Imperial County Agricultural Briefs

University of California
Agriculture and Natural Resources

Features from your Advisors

April 2022 (Volume 25 Issue 4)

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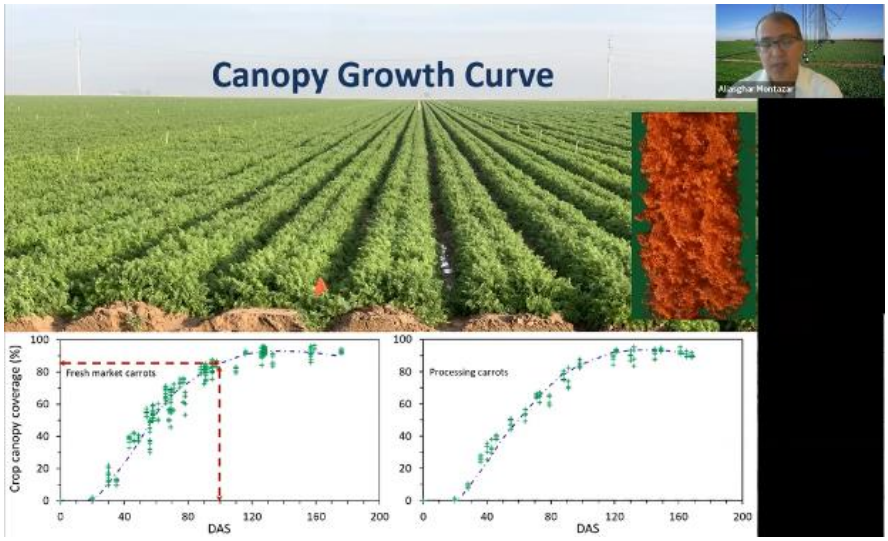
VEGETABLE CROPS AND IPM WEBINAR

Ali Montazar, Irrigation and Water Management Advisor, UCCE Imperial, Riverside, and San Diego Counties
Apurba Barman, Area Low Desert IPM Advisor, UCCE Imperial County
Oli Bachie, Agronomy Advisor, UCCE Imperial, Riverside, and San Diego Counties

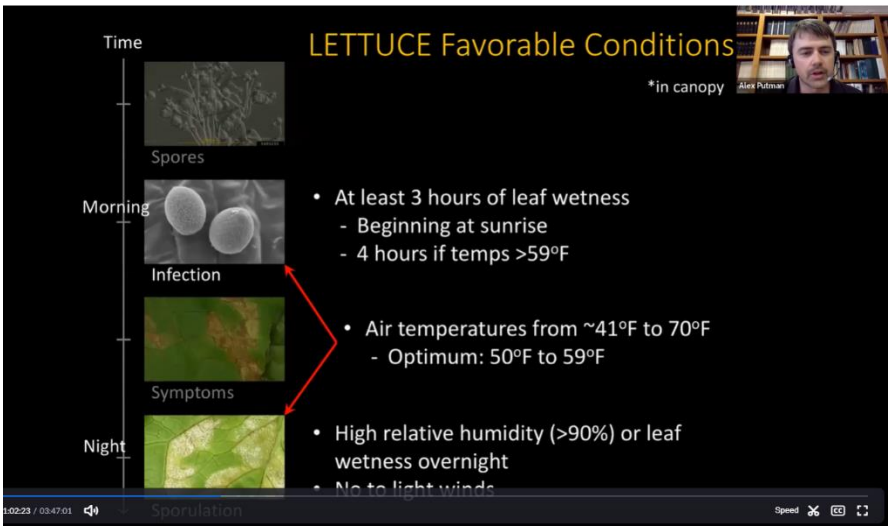
University of California Cooperative Extension Imperial County held a Vegetable Crops and IPM Workshop (Webinar) on March 10, 2021. This virtual workshop was held with 14 speakers / or panelists from UC Davis, UC Riverside, UCCE Imperial County, UCCE Kern County, UCCE Riverside County, UC Desert Research and Extension Center, California Department of Food and Agriculture, California Climate & Agriculture Network, and industries and private sectors who brought innovative ideas, solutions, and disseminate 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, lettuce, spinach, and food safety were presented and discussed during the webinar. Highlights of the presentations are shown below:

Dr. Philip Waisen delivers a talk on research and extension program on vegetable crops in desert.

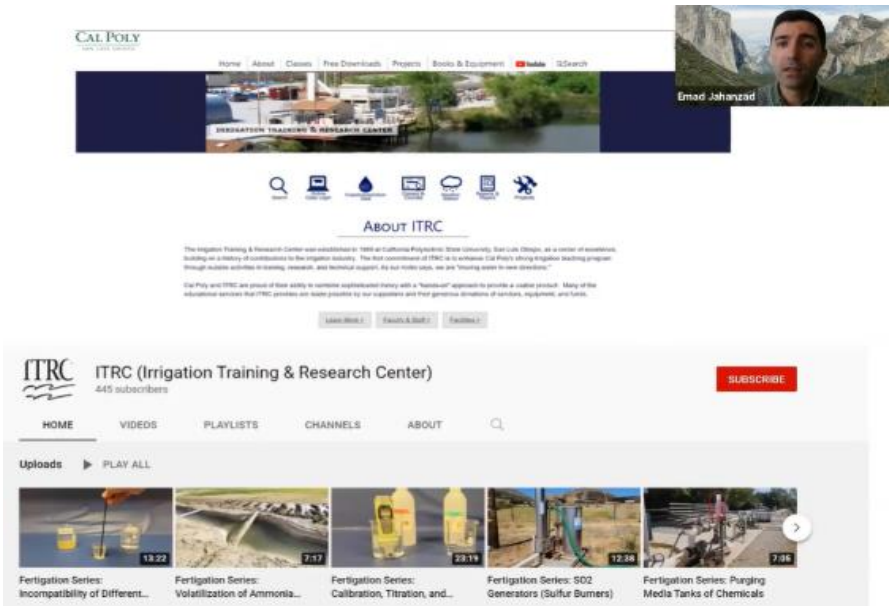
Dr. Linda Harris delivers the updates to produce safety rule proposed revisions to Subpart E – Agricultural Water.



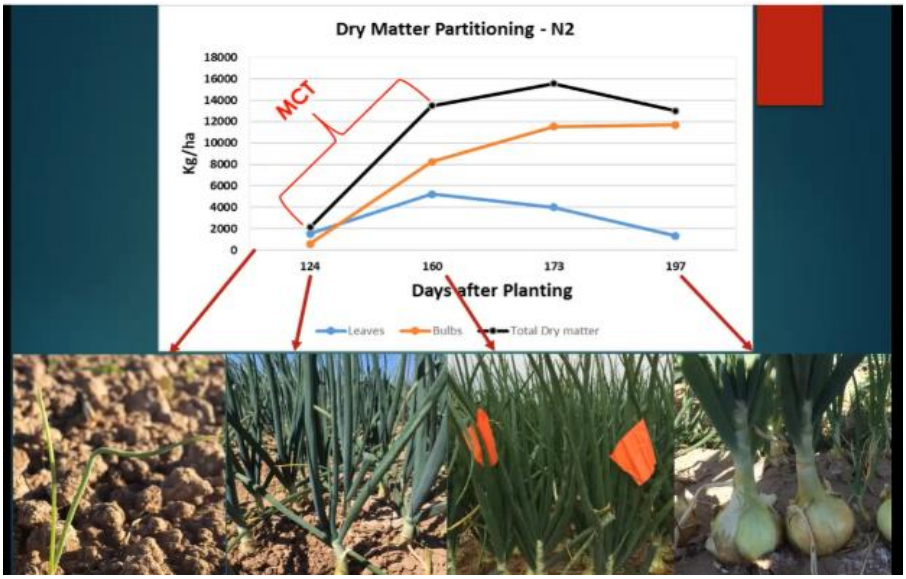
Dr. Ali Montazar delivers a talk on new information developed on water-nitrogen best management practices in desert carrots.



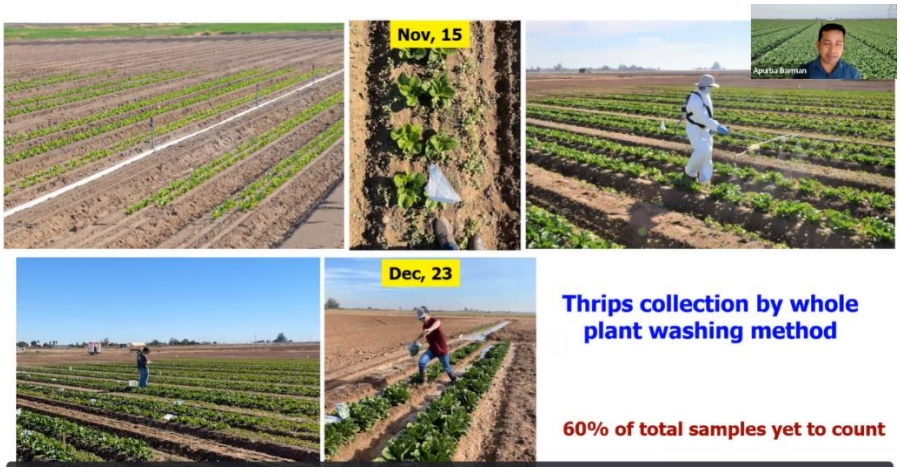
Dr. Alex Putman delivers a talk on downy mildew in vegetable crops



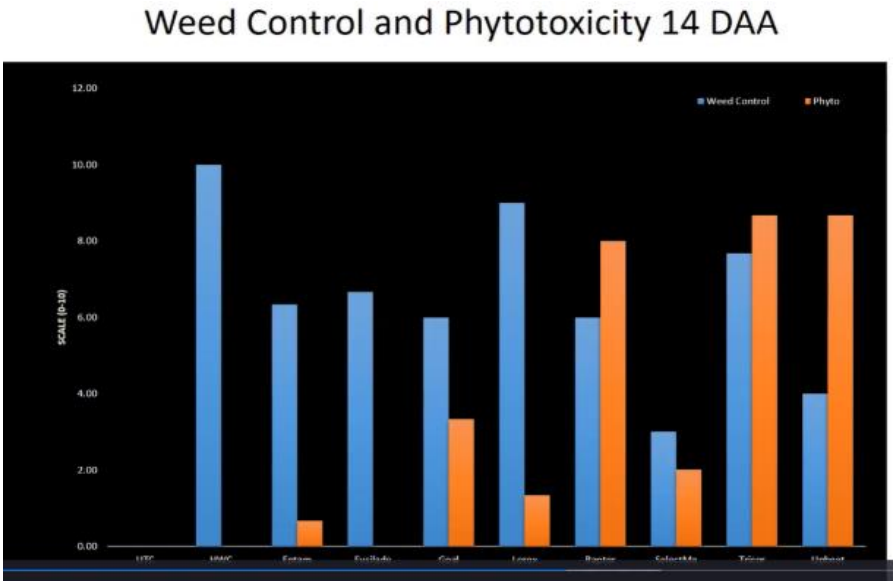
Dr. Emad Jahanzad delivers a talk on Fertilizer Research and Education Program (FREP): resources and opportunities for Vegetable production.



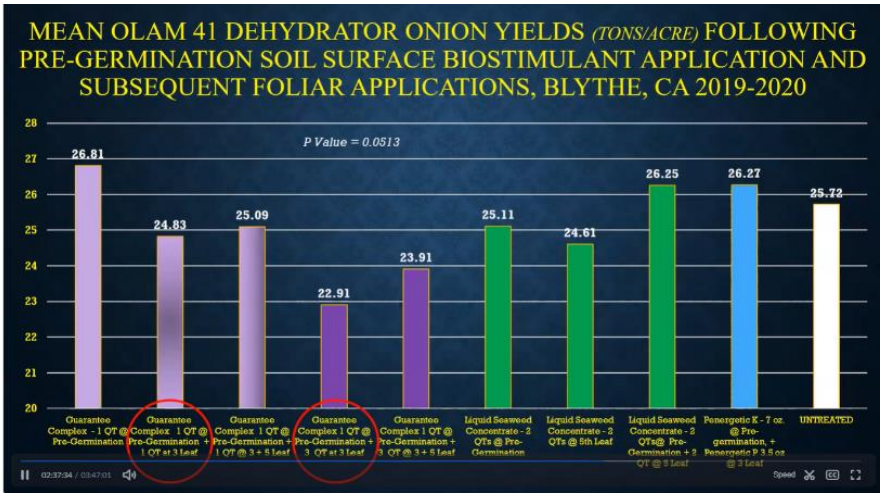
Dr. Jairo Diaz delivers a talk on irrigation and nutrient management of drip irrigated onions in Imperial County.



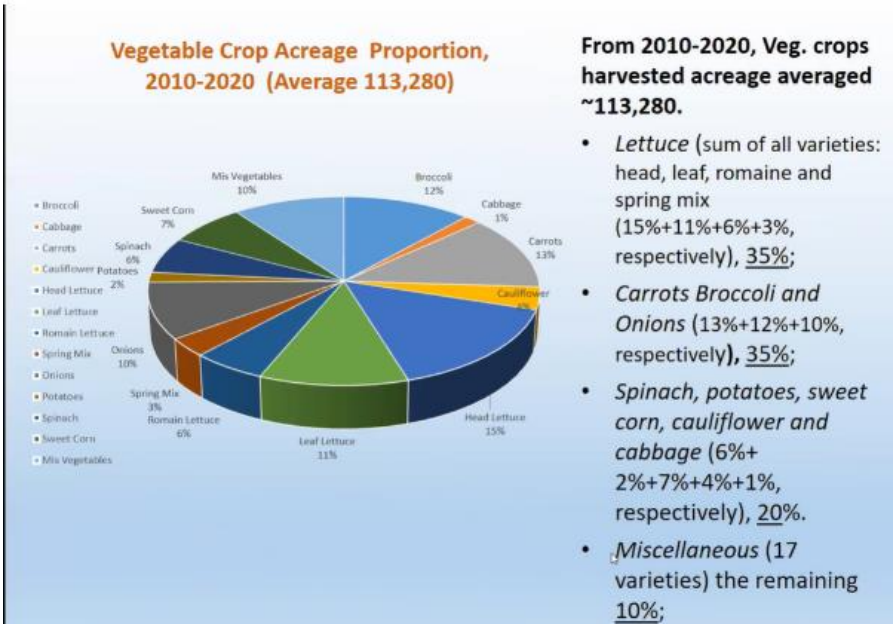
Dr. Apurba Barman delivers an update on current effort to mitigate risk of INSV incidence in desert lettuce.



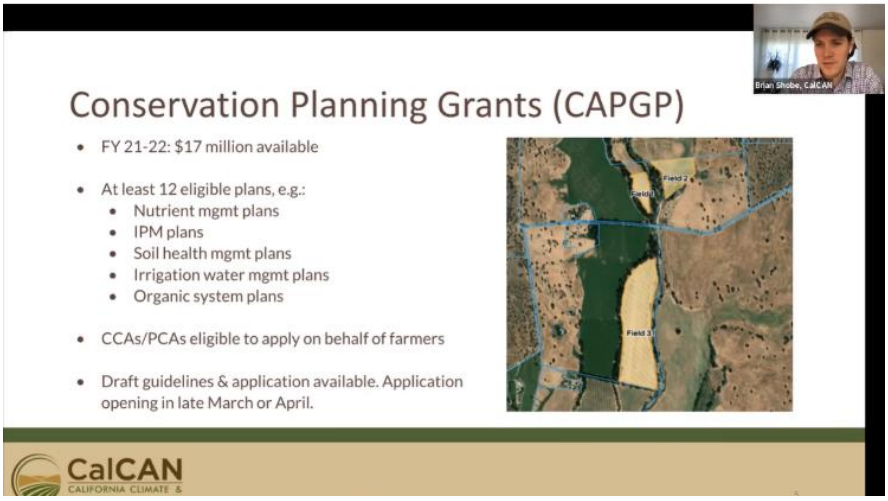
Dr. Jaspreet Sidhu delivers a talk on herbicide evaluations and streamlining the use of Dual Magnum in carrots.



Michael Rethwisch delivers a talk on low desert dehydrator onion yield responses to bio - stimulants.



Etaferahu Takele delivers a talk on Economic Trends of Vegetable Crops Production and Sustainability in the desert.



Brain Shobe delivers an overview of the CA climate smart agriculture programs and other resources available to farmers.

MARCH 2022 CATTLECAL NEWSLETTER UPDATE

Brooke Latack, Livestock Advisor – Imperial, Riverside, and San Bernardino Counties

The March 2022 edition of the CattleCal newsletter covered the newest interns that joined our team at UC DREC, the career and research of UCCE livestock and natural resources advisor Sheila Barry, and a discussion of a study looking at the effect of excessive fat supplementation on feedlot steer performance and carcass characteristics. The newsletter also summarizes our ongoing feedlot research being done at UC DREC.

If you would like to subscribe to the CattleCal newsletter, please visit this site and enter your email address: http://ceimperial.ucanr.edu/news_359/CattleCal_483/

November CattleCal podcast episodes:

- **Quiz Zinn**
  In this episode, we asked Dr. Richard Zinn a question from our listeners related to the diet of cattle moving from pasture to the feedlot.

- **Career Call**
  Brooke Latack and Pedro Carvalho called Sheila Barry, a UCCE livestock and natural resourcesadvisor in the Bay area to talk with her about how she ended up in her position including working with cattlein Texas, spending a year in Jordan, and ultimately working on conservation practices and how grazing cattle fitinto that picture.

- **Research Call**
  Brooke Latack and Pedro Carvalho speak to Sheila Barry, this time covering her research looking at the interaction of conservation for endangered species and livestock grazing.

- **Feedlot Research Cal**l
  In this episode, join Pedro Carvalho and Brooke Latack as they discuss research looking at the effect of excessive fat supplementation in feedlot diets.

The podcast can be found at https://open.spotify.com/show/6PR02gPnmTSHEgsv09ghjY?si=9uxSj3dYQueTEOr3ExTyjw or by searching "CattleCal podcast" in Spotify. It is free to listen!

If you have burning questions about cattle management and would like your questions featured on our Quiz Zinn episodes, please send questions to cattlecalucd@gmail.com or DM your question to our Instagram account @cattlecal.

If you have any questions or comments or would like to subscribe to the newsletter, please contact:

Brooke Latack (UCCE Livestock advisor) – bclatack@ucanr.edu
Pedro Carvalho (CE Feedlot Management Specialist) - pcarvalho@ucdavis.edu
CattleCal: cattlecalucd@gmail.com

UCCE Presents a FREE Webinar Series:

Managing Land and Livestock on Small Acreages

Wednesdays, April 20, 2022 to June 1, 2022
6:00 – 7:00 PM via Zoom

Register here:

http://ucanr.edu/acreages

Join us to learn all about:

Irrigated Pasture Planning and Nutrition

Weed ID and Management

Backyard Poultry Production

Outdoor Hog Production

Small Flocks of Sheep and Goats

Marketing Small-Scale Production

Livestock Forensics: Mortality Diagnosis

UC CE | UNIVERSITY OF CALIFORNIA Agriculture and Natural Resources | Cooperative Extension


Save the Date...
May 5, 2022
Agronomic Crops & Irrigation
Water Management Field
Day (Virtual)
No Cost to Attend!
Location: ZOOM WEBINAR
(9am - 12:30 pm)
Presented by the
University of California Cooperative Extension Imperial County
More information to follow regarding the event; topics, agenda, CEU's, etc.
UC
CE
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Inquiries regarding ANR's nondiscrimination policies may be directed to John I. Sims, Affirmative Action Compliance Officer/Title IX Officer, University of California, Agriculture and Natural Resources, 2801 Second Street, Davis, CA 95618,(530) 750-1397.
IMPERIAL COUNTY
CALIFORNIA

Agronomic Crops and Irrigation Water Management Field Day (Virtual)
UCCE Imperial County - May 5, 2022

Registration link:
https://surveys.ucanr.edu/survey.cfm?surveynumber=36996

	9:00 a.m. – Noon
9:00	**Welcome address and an overview of current UCCE studies on field crops** - *Oli Bachie, UCCE Imperial County Director*
9:10	**Rules and Regulations for water sanitizers** - *Valeria Mejia, Agricultural Biologist, Imperial County Ag Commissioner Office*
9:25	**Alfalfa– more salt tolerant than established guidelines indicate** - *Sharon Benes, Professor and J.G. Boswell Endowed Chair in Plant Science, California State University, Fresno*
9:40	**Halt soil salinization, boost productivity and sustainability: what we've learned in recent years in the low desert** - *Ali Montazar, Irrigation and Water Management Advisor, UCCE Imperial County*
9:55	**Interactive webtools for improved, site-specific management of agronomic crops** - *Mark Lundy, Assistant Specialist in Cooperative Extension, UC Davis*
10:10	**Alfalfa and tall fescue breeding and evaluation in the low desert** - *Charles Brummer, Director of the Plant Breeding Center, UC Davis*
10:25	**Grower insights on modern irrigation technologies** - *Ronald Leimgruber, Leimgruber Farms*
10:30	**Can you achieve high application efficiencies with flood irrigation? Introducing high performance surface irrigation** - *Peter Moller, Rubicon Water*
	Break
10:40	**UC Industrial hemp trials** - *Dan Putnam, Extension Agronomist and Forage Specialist, UC Davis; and Bob Hutmacher, Cooperative Extension Specialist and Center Director, UC West Side REC*
11:00	**Resource management for effective crop productivity** - *Oli Bachie, Agronomy Advisor, UCCE Imperial County*
11:15	**Sugarbeet pest management in the low desert** - *Apurba Barman, IPM Advisor, UCCE Imperial County*
11:30	**Insecticide resistance management for alfalfa weevil** - *Ian Grettenberger, Assistant Specialist in Cooperative Extension Entomology, UC Davis*
11:45	**Granulate cutworm in low desert alfalfa** - *Michael Rethwisch, Crop Production and Entomology Advisor, UCCE Riverside County*

For additional information on the workshop, please contact organizers Ali Montazar, amontazar@ucanr.edu or Oli Bachie, obachie@ucanr.edu or Apurba Barman, akbarman@ucanr.edu or give us a call at (442) 265-7700

APPLYING FOR CEUs: CALIFORNIA DPR (), Arizona Department of Agriculture () & Certified Crop Advisor ()

**** Test will be given immediately following workshop for Virtual meeting attendees that are seeking CA DPR CEU ****

Got bacterial diseases of onion?

Help us "**STOP THE ROT**"

WHO We Are: A team of researchers from across the country, working on tools to combat bacterial diseases of onions

WHAT We Are Looking For: Samples of onion plants affected by any of the bacteria known or suspected to cause diseases in onions

HOW You Can Help: If you are a grower and you have a suspected bacterial disease in your onion crop, contact us to survey your field and/or sample the bulbs in storage

California contacts:

Brenna Aegerter, UCCE San Joaquin (209-953-6114, bjaegerter@ucanr.edu)
Jaspreet Sidhu, UCCE Kern (661-868-6222, jaksidhu@ucanr.edu)
Alex Putman, UC Riverside (951-522-9556, aiputman@ucr.edu)
Rob Wilson, UCCE Tulelake (530-667-2719, rgwilson@ucanr.edu)

Nature's NINJA

Nature's Ninja graphic courtesy of the National Onion Association

Project Director:
Lindsey du Toit, Washington State Univ.
Regional lead for California:
Brenna Aegerter, Univ. of Calif. Coop. Ext.

USDA United States Department of Agriculture National Institute of Food and Agriculture

'Stop the Rot' Onion Bacterial Project 2019-51181-30013

CURRENT INSECT PEST AND DISEASE UPDATE ON LOW DESERT CROPS

Apurba Barman, Area IPM Advisor, Imperial County

At this time of the year, many sugarbeet fields in the Imperial Valley are either harvested or in the process. Trucks with loads of sugarbeets heading to Spreckles Sugar is a quite common scene on the road. It looks like the worm and leafhopper population were very light this year and probably did not have to treat most of the sugarbeet fields in the valley. I noticed that this time of the year the palestriped flea beetles are on alfalfa crops, which is, of course, currently not a concern for either sugarbeet or alfalfa growers (Fig. 1). But it is interesting to see how this pest moves around different crops or other non-crop habitats in the valley before then become a pest on sugarbeet in the fall. Therefore, sugarbeets planted early and near alfalfa fields are prone to have flea beetle infestations during the seedling stage of the crop.

Fig. 1. Palestriped flea beetles are often seen on alfalfa crops: not a pest of alfalfa but infest sugarbeet seedlings later in the fall. Photo: Apurba Barman.

Most of the wheat fields in the valley are at their heading or grain filling stage. There has not been any report of significant pest or disease incidence on wheat. However, you may see some aphids on your wheat and the density can be high in some parts of the field. Overall, I see high activities of natural enemies such as lady beetles, pirate bugs and lacewings, which can take care of low aphid populations without any insecticide intervention. Few weeks ago, I received some wheat plant samples with high aphid infestation from one of the fields and I noticed that there was high percentage of parasitism from beneficial, parasitic wasps (Fig. 2). Again, presence of all these beneficial insects seem to take care of aphid populations on wheat in most cases. There are number of aphid species found feeding on wheats such as English grain aphid, greenbug, bird cherry oat aphid and Russian wheat aphid. It seems that the dominant aphid species on the wheat sample I just mentioned had bird cherry oat aphid. This particular aphid species can be easily distinguished from other three species of aphids feeding on wheat by the orange patch towards the end of the body (Fig. 2).

Fig. 2. Bird cherry oat aphids: brown, round ones are already parasitized (left picture). Notice the orange patch on the back of live ones, light green in color. Photo: Apurba Barman (left) and Adam Varenhorst (right).

The leafy greens are approaching an end for this season. Especially, whatever the lettuce crop that is still in the field will be harvested in a matter of a week or two. As I mentioned in my last month's article, there are no reportable incidence of INSV (Impatiens Necrotic Spot Virus), which is transmitted by western flower thrips, in the lettuce fields around the valley. I only found couple of INSV infected and symptomatic plants from only one lettuce field south of Holtville (Fig. 3). Research work is currently ongoing to identify and traceback the source of this virus on weed species collected within and around that field. Going forward, we are also

interested in looking at the possibilities of finding this virus (INSV) on transplants coming to the valley, whether it is cruciferous vegetables or other crops.

Fig. 3. An INSV infected plant in middle of a lettuce field. Not seen in most fields in 2022 in Imperial Valley. Photo: Apurba Barman.

Finally, our alfalfa seed crop season is around the corner and I am sure there will be a lot of alfalfa fields prepared to produce seed in the Imperial Valley. I have already seen some activity of Lygus bugs, which is the primary pest of the seed alfalfa crops. An alfalfa seed crop provides enormous opportunity for lygus bug to feed as plants are full of fruiting structures. Both adults and immature stages of lygus bug can feed on flowers, buds and green pods, which results in premature drop of buds and flowers (stripping), seed deformation, and reduced seed viability. Therefore, it is so critical to control of *lygus* bug for economic production of alfalfa seed. In California, the established threshold for lygus on alfalfa seed crops is: 4-6/sweep during bud or pre-bee stage of the crop, 8-10/sweep during bloom to early seed set, and 10-12/sweep during seed maturity. There are not many insecticides available for lygus management in California alfalfa seed. Carzol® SP, Dimethoate 400 EC, Beleaf® 50SG, and Rimon® 0.83EC are registered products for usage on alfalfa seed crop, the latter two (Beleaf and Rimon) being registered with special local need (24c). It is important to remember that both Carzol® SP and Dimethoate 400EC are highly toxic to bees and also to natural enemies. Several studies have

been conducted to evaluate the efficacy of other insecticides and Transform® appears to be a good product to manage Lygus without significant adverse effect on beneficials. However, this product is not registered for use on alfalfa in California.

There are several kinds of onions we grow in the valley for consumption and seed purposes. I recently learned from Dr. Alex Putman, Extension Plant Pathologist based in UC Riverside that there are onion fields where onion downy mildew has been observed, but at very low incidence level. The onion downy mildew incidence is favored by cool and humid environment, which are not the characteristics of low desert. However, couple days of cool temperature and enough humidity from irrigation schedules can favor the incidence of this disease on onion. So, keep an eye on your onion fields, especially later in the next week as some cool weather is projected for early next week. The typical symptoms of onion downy mildew on individual plants are pale green tissue on older leaves, which eventually turn brown or yellow, fold over and collapse (Fig. 4). Widespread and heavy infection can defoliate the crop prematurely and cause significant loss.

Fig. 4. Symptom of downy mildew infection on onion (notice the purple growth and collapsed leaves). Photo: Tom Turini.

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 April 1st to June 30th 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	April		May		June	
	1-15	16-30	1-15	16-31	1-15	16-30
Calipatria	0.22	0.25	0.27	0.29	0.31	0.32
El Centro (Seeley)	0.24	0.28	0.29	0.31	0.34	0.36
Holtville (Meloland)	0.23	0.27	0.29	0.31	0.33	0.34

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/.