



Imperial County

Agricultural Briefs



University of California
Agriculture and Natural Resources

Features from your Advisors

April 2021 (Volume 24 Issue 4)

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UPDATE: LIVESTOCK RESEARCH BRIEF

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

This month we have improved and updated the Livestock Research Brief to provide more information to our readers. It will still have the research brief as it has been presented before, but it will also several more articles related to the beef industry and the people who work in the industry. The newsletter is now called the CattleCal Newsletter. Regular updates will still be provided in the Ag Briefs. 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/

In more exciting news, we started a podcast! Called “CattleCal Podcast,” it will complement the CattleCal Newsletter with extra information and interesting interviews. Each month will have four episodes:

- Week 1: CareerCal. Interview with a person working in the cattle industry
- Week 2: ResearchCal. Interview with same person discussing research they’ve done
- Week 3: FeedlotCal. A discussion about the Feedlot Research Brief
- Week 4: Quiz Zinn. Question and answer with Dr. Zinn, a UC Davis professor and leading researcher in feedlot nutrition

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!

In March we talked to Brooke Latack, UCCE Livestock Advisor, about her journey to her position and some of the research she has done. We also discuss protein requirements for calf-fed Holstein steers in our FeedlotCal episode.

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

2021 Date Palm Webinar Series

Objectives: This webinar series provides a virtual platform to learn about ongoing and upcoming issues in date production including irrigation, weeds, insects and diseases, nutrition management and updates on current County and State laws and regulations. We will be offering one webinar session completely in Spanish (4/29), including a Laws & Regs talk.

Who Should Attend: California and Arizona date producers/growers, PCA's, and CCA's that are currently in the date palm industry, native habitat managers from public and private lands, and urban ornamental tree growing and management sectors.

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

Thursday, April 1

Time (PT)	Speaker	Topic/Title
10 AM	Albert Keck, Hadley Date Gardens, Inc. & CA Date Commission	Welcome & Current Status of California Date Production
10:30 AM	Ali Montazar, UCCE Imperial/Riverside Counties	Cost-Effective Tools and Technologies to Improve Irrigation Management in Date Palms

Thursday, April 8

Time (PT)	Speaker	Topic/Title
10 AM	Mark Hoddle, UCR	South American Palm Weevil Update
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

BREAK

No courses Thursday, April 15

Thursday, April 22

Time (PT)	Speaker	Topic/Title
10 AM	Ruben Arroyo – Riverside Ag Commissioner office	California Laws & Regulations Update
11 AM	Ricardo Salomon-Torres, Sonora State University, MX	Date Palm Status and Perspective in Mexico

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Thursday, April 29

Time (PT)	Speaker	Topic/Title
10 AM	TBD-Oficina del Comisionado de Agricultura de Riverside	Actualización de leyes y reglamentos para de California - en español
11 AM	Ricardo Salomon-Torres, Universidad Estatal de Sonora, MX	La Palma Detilera: Fuente de Alimentos, Endulzantes y Bebidas

Thursday, May 6

Time (PT)	Speaker	Topic/Title
10 AM	Thomas Perring, UCR	Management of insect and mite pests of dates
11 AM	Thomas Perring, UCR	Timing and amount of irrigation can impact date puffy skin – PART 1
11:30 AM	Robert Krueger, USDA/ARS	Timing and amount of irrigation can impact date puffy skin - PART 2

Contacts for More Information

Registration and Logistics: Kellie McFarland, anrprogramsupport@ucanr.edu, 530-750-1361

Course Content: Sonia Rios, sirios@ucanr.edu or Ali Montazar, amontazar@ucanr.edu

IMPATIENS NECROTIC SPOT VIRUS (INSV) OF LETTUCE UPDATE

Apurba Barman, Area IPM Advisor, UC Cooperative Extension-Imperial County
Alex Putman, Assistant Cooperative Extension Specialist, UC Riverside

- *Impatiens necrotic spot virus* (INSV) has been found in Imperial County (about 5 fields) and the Coachella Valley (1 field)
- Overall INSV incidence in these fields remains very low
- Symptoms of INSV infection were found in most lettuce type including Romaine, leafy and head.
- If you see suspected INSV symptoms, please contact Apurba (209-285-9810) or Alex (951-522-9556)

Observations in the Low Desert

Last month in Ag Briefs, we mentioned to be on the lookout for *Impatiens necrotic spot virus* (INSV) on lettuce. Since then, INSV has been confirmed in a handful of fields in Imperial County and one field in the Coachella Valley (Fig. 1). One of these locations is a head lettuce trial located at the UC Desert Research and Extension Center outside Holtville. At each location, disease incidence was generally very low-often a few isolated plants scattered throughout each field. California Department of Food and Agriculture Plant Pathologist Heather Scheck reports to us that INSV was found in Imperial County in 2018. In addition, a couple of PCAs have reported seeing symptoms similar to INSV before, also at low levels that were not cause for much concern. Therefore, it is possible INSV has been present in Imperial County for a few years. However, we are more concerned about it now because of the extent of damage it has caused in the Salinas Valley for the past two years. The outbreak in Yuma also increases our level of concern in the desert. According to John Palumbo, Bindu Poudel, and Stephanie Slinski with the University of Arizona in Yuma, since the initial find of INSV early this year, the virus infection has been found in nearly 40 fields in the Wellton-Mohawk Valley area, a couple of which had a severe outbreak with about 25% of plants affected. Fortunately, in the low desert of California, we have not observed or been made aware of a significant INSV outbreak on lettuce as the 2021 winter produce season wraps up.

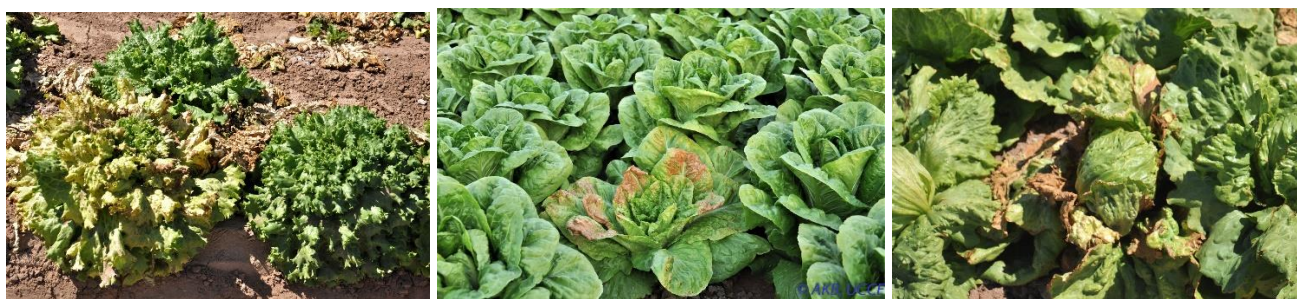


Figure. 1 INSV infected leaf lettuce (left), Romaine lettuce (middle) and head lettuce (right).

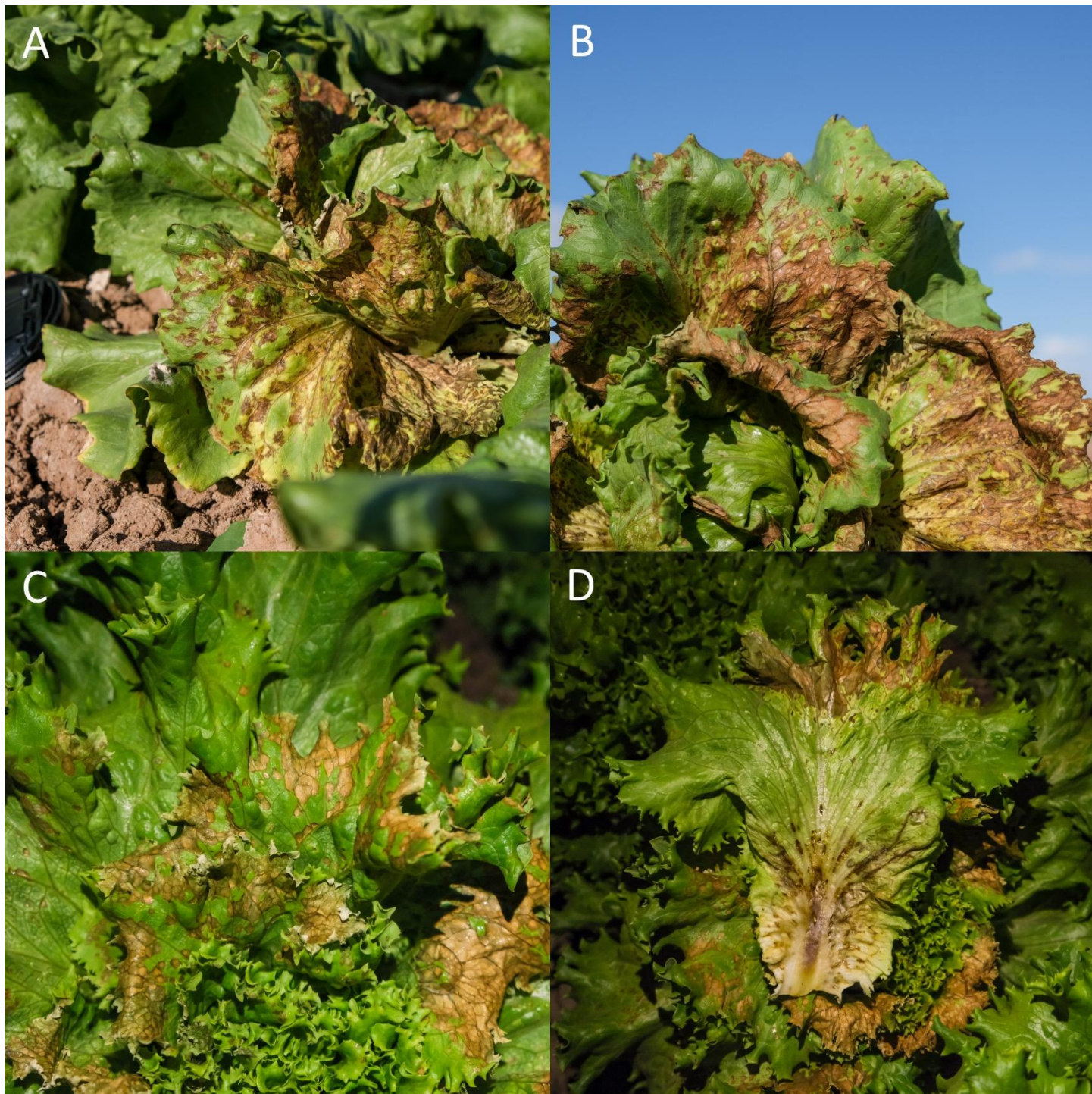


Figure 2. Symptoms of *Impatiens necrotic spot virus* (INSV) observed in Imperial County. **A and B**, necrotic spots on outer leaves of head lettuce. **C**, symptoms on leaf tips of green leaf lettuce. **D**, symptoms at the base of a leaf in a green leaf lettuce plant.

INSV Symptoms

Symptoms of INSV infection on lettuce sometimes can be confused with chemical or fertilizer burn. However, in most fields at a low incidence level, INSV symptoms are observed randomly on individual plants rather than any big patches or with any pattern. Both older and newer leaves develop dark brown to dead areas (necrotic spots) on leaf margins that can progress towards the core of the leaf (Koike et al. 2008). New infections could exhibit yellowing and deformation of leaves which would eventually lead to development of irregular dead areas (Fig. 2). In the absence of other pathogens such as *Sclerotinia* spp. (cause of lettuce drop), INSV-infected plants and their root systems remain strong and intact. However, INSV-infected plants could be severely stunted with dead leaf tissues and become unmarketable.

INSV Management

INSV is transmitted by several species of thrips. Western flower thrips (*Frankliniella occidentalis*) is the primary vector of concern in the Imperial Valley given the dominance of this species throughout the low desert and other parts of the state. Therefore, controlling thrips is an important step to reduce the risk of INSV incidence on lettuce crops. In order to infect lettuce plants with INSV, thrips must acquire the virus by feeding on already infected plant tissues at their immature stages. These plants serving as a source of the virus may be present inside or outside the field and could be both crops or weeds. Eliminating the sources of the virus, for example clean cultivation and weed management can also help in reducing the risk of INSV incidence. Identifying the plants that serve as reservoir hosts of INSV in the landscape and proper control of those plants is a strategy worth pursuing for long term management of INSV on lettuce crops. Some progress has already been made in this direction in the Salinas Valley, where researchers (Daniel Hasegawa, USDA-ARS; Richard Smith, UCCE and others) have identified a number of weed species such as nettleleaf goosefoot, little mallow, lambsquarter, and field bindweed that are serving as hosts of INSV. Although a lettuce variety resistant to INSV could be a solution to this viral disease, currently no commercial variety is known to confer resistance to INSV. Work is in progress to evaluate various breeding lines of lettuce in both field and green house conditions for future release (Simko et al. 2018).

References:

- Koike, S.T., Kuo, Y.W., Rojas, M.R., and Gilbertson, R.L. 2008. First Report of Impatiens necrotic spot virus infecting lettuce in California. *Plant Disease*. 92(8):1248.
- Simko, I., Richardson, C.E., and Wintermantel, W.M. 2018. Variation within *Lactuca* spp. for resistance to Impatiens necrotic spot virus. *Plant Disease*. 102(2):341-348.

Save the Date...

April 22, 2021

Agronomic Crops & Irrigation Water Management Field Day (Virtual)

Location: ZOOM WEBINAR

No Cost to Attend!

Presented by the

University of California Cooperative Extension Imperial County

More information to follow regarding the event; topics, agenda, CEU's, etc.



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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 Tulare (530-667-2719, rgwilson@ucanr.edu)



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.



United States
Department of
Agriculture

National Institute
of Food and
Agriculture

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

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:

Jim Correll, Univ. of Arkansas
Stephanie Slinski, Yuma Center for Excellence in Desert Agriculture

Funded By:

California Leafy Greens Research Program
2021-2022

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/>.

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