



Features from your Advisors

March 2021 (Volume 24 Issue 3)

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VEGETABLE CROPS AND IPM WEBINAR

Ali Montazar, Irrigation and Water Management Advisor, UCCE Imperial, Riverside, and San Diego Counties
Oli Bachie, Agronomy Advisor, UCCE Imperial, Riverside, and San Diego Counties

University of California Cooperative Extension Imperial County held a Vegetable Crops and IPM Workshop (Webinar) on February 25, 2021. A workshop on Vegetable Crops and IPM for Imperial County is established as a new annual event to be held in person as a field day. However, due to the pandemic restrictions, it was held virtually for this year. This virtual webinar was held with 13 speakers / or panelists from UC Davis, UC Riverside, UCCE Imperial County, UCCE Monterey County, UCCE Kern County, UCCE Ventura County, UC Desert Research and Extension Center, Imperial Valley Vegetable Growers Association (IVVGA), California Leafy Greens Research Program (CLGRP), and industries and private sectors who brought innovative ideas, solutions, and disseminated the outcomes of their recent studies and programs in vegetable production and pest management. A wide range of topics, including various studies on carrots, onions, broccoli, lettuce, spinach, melons, cabbage, and celery were presented and discussed during the webinar. Highlights of the presentations are shown below:

Apurba Barman, the new area low desert IPM Advisor delivered a talk on IPM opportunities for vegetable production in the low desert: a beginner's perspective.


Low Desert Production System



- Factors leading to pest management challenges:**
- Year-round availability of plants
 - Limited mortality due to cold
 - Multiple exposure to pesticides

Ali Montazar, UCCE Imperial County Irrigation and Water Management Advisor, on irrigation and nitrogen best management practices in the low desert carrots.

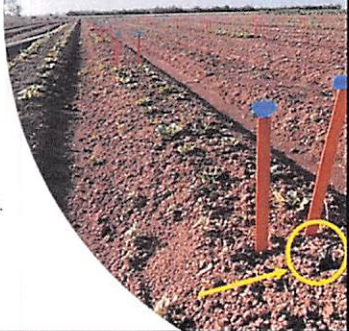
Experimental Fields (2019-2020)

Field		Irrigation Practice
Carrot - 1 (Fresh market)	Sprinkler irrigation	Sprinkler
Carrot - 2East (Fresh market)	Furrow irrigation	Furrow
Carrot - 2West (Fresh market)		Furrow
Carrot - 3 (Processing)	Drip irrigation	Furrow
Carrot - 4 (Processing)		Furrow
Carrot - DREC (Fresh market)		Sprinkler - Drip

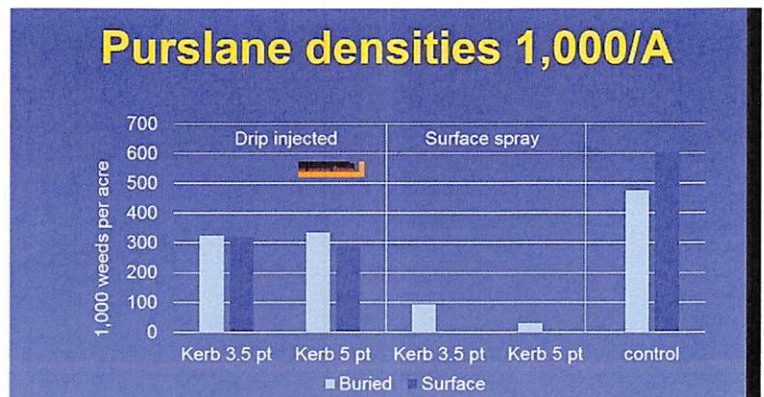
Michele Jay-Russell, Research Microbiologist at UC Davis Western Center for Food Safety, on pre-harvest survival of *E. coli* during romaine lettuce production in the desert.

Preliminary Result and Conclusion

- *E. coli* was recovered from soil in all amended and unamended plots up to 70 days after inoculation.
- *E. coli* transferred to lettuce leaves from all manure-amended and unamended plots to days 111 and 118 after inoculation.
- *E. coli* levels from lettuce leaves grown in amended soil was higher than levels from lettuce grown in unamended plots (control).
- Raw poultry litter -amended plots had significantly higher concentration of *E. coli* from soil and lettuce leaves compared with plots amended with HTPP and steer compost.



Oleg Daugovish, UCCE Ventura County Vegetable Crop Advisor, on Pronamide/Kerb efficacy and safety applied via drip vs sprinkler in lettuce.



Alex Putman, UC Riverside Plant Pathologist, on downy mildew of lettuce and spinach in the Imperial Valley.

Spore trapping

- September-October and December-March
- 2-3 days per week
- Both *Peronospora effusa* and *Bremia lactucae*
- Klosterman (USDA Salinas), Montazar (UCCE Imperial), funded by CLGRP and CDFA

Michael Cahn, UCCE Monterey County Irrigation and Water Resource Advisor, on weather-based irrigation scheduling of red cabbage for optimizing yield.

CropManage can be used for ET-based irrigation scheduling

Date	Event	Value
27 Jul 2020	Drip	5.1 hr
24 Jul 2020	Drip	5.5 hr
24 Jul 2020	MAN32	7 gal/acre
20 Jul 2020	Drip	6.6 hr
20 Jul 2020	Quick Nitrate Strip	0.8 ppm
20 Jul 2020	Quick Nitrate Strip	0.5 ppm
17 Jul 2020		

cropmanage.ucanr.edu

Jaspreet Sidhu, UCCE Kern County Vegetable Crops Advisor, on evaluating alternative nematicides for the control of root-knot nematodes in melons and carrots.

1 Non treated control
2 Nimitz
3 Gropro

4
5

Shelby Dill, Executive Director of IVVGA on Imperial Valley Vegetable Growers Association (IVVGA).



COVID-19

- Personal Protective Equipment
- Testing
- Housing for Harvest
- Vaccinations

Jennifer Clarke, CLGRP California Leafy Greens Research Program (CLGRP).



A Little History

California Leafy Green Research Program is a Marketing Order administered through CDFA

Created to fund research relating to production, processing, and distribution of Iceberg Lettuce (currently Leafy Greens)

The Iceberg Lettuce Research Board first convened in 1973

Then became the CA Lettuce Research Board in 1997 when the four major leaf lettuces were added to the order

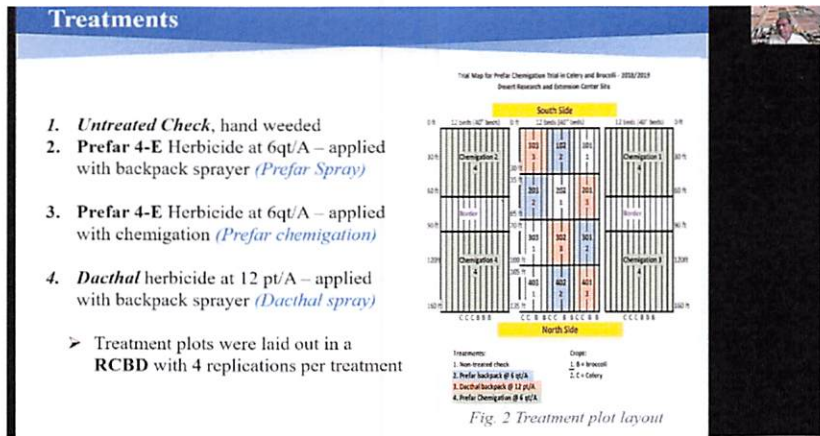
In 2008 spinach and spring mix were included in the program and the program was renamed to the CA Leafy Greens Research Program

Jairo Diaz, Director of UC Desert Research and Extension Center, on nitrogen and irrigation studies in drip irrigated fresh market onions.



Postharvest Quality		
Treatments	Firmness (lbs)	Brix (%)
Irrigation rate (I)		
130% ETc	9.6a ^y	6.9a
100% ETc	9.7a	7.6a
70% ETc	8.2a	7.8a
40% ETc	9.2a	8.4a
<i>P</i>	0.362	0.011
Nitrogen rate (N)		
PN + 225 lb/ac	9.3a	7.5ab
PN +150 lb/ac	9.4a	7.2b
PN + 75 lb/ac	8.8a	7.4b
PN + 0 lb/ac	9.1a	8.5a
<i>P</i>	0.923	0.021
Interaction (IxN)		
<i>P</i>	0.439	0.487

Oli Bachie, Director of UCCE Imperial & San Diego Counties and Agronomy Advisor on weed control efficacy and crop safety of Prefar and Dacthal herbicides applied over broccoli transplants.



Two industry representatives, Jay Sughroue and Abbas Alhadithi gave industry product updates representing BioSafe Systems company and Universal Agriculture company, respectively.

This virtual webinar was co-organized by UCCE Imperial County advisors; Ali Montazar and Oli Bachie. We thank all presenters, growers, UCCE Imperial County staff, and all other participants for making this event successful.

GROUNDBREAKING RESEARCH SHOWS PROMISE FOR SPINACH GROWERS

As seen in the Holtville Tribune



Aliasghar Montazar, University of California Cooperative Extension irrigation and water management adviser, said the California Leafy Greens Research Board is excited about his preliminary research findings related to the use of drip irrigation on organic spinach at the UCCE center in Holtville. | JULIO MORALES PHOTO

HOLTVILLE — A local three-year research project to determine whether drip-irrigation systems can help reduce the incidences of downy mildew in organic spinach is showing “promising results.”

The groundbreaking study is being conducted at the University of California Cooperative Extension and led by Aliasghar Montazar, UCCE irrigation and water management adviser.

Downy mildew, a plant disease, is a major concern among spinach growers and often results from the

use of sprinkler irrigation, which is used exclusively in spinach production, and which deposits water on the crop's leaves and can lead to downy mildew if not managed properly, Montazar said.

In contrast, driplines deliver water directly to the crop's roots, eliminating any contact that irrigation water may have with the spinach leaves, and thereby helping reduce instances of downy mildew, he said.

"This is the first time we've done this in California — in the world actually," Montazar said as he excitedly gestured toward the UCCE's experimental beds of spinach on Feb. 12.

The three-year study is now in its final stages. Once concluded, Montazar said he plans to publish the findings in UCCE's and other ag-related publications and make a presentation at the annual California Leafy Greens Research Board state conference in March.

"Promising" Results

The origins of the research project date back a few years to a meeting Montazar had with members of the California Leafy Greens Research Board, which had expressed concerns to him about spinach downy mildew causing substantial losses in the crop's statewide yields.

He suggested to the board that drip irrigation could be used in place of sprinklers to potentially reduce instances of the plant disease, which is also a food safety concern for growers.

"They asked me if I had any idea to resolve this issue and I came up with this idea," said Montazar, who has spent more than 18 years researching irrigation management, engineering, and structures and has been assigned to the local UCCE since 2017.

So far, his experimentation has demonstrated that downy mildew disease was four to five times less prevalent in the experimental drip irrigation-fed organic spinach beds compared to the adjacent beds that had used sprinkler irrigation.

"It's pretty significant," he said.

Locally, about 8,000 to 10,000 acres of spinach is grown annually, all of it using sprinkler irrigation, Montazar said. Its relatively brief growing and harvesting season is in the fall and winter.

His research was conducted solely on organic spinach, which does not use synthetic fertilizers, pesticides, or herbicides, and which presented additional challenges because of its sensitivity, he said.



Aliasghar Montazar, University of California Cooperative Extension irrigation and water management adviser, said the California Leafy Greens Research Board is excited about his preliminary research findings related to the use of drip irrigation on organic spinach at the UCCE center in Holtville. | JULIO MORALES PHOTO

Nonetheless, a non-organic spinach grower in Winterhaven has already adopted the use of driplines in their fields and has reported a savings of about \$150 per acre in fertilizer, Montazar said. He further explained that drip irrigation has a proven track record of conserving water and fertilizer in comparison to sprinklers.

“The results we got from his field is much, much better,” he said, referring to the grower’s savings of about \$300 per acre in water and fertilizer expenses.

Additionally, Montazar was successfully able to germinate, for the first time, the industry-standard 80-inch-wide spinach beds with drip irrigation, as opposed to the traditional use of sprinklers.

Though preliminary experiments revealed that the dripline-irrigated spinach beds produced 1.5 percent less seedlings, the difference was not that significant and could be addressed easily enough with a corresponding increase in the amount of seeds planted.

“It’s promising,” he said, referring to the study’s overall results related to plant disease control, germination, and fertilizer reduction. “There are a lot of benefits.”

Different Experimental Configurations

To find the optimal conditions for dripline irrigation, Montazar and his collaborators experimented with a variety of configurations over the course of the three-year study, which began in the winter of 2018-2019.

After the initial planting season, they eventually abandoned the use of surface driplines, which produced less crop yield than the subsurface driplines, and which were blown astray by strong winds despite the use of stakes.

Researchers also varied the number of driplines that were buried in the raised spinach beds. Beds with four subsurface driplines produced yields 12 percent more than those with three subsurface driplines, while the sprinkler treatment resulted in yields 13 percent higher than the beds with four driplines, Montazar wrote in a local UCCE Ag Brief article in January 2019.

“However, we believe that this yield gap can reduce through optimal drip irrigation system design and better irrigation and nutrient management,” he wrote.

The research is scheduled to continue in the Salinas Valley later this year, where its sandy soil conditions differ from the silty clay soil found in the Valley, Montazar said. The sandy conditions to the north may likely require the use of four subsurface driplines to achieve optimal irrigation conditions, he said.

California leads the nation in the production of spinach, with most of it grown in the Central Valley and in the low desert of the Imperial and Coachella valleys.

Locally, spinach was listed last in the county’s top 10 ranking of commodities’ overall gross value in the 2019 Agricultural Crop & Livestock Report. That year, some 8,128 acres of spinach generated about \$57.9 million in gross value, the report stated.

Encouragement for the Industry

Though he admits additional research and experimentation is needed to further optimize his study's findings, Montazar said the preliminary results should be encouraging to spinach growers, if the initial industry feedback he has gotten is any indication.

"The California Leafy Greens Research Board is very excited about the results," he said.

The California Leafy Greens Research Board funded Montazar's spinach research, and for the past 10 years has contributed about \$600,000 annually toward similar research efforts across the state, its website stated.

Even so, the transition to drip irrigation may prove challenging for some spinach growers because of the capital and labor initially required to purchase and install the subsurface driplines, Montazar said.

That's why research such as his is crucial, he said. It helps foster additional collaborative opportunities between academia, the industry, and government, which can provide financial incentives for growers that pursue additional water, pesticide, and fertilizer conservation.

Toward that end, Montazar continues to work with dozens of commercial growers in Imperial and Riverside counties, where about 90 percent of his research into water conservation and irrigation management is conducted.

A native of Iran and the son of a farmer, Montazar said he was motivated to study irrigation by the childhood memories of a two-year drought that took its toll on desert farmers such as his father.

"When we want to encourage growers to adopt a practice, we need to know how valuable that technology is," Montazar said. "We need to bring that data to the table."

JULIO MORALES ON FEBRUARY 18, 2021

LAST UPDATED:FEBRUARY 23, 2021

GROWERS REFINE DATE PALM IRRIGATION WITH UC ANR RESEARCH

As seen in UCANR News and Events



New research gives California date growers the data they need to apply a more precise amount of irrigation water to meet the trees' needs to produce a healthy crop. Photo by Ali Montazar

California's \$86 million date industry produces more than half of the nation's dates. Most of the fruit is grown in the arid Coachella Valley. Despite efforts by growers to conserve water, data was lacking on date palms' actual water use to refine the best irrigation management for the crop until a recent research project led by Ali Montazar, UC Cooperative Extension irrigation and water management advisor for Imperial and Riverside counties.

“California dates are grown in the hottest and most arid climate in North America and require substantial amounts of water in order to bring a successful crop to fruition,” Albert Keck, Coachella Valley date grower and chairman of the California Date Commission, wrote in a letter of support for this project. “In addition, there is scant modern research specifically and technically focused on growing dates in North America.”

Montazar said there is a lack of irrigation management information on date palms worldwide.

“The information developed in this study is expected to have a worldwide impact,” he said.

To determine the evapotranspiration rate and crop coefficients for California date palms, Montazar teamed up with scientists at UC Davis, California Department of Water Resources, USDA Agricultural Research Service, and USDA Salinity Laboratory.

The experiment was carried out in six date orchards in the Coachella and Imperial valleys. The sites represent various soil types and conditions, irrigation management practices, canopy characteristics, and the most common date cultivars in the region.

“The findings of the project indicate that there is considerable variability in date palm consumptive water use, both spatially and temporally,” Montazar said. In other words, the amount of water the trees use varies considerably depending on each site's growing conditions.

He estimated the water needs for date palms planted in different soil types in the low desert region.

“Growers will be able to use the science-based information and tools developed by this project to determine their date palm water needs and optimize the efficiency of water and fertilizer use in their groves,” Montazar said.

The peer-reviewed article “Determination of Actual Evapotranspiration and Crop Coefficients of California Date Palms Using the Residual of Energy Balance Approach” is published in the journal *MDPI Water* at <https://www.mdpi.com/2073-4441/12/8/2253>.

“With a large quantity of new date plantings in the region, coupled with increasingly limited water resources in the Colorado River Basin Watershed, the knowledge anticipated to be developed by this research project has the potential to yield large dividends through not only improved water use efficiency, but also best management practices and crop quality,” said Keck of the California Date Commission.

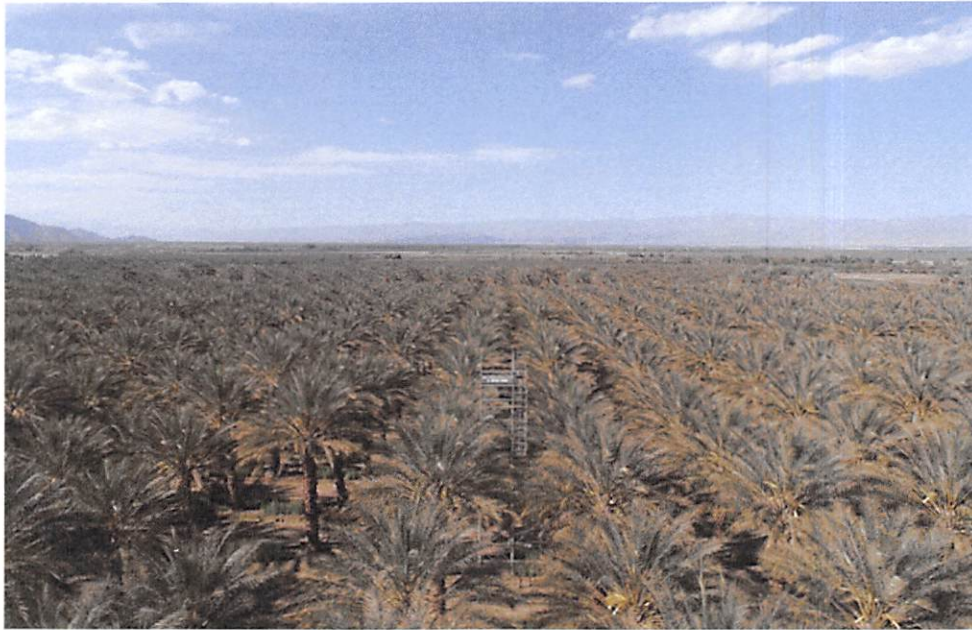
Although the research focused on Coachella Valley dates, Montazar said the results are likely to be useful to growers who have orchards with similar varieties, irrigation practices, and canopy and soil features in other locations.



Fruit bags protect dates from insect damage and dust and prevent the fruit from falling to the ground. Photo by Ali Montazar

Montazar's co-authors are Robert Krueger of the USDA-ARS National Clonal Germplasm Repository for Citrus and Dates; Dennis Corwin of USDA-ARS U.S. Salinity Laboratory; Alireza Pourreza UC Cooperative Extension specialist based at UC Davis Department of Biological and Agricultural Engineering; Cayle Little of California Department of Water Resources; Sonia Rios, UC Cooperative Extension advisor in Riverside County; and Richard L. Snyder UC Cooperative Extension specialist emeritus in the UC Davis Department of Land, Air and Water Resources.

The date palm irrigation project was funded by the CDFR Specialty Crop Block Grant Program.



With limited water, date growers hope the new research will help improve water use efficiency, best management practices and crop quality. Photo by Ali Montazar

By [Pamela Kan-Rice](#)

Author - Assistant Director, News and Information Outreach
Feb 16, 2021

DRIP CURBS DOWNY MILDEW IN SPINACH

A UC study having a trifecta impact of disease management, food safety and water management.



Todd Fichette

Ali Montazar, a researcher with the University of California, wants to learn how drip irrigation in 80-inch spinach beds can help address downy mildew pressure. The study is also showing positive early results for water management and food safety issues.

University of California scientists at the Desert Research and Extension Center in Holtville, Calif., may be onto something more significant than just disease control with ongoing practices being studied in organic spinach. The original thought was to test drip irrigation practices in organic spinach to help avoid the kinds of disease pressure brought on by sprinkler irrigation practices in the crop, according to Ali Montazar, an irrigation and

water management farm advisor with the University of California Cooperative Extension in Imperial and Riverside counties.

Now in its third year under a grant by the California Leafy Greens Marketing Agreement, the study is showing itself to have a trifecta impact of food safety and water management implications.

Initially, Montazar believed that converting to drip irrigation would keep the leaves dry, a method understood to aid in preventing downy mildew, a significant issue for spinach growers and one which organic farmers have no approved means of control.

"Almost 100 percent of California spinach is sprinkler irrigated," Montazar said.

Questions Montazar wants to answer through his studies include:

- How well can we germinate spinach with drip versus sprinklers?
- Can we profitably produce spinach with drip irrigation?
- Can we effectively control downy mildew with drip irrigation?

To date Montazar is optimistic in his findings. His studies have shown a 4x-5x reduction in downy mildew using drip irrigation. Aside from his studies at the Desert REC in Holtville, Montazar is working with a grower in eastern Imperial County to test the effectiveness in a commercial setting.

"This is a promising method to control downy mildew," he said.

Food safety

Irrigating spinach through drip irrigation avoids the need to treat sprinkler applications as that water no longer touches the part of the plant going to human food production. Through his work with a commercial grower in eastern Imperial County, Calif., Montazar said the farmer reports saving \$300 per acre on water treatment products.

The more exacting drip method also saved the farmer \$150 per acre in fertilizer costs.

One caveat to the food safety benefits of the surface or subsurface drip would be the need to remove drip tape prior to harvest, a move Montazar says could increase food safety risks.

Drip versus sprinkler

Montazar compared drip tape placed on the surface with lines buried 1.5 inches below the surface. Some of the 80-inch beds had three lines of drip tape applied while other beds had four drip lines across the same bed width. Each of these scenarios was compared against sprinkler irrigation for disease pressure and yield.

The surface drip application showed a 6% reduction in yield compared to the subsurface drip lines. Sprinkler irrigation yielded 13% higher than the subsurface application. He believes optimal drip irrigation design and better nutrient management can close the gap between sprinkler sets and subsurface drip.

Other issues noticed in the trial included yellowing of leaves in beds with three lines, which were attributed to the likelihood of nutrient deficiency due to the inability of water to move effectively between the drip lines. Moreover, surface applications of drip tape were shown to not be practical during high wind events in the desert. High winds in the winter and spring can easily relocate the plastic irrigation lines.

Source URL: <https://www.farmprogress.com/water/drip-curbs-downy-mildew-spinach>

Todd Fitchette | Feb 19, 2021

GREETINGS FROM THE NEW IPM ADVISOR



Hello Friends,

Greetings! It is my pleasure to be in Imperial Valley and I am excited about my new position as Low Desert Area IPM (Integrated Pest Management) advisor to serve Imperial, San Diego and Riverside Counties. I recently came from the University of Georgia, where I was conducting research to understand how silverleaf whitefly population changes within a year across the southern part of Georgia. Earlier, I worked with Texas A&M University as a cotton Extension entomologist and also as a graduate student on cotton insect pests such as Lygus bugs, bollworms etc. I have years of experience working with number of insect pests on different crops. However, my current position in Imperial Valley comes with challenges and opportunities to learn about new crops and their pests. As an entomologist, this is a great opportunity to be in Imperial Valley, where pest management is of high importance on several crops.

My primary focus in this position is to work closely with growers, pest control advisors, chemical industry partners and the administrators in the county to address pest management needs on various crops grown in this region. I will conduct applied research to evaluate pest management solutions and modern technologies to support the profitable and sustainable crop production in the area. Concurrently, I will also come to you via in-person and electronic medium with scientific information generated from my program and other reliable sources. I believe this information will be helpful in your decision making process for pest management needs. As I start developing my Extension and research program, I would like to reach out to you for your feedback and comments concerning

pest management or anything related. Meanwhile, please feel free to contact me with your comments, questions or just to say “hello”. Here at UCCE-Imperial County, we are happy to serve you and all Californians!

With best wishes,

Apurba Barman

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VIRAL DISEASE ON LETTUCE

*Apurba Barman, Area Low Desert IPM Advisor, UCCE Imperial County
Oli Bachie, Director, UCCE Imperial County & San Diego County; Agronomy Advisor, UCCE Imperial,
Riverside & San Diego Counties*

A recent report of viral disease on lettuce from our neighbor (Yuma, Arizona) caught our attention since this is highly relevant to our production system (please find information on the first link below). The name of the virus is “Impatient Necrotic Sport Virus” (INSV), which is a tospovirus, similar to the virus that attacks tomato to cause tomato spotted wilt virus symptoms. This virus (INSV) was first reported affecting lettuce crops in Salinas Valley of California in 2006. Subsequently, it was reported to cause crop loss in 2012 and 2015 in the same area. This virus is transmitted by western flower thrips (*Frankliniella occidentalis*), which is very common and abundant in the low desert region. Early symptoms of infection by INSV are brown to dark spots and dead (necrotic) areas on leaves, which is often mistaken as chemical burn as shown in the picture below on the left-hand side (*Photo Credit: Steven T. Koike, UCANR*). As the disease progresses, multiple leaves could be affected and result in distorted, twisted and dwarf plants (picture on the right). Most of the lettuce types are susceptible to this virus. Several weed species are also believed to be the hosts of this virus. Thrips, that also feed on the alternate host weeds can facilitate INSV transmission to lettuce and other crops.

The good news is that this virus has not been reported in the Imperial Valley to the best of our knowledge. However, we must keep an eye on anything unusual, especially the symptoms shown in the pictures below.



If you observe similar symptoms on your lettuce or related crops, please bring to our attention, contact us at (442) 265-7700 or bring the sample to our office, 1050 E Holton Road, Holtville, CA 92250.

For more information:

<https://acis.cals.arizona.edu/agricultural-ipm/vegetables/vipm-archive/vipm-plant-view/impatiens-necrotic-spot-virus>

<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=7309>


<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=17351>

IRRIGATION MANAGEMENT TOOLS AND TECHNOLOGIES WEBINAR

Ali Montazar, Irrigation and Water Management Advisor, UCCE Imperial, Riverside, and San Diego Counties

University of California Cooperative Extension Imperial County held an Irrigation Management Tools and Technologies Workshop (Webinar) on Wednesday, March 3rd, 2021. This virtual webinar was held with 7 speakers and/or panelists from UC Riverside, UCCE Imperial County, a local grower plus from industry and the private sector who brought innovative irrigation tools and solutions. Each disseminated the outcomes of their recent studies and programs in irrigation management. Highlights of the presentations are shown below:

Ali Montazar, UCCE Imperial County Irrigation and Water Management Advisor, on irrigation and nitrogen best management practices in the low desert carrots.



Soil moisture sensors as useful tool may answer critical questions:

- How is water status of the soil early in the season?
- When is the right time for the first and subsequent irrigation events?
- Is the soil profile full after each irrigation event?
- What is the length of irrigation time?
- Should irrigation practice need to change?

Amir Haghverdi, Assistant Professor of Irrigation and Water Management at UC Riverside, on fundamentals of site-specific variable rate irrigation management.



Variable-Rate Application of agricultural inputs

fertilizer, lime, weed control, and seed ...

VRA techniques:

Map-based: Prescription map + GPS receiver: the concentration of input is changed as the applicator moves through the field.

Sensor-based: Sensors measure soil/crop properties and determine the application real time "on the go."



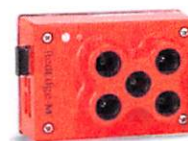
Anish Sapkota, PhD Candidate at UC Riverside, on challenges and opportunities to use drones for irrigation management.

Sensors

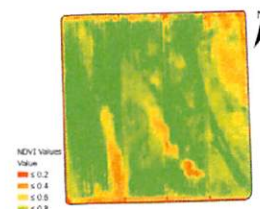
- RGB
- Multispectral
- Thermal
- LiDar



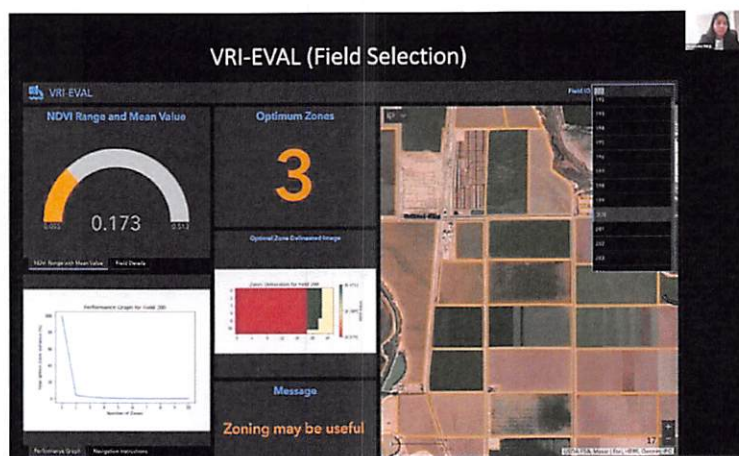
Picture: GoPro



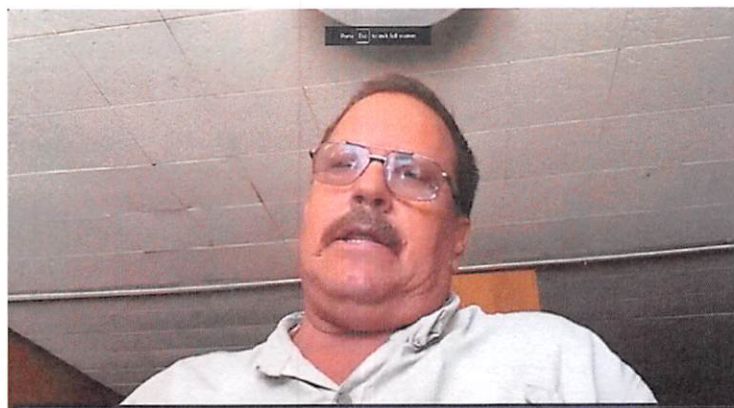
Picture: Micasense Rededge M: Micasense



Akanksha Garg, postdoctoral research scholar at UC Riverside, on VRI-EVAL: a web-based tool for variable rate irrigation pre-adoption assessment.



Ronald Leimgruber, Leimgruber Farms, on grower experience on the adoption of irrigation advanced technologies in the Imperial Valley.



Two industry representatives, Merritt McDougall and Darren Fillmore gave industry updates representing Valley Irrigation and SWIIM System, respectively.

This virtual webinar was organized by UCCE irrigation and water management advisor, Ali Montazar. UCCE Imperial County thanks all presenters, growers, UCCE Imperial County staff, and all other participants for making this event successful.

Last Updated: 3/1/21



SAVE THE DATES

2021 Date Palm Webinar Series

Sponsored by UC Agriculture and Natural Resources, California Date Commission, University of California, Riverside, and USDA/ARS National Clonal Germplasm Repository for Citrus & Dates


Dates/Times: Virtually on Zoom, every Thursday in April 2021, starting at 10:00 AM – Noon
COST: \$10/per seminar (Day) OR Pre-Pay for ALL seminars (X5) and pay \$35 (\$15 discount)- Links Pending

CEU's Pending: CCA, PCA (Other & laws/Regs), ISA, and Arizona (AZDA)

Atención: *aplicadores privados, hasta 2 Unidades de Educación Continua en español, Departamento de Regulaciones de Pesticidas y Departamento de agricultura de Arizona - Pendiente*

Webinar #	Date/Time	Speaker	Topic/Title
1	4/1 @ 10 AM	Albert Keck, Hadley Date Gardens, Inc. & CA Date Commission	Welcome & Current Status of California Date Production
2	4/1 @ 10:30AM	Ali Montazar, UCCE Imperial/Riverside Counties	Cost-Effective Tools and Technologies to Improve Irrigation Management in Date Palms
3	4/8 @10 AM	Mark Hoddle, UCR	South American Palm Weevil Update
4	4/8 @11 AM	Sonia Rios, UCCE Riverside/San Diego	The Challenges to an Effective Integrated Weed Management Program in Date Palms: Evolution of Herbicide Resistance Weeds
	4/15	Intermission	
5	4/22 @ 10AM	Ruben Arroyo – Riverside Ag Commissioner office	California Laws & Regulations Update (1 hr laws/Regs)
6	4/22 @11 AM	Ricardo Salomon-Torres, Sonora State University, MX	Date Palm Status and Perspective in Mexico
7	4/29 @10 AM	TBD-Oficina del Comisionado de Agricultura de Riverside	Actualización de leyes y reglamentos para de California - en español (1 hr laws/Regs)
8	4/29 @ 11 AM	Ricardo Salomon-Torres, Universidad Estatal de Sonora, MX	"La Palma Datilera: Fuente de Alimentos, Endulzantes y Bebidas" en español
9	5/6 @ 10 AM	Thomas Perring, UCR	Management of insect and mite pests of dates
10	5/6 @11 AM	Thomas Perring, UCR	Timing and amount of irrigation can impact date puffy skin – PART 1
11	5/6 @ 11:30 AM	Robert Krueger, USDA/ARS	Timing and amount of irrigation can impact date puffy skin - PART 2

If you have any questions please contact, Sonia Rios: sirios@ucanr

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IMPERIAL VALLEY CIMIS REPORT AND UC WATER MANAGEMENT RESOURCES

Ali Montazar, Irrigation and Water Management Advisor, UCCE Imperial and Riverside Counties

The reference evapotranspiration (ET_o) is derived from a well-watered grass field and may be obtained from the nearest CIMIS (California Irrigation Management Information System) station. CIMIS is a program unit in the Water Use and Efficiency Branch, California Department of Water Resources that manages a network of over 145 automated weather stations in California. The network was designed to assist irrigators in managing their water resources more efficiently. CIMIS ET data are a good guideline for planning irrigations as bottom line, while crop ET may be estimated by multiplying ET_o by a crop coefficient (K_c) which is specific for each crop.

There are three CIMIS stations in Imperial County include Calipatria (CIMIS #41), Seeley (CIMIS #68), and Meloland (CIMIS #87). Data from the CIMIS network are available at:

<http://www.cimis.water.ca.gov/>. Estimates of the average daily ET_o for the period of March 1st to May 31st for the Imperial Valley stations are presented in Table 1. These values were calculated using the long-term data of each station.



Table 1. Estimates of average daily potential evapotranspiration (ET_o) in inch per day

Station	March		April		May	
	1-15	16-31	1-15	16-30	1-15	16-31
Calipatria	0.16	0.19	0.22	0.25	0.27	0.29
El Centro (Seeley)	0.19	0.22	0.24	0.28	0.29	0.31
Holtville (Meloland)	0.17	0.21	0.23	0.27	0.29	0.31

For more information about ET and crop coefficients, feel free to contact the UC Imperial County Cooperative Extension office (442-265-7700). You can also find the latest research-based advice and California water & drought management information/resources through link below:

<http://ciwr.ucanr.edu/>.

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