

Imperial County

Agricultural Briefs



Features from your Advisors

October 2021 (Volume 24 Issue 9)

Table of Contents

SEPTEMBER 2021 CATTLECAL NEWSLETTER UPDATEBrooke Latack	-151-
NEW RESEARCH FILLS GAP ON BEST PRACTICES FOR CALIFORNIA CARROT PRODUCTIONContributed by Ali Montazar, Written by Mike Hsu	-153-
LETTUCE FUSARIUM WILT – SAMPLES NEEDEDAlex Putman	-157-
SIGN UP FOR A PUMP EFFICIENCY TEST FLYER	-158-
GRANT SOLICITATION FOR THE 2021 STATE WATER EFFICIENCY AND ENHANCEMEN PROGRAM (SWEEP) IS EXPECTED TO OPEN SOON,,,,,,,,,,,,,,,,,,,,,,Kristian Salgado	NT -159-
GRANT WORKSHOP FLYER: HEALTHY SOIL & SWEEP	-160-
PROTECTING SUGAR BEETS FROM FLEA BEETLES AND EARLY SEASON PESTS	-161-
IS YOUR ALFALFA FIELD DECORATED FOR HALLOWEEN?	-164-

Table of Contents (continued)

WESTERN ALFALFA & FORAGE SYMPOSIUM AGENDA	-166-
SAVE THE DATE – 32 ND ANNUAL FALL DESERT CROPS WORKSHOP FLYER	-170-
APPLICATION PERIOD OPENS FOR PANDEMIC RESPONSE AND SAFETY GRANT PROGRAM TO PROVIDE RELIEF	-171
IMPERIAL VALLEY CIMIS REPORT AND UC WATER MANAGEMENT RESOURCESAli Montazar	-172-

SEPTEMBER 2021 CATTLECAL NEWSLETTER UPDATE

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

The September 2021 edition of the CattleCal newsletter covered information on the effect of mud on the performance of feedlot cattle, the career and research of South Dakota State University Professor Zachary Smith, and a look at a study looking at the effect of steroidal implants on performance, carcass characteristics, and serum and tissue E_2 in feedlot Holstein steers.

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/

September CattleCal podcast episodes:

- Quiz Zinn

In this episode, we asked Dr. Richard Zinn a question from our listeners related to the effect of mud on the performance of feedlot cattle.

- Career Call

In the career call of the month, Brooke Latack and Pedro Carvalho called Dr. Zachary Smith. Zach is an animal science professor at South Dakota State University. He shares his journey from the wake boards, fishing poles, and skateboards of Florida to becoming an expert in feedlot management.

- Research Call

Brooke Latack and Pedro Carvalho call Dr. Zach Smith again. Zach shared information on his work looking at the impact of bedding pens on feedlot cattle performance.

- Feedlot Research Call

In this episode, join Pedro Carvalho and Brooke Latack as they discuss a study looking at the use of steroidal implants on the performance, carcass characteristics, and serum and tissue E_2 of Holstein steers in the feedlot. Tune in to hear the impact of this important technology.

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) – <u>bclatack@ucanr.edu</u>
Pedro Carvalho (CE Feedlot Management Specialist) - <u>pcarvalho@ucdavis.edu</u>
CattleCal: <u>cattlecalucd@gmail.com</u>

NEW RESEARCH FILLS GAP ON BEST PRACTICES FOR CALIFORNIA CARROT PRODUCTION

Sep 24, 2021



Carrot field under furrow irrigation system in the Imperial Valley. Photos by Ali Montazar

One doesn't need to be a seasoned farmer to know that growing conditions in Canada are completely different than those found in the low desert of California.

And yet, for many years, studies conducted in Canada were used to generate nitrogen uptake data for the California carrot production system, so growers managed their fields based on their own experiences – and that research conducted thousands of miles to the north.

Carrots had been among the crops grown in California that did not have site-specific data to suggest the best source, rate, timing and placement of nitrogen, in the highly variable cropping seasons and locations throughout the state. That's why new information – based on local research and <u>published in August</u> – is invaluable to farmers in Imperial and Kern counties, where the majority of the carrots in California are grown.



The trials at UC ANR's Desert Research and Extension Center consisted of two irrigation regimes and three nitrogen scenarios.

Two years of data from two experimental trials at UC Agriculture and Natural Resource's <u>Desert Research and Extension Center</u> – as well as from 10 commercial fields – produced <u>key recommendations</u> for farmers to make the most of their irrigation and nitrogen applications.

"The point is we developed information in your field, based on your practices, your climate, your production system – and this is what is really happening," said <u>Ali Montazar</u>, UC Cooperative Extension irrigation and water management advisor for Imperial County. Montazar conducted the study alongside Daniel Geisseler, UCCE nutrient management specialist at UC Davis, and Michael Cahn, UCCE irrigation and water resources advisor for Monterey County.

With reliable data gathered under real-world conditions, Montazar said growers now have solid reference points for when – and at what rate – to irrigate and apply fertilizers in the low desert environment. One of the key findings, for example, was that the carrots' nitrogen uptake is generally low in the first 40 to 50 days, so growers are advised to limit their fertilizer application during that period.



Monitoring stations in one of the commercial experimental sites.

Then, by tailoring those basic guidelines to their own site-specific situation and optimizing their practices, growers can maximize the amount of nitrogen taken up by the carrots – and minimize the amount that is leached out.

Improving irrigation and nutrient management in the desert production system is what local growers are themselves trying to achieve. With improving efficiency and reducing nutrient leaching, we can improve the quality of water in the Salton Sea," said Montazar, noting the longstanding challenges of reducing contaminants from irrigated lands to protect its unique ecosystem and wildlife.

While contamination of groundwater is not a critical issue in the desert, the best practices in this study can also help carrot growers in parts of California where nitrogen leaching into groundwater and drinking water supplies is a greater concern.

Montazar is currently leading a team in studying carrot-growing management practices under slightly different conditions in Kern County, with the hopes of publishing findings in late summer 2022.

The Imperial County study, "Spatial Variability of Nitrogen Uptake and Net Removal and Actual Evapotranspiration in the California Desert Carrot Production System," is published in the journal *Agriculture*, and can be found at https://doi.org/10.3390/agriculture11080752. Findings and recommendations also appear

in *Progressive Crop Consultant*: https://progressivecrop.com/2021/09/new-knowledge-based-information-developed-to-enhance-water-and-nitrogen-use-efficiency-in-desert-fresh-market-carrots/.

Funding for this study was provided by the California Department of Food and Agriculture's Fertilizer Research and Education Program, as well as the California Fresh Carrots Advisory Board.

By Mike Hsu

Author - Senior Public Information Representative

 ${\small \textit{Ag Briefs}-\textit{October 2021}} \\$

Samples wanted for research on Lettuce Fusarium wilt

WHAT we are looking for

Samples of lettuce plants affected by Fusarium wilt

WHERE we are looking

Imperial County (including Bard/ Winterhaven area) and Huron, other regions of California also welcome

WHY we are doing this

To monitor for emergence of new pathogen races

HOW you can help

If you are a grower or PCA and you have Fusarium wilt in your lettuce crop, contact us and we will survey your field and collect samples



Contact: Alex Putman, UC Riverside (951-522-9556, aiputman@ucr.edu)

Collaborators: Funded By:

Jim Correll, Univ. of Arkansas

Ag Briefs - October 2021

California Leafy Greens Research Program 2021-2022

Stephanie Slinski, Yuma Center for Excellence in Desert Agriculture

157

APPLYING FOR THE STATE
WATER AND EFFICIENCY
ENHANCEMENT(SWEEP)
PROGRAM, BUT DON'T KNOW
WHERE TO GET A PUMP TEST?

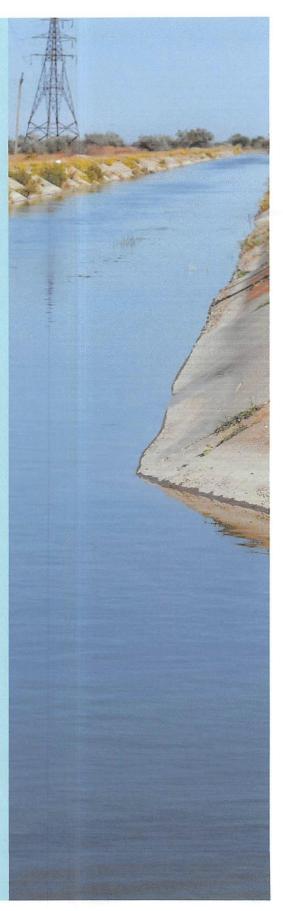
SIGN UP FOR A PUMP EFFICIENCY TEST

South Valley Pump Testing Inc. has agreed to travel to Imperial County on Friday, Oct. 29th, 2021 to run pump efficiency test.

TO SIGN UP AND GET MORE INFORMATION CONTACT SOUTH VALLEY PUMP TESTING INC. AT 559.802.7907 OR CHRISTYFIT@SOUTHVALLEYPUMP.COM

We don't endorse any specific pump testing company for a list of other pump providers visit:

 $\underline{\text{http://fresnostate.edu/jcast/pumpefficiency/pumptesting/list.ht}}$ ml



GRANT SOLICITATION FOR THE 2021 STATE WATER EFFICIENCY AND ENHANCEMENT PROGRAM (SWEEP) IS EXPECTED TO OPEN SOON

Kristian Salgado, Community Education Specialist 2 – Climate Smart Agriculture

Sometime this month, the California Department of Food and Agriculture's (CDFA) Office of Environmental Farming and Innovation anticipates opening the application submission period for the 2021 State Water Efficiency and Enhancement Program (SWEEP). According to the SWEEP request for grant applications draft for this SWEEP solicitation, CDFA will be dispersing approximately \$36 million to California agricultural operations investing in irrigation systems that reduce greenhouse gas (GHG) emissions and saves water. Agricultural operations can apply for a maximum grant award of \$200,000 for a variety of projects that increase water savings by utilizing technologies, such as weather, soil, or plant-based sensors for irrigation scheduling, and conversion to micro/drip irrigation systems. In addition to water saving practices, which may reduce GHG emissions, farmers can also apply for projects such as fuel conversions, improving energy efficiency, switching to low pressure irrigation systems, and variable frequency drives.

The Imperial County Farm Bureau, Imperial Valley Water (IVH2O) and University of California Cooperative Extension Imperial (UCCE) will be hosting a SWEEP workshop (in conjunction with the Healthy Soils Incentive Grant) on Oct. 21ST, 27TH, and Nov. 3rd from 9am-12pm at Farm Credit West, 485 Business Pkwy, Imperial, CA 92251. **Space is limited to 25 attendees per workshop in accordance with COVID-19 policies.**

Agricultural operations in Imperial County that are interested in applying, or willing to learn more about the 2021 SWEEP grant, can contact UCCE Irrigation and Water Management Advisor, Dr. Ali Montazar at amontazar@ucanr.edu or Climate Smart Agricultural Specialist, Kristian Salgado at kmsalgado@ucanr.edu. For more information about the grant, visit https://www.cdfa.ca.gov/oefi/sweep/

Co-sponsored by UCCE-Imperial County, IVH20, and Imperial County Farm Bureau



Grant Workshop: Healthy Soil Program & State Water Efficiency and Enhancement Program

UCCE-Imperial County, Imperial County Farm Bureau, and IVH2O will be hosting a series of workshops that will be presented back-to-back to provide information and assistance to growers who are interested in applying for the HSP and SWEEP grants. Potential applicants are encouraged to attend at least one workshop.

Space is limited to 25 attendees per workshop in accordance with COVID-19 policies.

State Water Efficiency and Enhancement Program

SWEEP provides financial assistance in the form of grants to implement irrigation systems that reduce greenhouse gases and save water on California agricultural operations. Applicants are eligible to receive up to \$200,000 in grant funding.

Eligible system components include improved irrigation water management, soil, weather, plant sensors, micro-irrigation, improved energy efficiency, pump replacement retrofit.

Healthy Soil Program

The HSP Program provides financial assistance for the implementation of conservation management practices that improve soil health, sequester carbon and reduce greenhouse gas (GHG) emissions. Applicants are eligible to receive up to \$100,000 in grant funding.

On-farm soil management practices that are eligible include but are not limited to: mulching, compost application, herbaceous and woody plantings, cover cropping and no/reduced tillage.

Date: Oct. 21st, Oct. 27th, and Nov.3rd

Time: 9am-12pm

Location: Farm Credit West, 485 Business Pkwy,

Imperial, CA 92251



You can also register by contacting Kristian Salgado at kmsalgado@ucanr.edu or 760-693-8938

Please feel free to contact us if you need special accommodations











PROTECTING SUGAR BEETS FROM FLEA BEETLES AND EARLY SEASON PESTS

Apurba Barman, Area IPM Advisor, UC Cooperative Extension-Imperial County

Imperial County is the largest producer of sugar beet crop in California and its planting in the valley is almost concluding for this season. Fields planted during early September are already at 3-4 leaf stage provided there was plenty of irrigation water. Sugar beet seedlings are quite vulnerable to stress from moisture, temperature and most of all - the insect pests.

Although we see robust, vigorously growing sugar beet plants in late winter or early spring, the young seedlings are relatively weak and need the most care. There are several insect pests that can significantly damage young seedlings such as flea beetles, whiteflies and armyworm. However, flea beetles are the most damaging ones during the seedling stage of sugar beet crop in the Imperial Valley.

There are at least 3-4 different species of flea beetle that can attack sugar beet crops. Among these, palestriped flea beetle (*Systena blanda*) is the most common and destructive in the Imperial Valley sugar beet fields. Adults are about 1/8-inch-long, shiny black to dark brown color with two white stripes on the back.

Flea beetles get their names from their jumping ability, but can also fly. Palestriped flea beetles are highly polyphagous, with a number of crop and weed hosts. Alfalfa is a major crop host of this insect pest, and sugar beet fields close to alfalfa fields are more prone to infestation of palestriped flea beetle in the seedling stage.

Similarly, weed species such as nettleleaf goosefoot, one of the most common and widespread weeds in the low desert, also appears to be a good host of this insect. Interestingly, emergence of nettleleaf goosefoot coincides with the sugar beet planting season and sugar beet fields infested with this weed species could potentially attract the pest even before the emergence of sugar beet seedlings.

Adult beetles primarily feed on young trues leaves including the cotyledons by scraping off the leaf tissues, which eventually turn into "shot hole" appearance. Excessive feeding can lead to significant damage to the young plants and stand reduction. The larvae of this pest can also feed on the roots of young plants resulting in seedling death.

Management of palestriped flea beetle in sugar beet seedlings should be planned ahead, even before the pests arrive. In the absence of Chlorpyrifos, neonicotinoid insecticides are found to be a good alternative for

managing flea beetles and other early season sucking pests in sugar beet. Neonicotinoids are available as a seed treatment option for sugar beet and growers can take advantage of this technology. Often, neonicotinoid products are also applied in-furrow or at planting to protect sugar beet seedlings from flea beetle and other early season pests. Regardless of the application technology, neonicotinoid products can be used as a preventative management strategy for flea beetle management in low desert.

Post-emergence application of pyrethroid products may be necessary to protect the young seedlings from severe feeding damage by flea beetles, especially the palestriped flea beetles in the Imperial Valley. As new growth is unprotected, this class of insecticides is usually applied via sprinkler irrigation to allow a longer period of insecticide application and longer protection of sugar beet foliar growth.

Currently, a California Department of Pesticide Regulation funded project lead by Dr. Steve Kaffka, the state sugar beet specialist based at UC Davis, is facilitating experiments both at the DREC research station and grower fields to evaluate the benefit of neonicotinoid seed treatments and other in-season pest management programs in sugar beet production system. The research results will be shared once those become available.



Figure 1: Infestation of palestriped flea beetles on young sugar beet seedlings, Holtville, CA.



Figure 2: Palestriped flea beetle feeding on nettleleaf goosefoot seedling (left), potato flea beetle, *Epitrix cucumeris* feeding on grass host (right); presence of these weeds can increase the chances of flea beetle infestation in sugar beet fields, Holtville, CA.

 ${\small \textit{Ag Briefs}-\textit{October 2021}} \\$

IS YOU ALFALFA FIELD DECORATED FOR HALLOWEEN?

Michael D. Rethwisch, Crop Production & Entomology Advisor, UCCE Riverside County – Palo Verde Office

October is the month associated with Halloween and is the month that many people get into the Halloween spirit by decorating their offices and homes. One type of decoration that is often used is spider webs or 'cobwebs'; the latter being a spider's web that is old and covered with dust in some definitions

Cobwebs get their name from the Middle English word for spider which is "coppe", derived from the Old English word for spider: atorcoppe (which means poison head). The term atorcoppe is rarely used these days, although it was reportedly used by J.R.R. Tolkien in *The Hobbit* in 1937.

While some people decorate their residences to the extreme for the season, it appears that some alfalfa fields in the low desert also are being 'decorated' (Fig. 1).



Fig. 1. An alfalfa field in the Palo Verde Valley, October 2020.

When closely examining these 'decorated' fields, it was easy to see that the decorations are not 'cobwebs', because they are not old and dusty. What was more surprising is that the decorations shown in Figure 1 were not spider webs either, although they were indeed made by spiders. To be technically correct, a spider web is a structure made by a spider to capture prey, which was not the situation in these fields.

So, what is the actual cause here? A collection of the spiders in this and other fields in October found that the vast majority of spiders were wolf spiders (Family Lycosidae), which ranged in size from very, very small 'spiderlings' to about half-grown. While not identified to species, the most common genus of wolf spiders in alfalfa from New Mexico to northern California is *Pardosa*.

Wolf spiders are hunting spiders, and do not spin webs, but they are able to create 'spider silk'. It is this spider silk that is being noted during October in multiple alfalfa fields, and it is being used for 'ballooning'.

Ballooning is done by small spiders and spiderlings. To balloon, the spider climbs to a high point, turns to face the wind, initiates a 'tiptoe' posture in which it stands on the ends of its tarsi, elevates its abdomen, and releases a few strands of silk known as draglines. The spider detects the strength and direction of the wind with sensory hairs on its legs. It then lifts its body up holding on to the surface with just two front legs, and waits until a very light breeze (usually less than 10 feet/second) carries it up and away. As can be seen in Figure 1, there are distinct linear concentrations of spider silk across the field that correspond to the tallest alfalfa stems, consistent with spiderlings moving to the highest points for "take-off".

While some wolf spiders are known to be airborne via ballooning in the spring, the spider silking in alfalfa fields in the Palo Verde Valley have only been noted in the fall. The effect of silking and ballooning is not necessarily restricted to alfalfa fields, as there are usually plenty of pick-up truck antennas that also collect airborne silk (and probably a few spiderlings as well).

Although local motorists may not appreciate their vehicles being naturally decorated with spider silk at this time of year, alfalfa growers usually benefit from the redistribution of these predatory animals which hunt and feed primarily on insects found in their fields.

 ${\small \text{Ag Briefs-October 2021}} \\$

2021 Western Alfalfa & Forage Symposium



The 2021 Western Alfalfa & Forage Symposium will in an in-person event this year, being held November 16-18 at the Grand Sierra Resort in Reno, NV. The first day is an optional agricultural educational tour in Northern Nevada. Areas of emphasis during the symposium include water availability, pest management, alternative forages, and soil health and fertility. There will also be multiple posters with additional research data on display.

Registration is urged to be completed by <u>Friday October 15</u>. Costs are \$100 for the tour only, \$340 for the symposium sessions, and \$415 for all symposium activities. Registration and additional information, including housing, is available at https://calhaysymposium.com/.

There will not be a California Alfalfa Symposium or Western Alfalfa & Forage Symposium in 2022. Instead, there will be a World Alfalfa Congress, and for those of us in the desert southwest it will be almost in our backyard, being held November 14-17, 2022, at the Town and Country Resort in San Diego, CA. Hope to see you at one or both of these events.

Day One - Tuesday, November 16, 2021

6:30 a.m. – 7:00 p.m. Symposium and Exhibitor Registration

7:30 a.m. Continental Breakfast (Tour Participants Only)

8:00 a.m. – 4:00 p.m. Exhibitor/Poster Set-Up

8:00 a.m. – 5:15 p.m. Agricultural Educational Tour in Northern Nevada

<u>Overview:</u> Tour stops will include a large western dairy production operation, a specialized goat dairy, Frey Ranch Distillery, the Derby Dam and Newslands Water Project, and a hay export operation.

5:00 p.m. – 7:00 p.m. Symposium Welcome Reception

DAY Two - Wednesday, November 17, 2021

Session I. 8:00 a.m. – 10:00 a.m. Economics and Water Trends:

- 8:10 a.m. Status of the Western Forage Industry, Josh Callen, The Hoyt Report, Twin Falls, ID
- 8:35 a.m. Current Trends and Challenges for the Western Dairy Industry. Paul Sousa, Western United Dairies, Turlock, CA
- 9:00 a.m. International Trade Dynamics in Hay and Impacts on Markets. Dan Sumner, University of California, Davis, CA
- 9:25 a.m. Water Situation in West and Impacts on Forages. Jason Kelley, USDA-ARS, Parlier, CA
- 9:50 a.m. Discussion
- 10:00 a.m. Break

Session II. 10:30 a.m. – 12:00 p.m. Water, Climate Change, and the Environment

- 10:30 a.m. The Important Role of Alfalfa in an Uncertain Water Future. Dan Putnam, University of California, Davis, CA
- 10:55 a.m. Key Role of Forages in Climate-Smart Agriculture. Josh Gamble, USDA-ARS, St. Paul, MN
- 11:20 a.m. Rethinking Methane Livestock's Path to Climate Neutrality. Frank Mitloener, University of California, Davis, CA
- 11:45 a.m. Discussion

12:00 p.m. – 1:00 p.m. Symposium Lunch

1:30 p.m. – 5:00 p.m. Symposium Breakout Sessions

Breakout 1: Pest Management (CEUs available from California and other states for this section)

- 1:30 p.m. Burn-Down Strategies for Alfalfa Weed Control Earl Creech, Utah State University, Logan, UT
- 1:50 p.m. Residual and Postemergence Weed Control in Seedling Alfalfa. Albert Adjesiwor, University of Idaho, Kimberly Research & Extension Center
- 2:10 p.m. Toxic Plants that Contaminate Hay and Other Forages in the Western United States. Bryan L Stegelmeier, Research Veterinary Medical Officer USDA ARS, Logan Utah
- 2:30 p.m. Managing Pocket Gophers in Alfalfa. Roger Baldwin, University of California, Davis, CA

- 2:50 p.m. Discussion
- 3:00 p.m. Break
- 3:30 p.m. Grasshoppers: To Treat or Not to Treat? Greg Abbot, USDA-APHIS, Logan, Utah
- 3:50 p.m. Alfalfa Weevil Management & Resistance Issues. Ian Grettenberger, University of California, Davis, CA and Kevin Wanner, Montana State University, Bozeman, MT
- 4:10 p.m. Blue Alfalfa Aphids in the Western US Management Challenges and Successes Vary by Location. Michael Rethwisch, UCCE, Blythe, CA
- 4:30 p.m. Using Drones to Control Pests in Alfalfa. Rachael Long, UCCE, Woodland, CA and Ken Giles, University of California, Davis, CA
- 4:50 p.m. Discussion

Breakout 2: Water Management

- 1:30 p.m. Innovative Technologies for Water Conservation in Flood Irrigation Systems. Khaled Bali, University of California, Kearney Research and Extension Center, Parlier, CA
- 1:50 p.m. Optimizing Overhead Irrigation Systems. Matt Yost, Utah State University, Logan, UT
- 2:10 p.m. Alfalfa on Subsurface Drip Irrigation (SDI) Pros and Cons. Doug Larson, Ag Water Chemical, Fresno, CA
- 2:30 p.m. Alfalfa and Groundwater Management Strategies to Address Drought and Limited Water Supplies. Helen Dahlke, University of California, Davis, CA
- 2:50 p.m. Discussion

• 3:00 p.m. Break Breakout 3: Alternative Forages

- 3:30 p.m. Sugar Beets and Safflower as Alternative Winter Forages. Steve Kaffka, University of California, Davis, CA
- 3:50 p.m. Double Cropping Both Winter and Spring Canola as Silage and Grain. Steve Fransen, Washington State University, Prosser, WA
- 4:10 p.m. Hemp Production and Animal Feed Potential. Serkan Ates, Oregon State University, Corvallis, OR

- 4:30 p.m. Winter and Summer Annual Small Grain Forage Crops. Guojie Wang, Oregon State University, Corvallis, OR
- 4:50 p.m. Discussion

5:00 p.m. – 7:00 p.m. Exhibit Reception, Poster Presentations, and CAFA Auction

Day Three – Thursday, November 18, 2021

Soil Health and Fertility, Forage Systems, and the Future of Forage Crops

- 8:00 Using Hay Tests Samples to Maximize Economic Returns from P and K Fertilization. Steve Norberg, Washington State University, Pasco, WA
- 8:25. Recycling and Management of Manure in Forage Crops. Eric Young, USDA-ARS, Marshfield, WI
- 8:50 Soil Health: Beyond Organic Matter and Carbon. Robert Dungan, USDA-ARS Kimberly, ID
- 9:15 Regeneration Nation: Alfalfa's Role in Sustainable Agriculture. Emily Meccage, FGI International, Muncy, PA
- 9:40 Discussion
- 9:55 BREAK
- 10:25 Grazing Cover Crops, and Opportunity for Forage Producers. Darrin Boss, Montana State University, Havre, MT
- 10:50 Management of Forages with High Nitrates. Hayes Goosey, Montana State University, Bozeman, MT
- 11:15 Perspectives and Future of Research/Cooperative Extension (Multi-State Discussion of Priorities and Linkages Within Western States). Steve Fransen, Washington State University, Prosser, WA

•	12:15	p.m.	Adjourn	Sy	mposium
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Save the Date...

32nd Annual Fall Desert Crops Workshop

Hybrid (In-Person & Virtual)

Dec. 9th, 2021 (8am-12pm)

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

More details regarding pre-registration link, speakers/topics and CEU's to follow.



Application for CE units will be made with CA Department of Pesticide Regulation, AZ Department of Ag & Certified Crop Advisors

Presented by:

University of California Cooperative Extension Imperial County 1050 E. Holton Rd, Holtville, CA 92250 (442) 265-7700 office http://ceimperial.ucanr.edu





Application Period Opens for Pandemic Response and Safety Grant Program to Provide Relief to Small Producers, Processors, Distributors and Farmers Markets Impacted by COVID-19

The U.S. Department of Agriculture (USDA) today announced a <u>Request for Applications (RFA)</u> for the new Pandemic Response and Safety (PRS) Grant program and encourages eligible entities to apply now for funds. Applications must be submitted electronically through the grant portal at https://usda-prs.grantsolutions.gov/usda by 11:59 p.m. Eastern Time on Monday, November 22, 2021. Approximately \$650 million in funding is available for the PRS grants, which are funded by the Pandemic Assistance provided in the Consolidated Appropriations Act of 2021.

The PRS Grant program will assist small businesses in certain commodity areas, including specialty crop producers, shellfish farming, finfish farming, aquaculture, and apiculture; specialty crop, meat, and other processors; distributors; and farmers markets. Small businesses and nonprofits in these industries can apply for a grant to cover COVID-related expenses such as workplace safety measures (e.g., personal protective equipment (PPE), retrofitting facilities for worker and consumer safety, shifting to online sales platforms, transportation, worker housing, and medical costs. The minimum funding request is \$1,500 and the maximum funding request is \$20,000.

The RFA and the PRS Grant Portal provide more details about eligibility for the grant. Eligible entities are required to obtain a free DUNS Number from Dun & Bradstreet (D&B) before applying for this program. USDA has created a custom PRS DUNS number portal at https://support.dnb.com/?CUST=PandemicResponse.

Application resources, including Frequently Asked Questions (FAQs), tip sheets in English and Spanish on applying for a DUNS Number, videos on "How to Apply" and more, are available on the PRS Grant Portal.

IMPERIAL VALLEY CIMIS REPORT AND UC WATER MANAGEMENT RESOURCES

Ali Montazar, Irrigation & Water Mgmt Advisor, UCCE Imperial & Riverside County

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.cim_is.water.ca.gov. Estimates of the average daily ET_o for the period of October 1 to December 31 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 (ET₀) in inches per day

	October		November		December	
Station	1-15	16-31	1-15	16-30	1-15	16-31
Calipatria	0.21	0.18	0.13	0.11	0.09	0.09
El Centro (Seeley)	0.22	0.18	0.14	0.12	0.10	0.09
Holtville (Meloland)	0.20	0.16	0.13	0.11	0.09	0.08

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/.



Ag Briefs - October 2021