, UC Davis*
2:40	Hedgerows enhance pollinators and pollination services, *Lauren Ponisio, Graduate Student, Environmental Sciences and Policy Management, UC Berkeley*
3:05	Hedgerows enhance biodiversity and provide crop benefits in agricultural landscapes, *Rachael Long, Farm Advisor, UCCE, Yolo County*
3:20	USDA-NRCS financial and technical support for hedgerows, *Andrea Casey, Colusa NRCS DC*
3:30	Adjourn

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