Field Notes
San Joaquin County
August 2024

University of California
Agriculture and Natural Resources

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Almond Red Leaf Blotch detected in San Joaquin County

Background. Red leaf blotch (RLB), caused by the fungal pathogen *Polystigma amygdalinum*, is one of the most important leaf diseases currently affecting almond trees in the Mediterranean basin, particularly in Spain, and in regions of the Middle East. In late May 2024, unusual symptoms on leaves, including yellow spots and orange to dark red-brown blotches, were detected in an almond orchard (Nonpareil, Monterey and Fritz) on the border of Merced and Madera counties. The disease has since been observed in Fresno, Madera, Merced, San Joaquin, and Stanislaus counties, indicating the disease is somewhat widespread in the Northern San Joaquin Valley. Following field sampling, as well as morphological and DNA/PCR analyses, our laboratory confirmed the detection of *P. amygdalinum* from symptomatic leaves. This is the first detection of *P. amygdalinum* from California almond, and the pest has formally been confirmed as being present in the state by both CDFA and the USDA. Growers and PCAs should be on the lookout for RLB as it is new to California and a serious disease of almonds.

Disease symptoms and biology. Symptoms of RLB initiate as small, pale, yellowish spots or blotches that affect both sides of the leaves (Figure 1). As the disease progresses, the blotches grow larger (1 to 2 cm) and turn yellow-orange with a reddish-brown center (Figure 2). At advanced stages of disease development, leaves become necrotic, curl, and drop prematurely. Mainly the leaves are affected, and premature defoliation of trees can occur. This decreases the photosynthetic capacity of the tree during the current growing season and in the following growing season, leading to a general decrease in orchard yield.

Figure 1. Early symptoms of red leaf blotch include small, pale yellowish spots or blotches that affect both sides of the leaves. (Picture credits: Alejandro Hernandez and Florent Trouillas).

Figure 2. Advanced symptoms of red leaf blotch include larger, yellow-orange blotches (1 to 2 cm) that turn reddish-brown in their center. (Picture credit: Brent Holtz).

The disease is monocyclic, with only one primary infection cycle. The primary source of inoculum is ascospores that form in perithecia (sexual fruiting bodies) on fallen infected leaves from the previous growing season. Infection occurs after petal fall when young leaves emerge and spring rains occur. Rain is essential for the release and dispersal of ascospores from perithecia. The disease may not be noticed before late April to mid-May as infection remains latent for approximately 35 to 40 days. Infected leaves develop small yellow blotches that expand and become orangish to reddish-brown, with variable shapes and sizes, as the fungus colonizes more leaf tissue. During spring/ summer, leaves contain the pycnidia (asexual fruiting bodies) of the fungus, which produce filiform conidia. These asexual spores do not cause new infection on leaves. Infection of leaves decreases drastically after June and with high summer temperatures. Rain combined with mild temperatures in spring and early summer generally lead to higher disease incidence.

Disease management. Research and experience in Spain where RLB is more common have shown that one

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preventive fungicide application at petal fall and two additional applications at two and five weeks after petal fall if rains persist are effective at controlling the disease. (This exact timing is not critical but depends on the occurrence of rainfall.) This means that fungicide applications and timing to control other common diseases of almond in California such as shot hole or anthracnose will likely also control this pathogen. Researchers in Spain also have shown that FRAC groups 7, 11, M3, M4 and some FRAC3 chemistries are most effective. Cultural practices, focused on eliminating the primary inoculum of infected fallen leaves, can also help mitigate the disease. These consist of removing leaf litter or applying urea to accelerate its decomposition. However, such strategies are only effective when applied over a wide area. Fungicides applied during bloom and after symptoms are visible are not effective.

If you suspect that you have this new disease in your almond orchard, please contact San Joaquin County Almond Advisor, Brent Holtz.

Florent Trouillas, Plant Pathology Extension Specialist, UC Davis
Brent Holtz, Orchard Systems Advisor and County Director

Invasive Carpophilus Beetle: How to Detect Its Infestation at Hull Split Almonds

Background. The new invasive carpophilus beetle, *Carpophilus truncatus* (Coleoptera: Nitidulidae), has been observed during the current season in several orchards in the northern San Joaquin Valley. Although this pest was first confirmed during the fall of 2023 in orchards in multiple counties of the San Joaquin Valley, this pest might have been in the area for a few years based on recent observations. This beetle has been a serious pest of almonds in Australia since its introduction, with an average of 2-5% damage reported annually. In California, we observed 4-19% damage in nuts collected after the harvest in two orchards in 2023. This beetle also attacks pistachios and walnuts, although the intensity of the overall damage seems to be comparatively less than that of almonds, based on preliminary reports in California. Carpophilus beetle is in the same family as other similar-looking beetle species, such as the dried fruit beetle (*Carpophilus hemipterus*), a secondary pest of peaches and figs in some years. None of these other species attack nut crops in the tree. Carpophilus beetle infests nut crops both pre- and post-harvest by directly feeding on nutmeats (i.e., kernels).

Seasonal ecology. In almonds, carpophilus beetle overwinters as adults in the remnant mummy nuts, mainly on the ground (Figure 1). The tiny black beetle (~2.5 mm long) has short wings exposing the latter segments of the abdomen with clubbed antennae. As the temperature rises in the spring, these adults become active and lay eggs on mummies. Eggs are tiny (1.5 mm long), creamy/white, and elongated (oblong) in shape. The larva has a brown head and "forked tail," which is creamy white in color. Pupation occurs in the soil, and newly emerged adults infest the ground mummies until the new season nuts are at the hull split stage. High temperatures, plenty of food sources, and some moisture on the ground can speed up its development, and it can complete one generation in as early as three weeks.

Figure 1. Carpophilus beetle (from left to right): a) egg, b) larva, c) pupa, and d) adult.

During hull split of the new season crop, adults move from ground mummies to fresh split nuts, where they lay eggs, and the cycle continues (Figure 2). Although we don't know how many generations they can complete in California, multiple generations are highly likely to occur.

Monitoring/damage detection. There are no reliable commercial traps available to monitor carpophilus beetle in California. Therefore, careful inspection of the nuts from the beginning of hull split is critical to detect the infestation early. We have observed beetles in new nuts as soon as the hull split occurs (3/8th inch opening). Hand cracking of the hull split nuts is effective in detecting infestation and identifying damage by the carpophilus. Adult beetles can be

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Figure 2. Adult carpophilus beetles inside the hull of the hull split almonds.

spotted crawling between the hull and shell. Adults chew the oval hole on the shell and lay eggs around the hole and/or on the kernel directly. It is possible that carpophilus beetle can get into the kernel in soft-shelled varieties like Nonpareil through the natural crack of the suture as the nut maturity advances. Having multiple beetles in one nut is very common. Eggs are tiny and can be seen singly or in masses when carefully checking the nut using a hand lens or microscope. One female can lay over 100 eggs in a lifetime. Egg hatches and larvae feed on the kernels directly. Often, multiple larvae can be found in one nut. After feeding for 1-2 weeks, mature larvae are believed to drop on the ground from the nut, and pupation occurs in the soil.

The feeding damage in the kernel can be diagnosed by fine powdery frass mixed with white/creamy nutmeat powder (Figures 3-4). This feeding sign can be distinguished from the navel orangeworm (NOW), which produces brown and bigger-sized frasses mixed with copious amounts of webbing.

Figure 3. Carpophilus beetle damage on fresh almond shell (left) and dried kernel (right).

Figure 4. Carpophilus eggs on the kernel (left) and larvae in the hull (right)

Management. Since carpophilus beetle is a new pest in California, IPM practices are being developed. In our experience over the last few months, we have learned that ground mummies are the only source of survival for overwintering, as well as spring/early summer populations. Even after the hull splits, adults continuously rely on ground mummies for reinfestation in new crops. So, the bottom line to effectively control this pest is proper sanitation of the orchard to remove or destroy mummy nuts. Winter sanitation is the known practice for NOW management. So, orchard sanitation can help to reduce the populations of these two notorious pests of California's nut crop industries. Insecticide application at hull split can be an additional control option if proven effective. However, this seems challenging due to the cryptic habit of the beetle hiding inside the fruit, and exposure to insecticide appears to be limited. Ongoing research aims to test the efficacy of multiple insecticides against this pest at hull split. Since carpophilus beetle is new to the California environment, research on several aspects of pest biology, ecology, and IPM tactics, including monitoring and control tools, are underway.

Acknowledgments. The initial phase of carpophilus beetle research has been funded by the Almond Board of California and the California Pistachio Research Board.

Jhalendra Rijal, IPM Advisor, Northern San Joaquin Valley
Mahesh Ghimire, Assistant Research Specialist, Stanislaus County

2024 Garbanzo Bean Variety Evaluation

In 2024, UCCE began evaluating garbanzo varieties in Central Valley regional trials. In a San Joaquin County commercial field, we evaluated six advanced lines from the UC Davis garbanzo breeding program and two standard varieties (UC 27 and Sutter). The soil types at the trial site were Jacktone and Galt clays, and the soil temperature was approximately 63°F at the time of planting. Due to wet spring conditions, planting was delayed until March 15th. Each variety was planted across four 40-inch beds (two rows per bed), on an average plot length of 884 feet. Planting depth was 1.5 inches, and the seeding rate was approximately 85 pounds per acre. An industry-standard fungicide seed treatment was applied to the seed before planting. Fertility and pests were managed by the grower in the same manner as the field, where the field variety was UC 27 and the previous crop was silage corn. Preplant herbicides were applied (Goal, Dual, and Chateau), but otherwise, the field received no other pesticide or fertilizer inputs. The field was irrigated one time at flowering.

This was a non-replicated evaluation; therefore, no statistical analysis is presented (Table 1, page 4). Stand counts were made approximately two weeks after planting on April 9th. The stand was assessed as the number of plants per two-foot length. Twelve replicate counts were averaged. In early May, we observed that Sutter and advanced lines 102, 104, and 110 had slightly earlier flowering than UC 27 and advanced lines 94, 95, and 96. We are interested in knowing whether the advanced lines have tolerance to Fusarium wilt and Ascochyta blight, but no diseases were observed at this location.

We harvested on July 25th. The plots in their entirety were combined and weighed. At harvest, the grower observed that lines 104 and 110 had an upright growth habit that made them easier to harvest. We measured harvest moisture on three subsamples, which were averaged for the summary table below, and we evaluated 100-seed weight as a measure of seed size, averaging five subsamples.

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We would like to thank Rob Norman for cooperating with us on this trial. We also thank Larry Kubo for providing the seed treatment, the CA Crop Improvement Association for funding regional trials, and to the CA Dry Bean Advisory Board for assistance with statewide research prioritization and outreach.

Michelle Leinfelder-Miles, Farm Advisor, San Joaquin County and Delta Region

Table 1. Harvest data of garbanzo advanced lines and varieties.

Variety/Line	Stand Count (plants/ac)	100-seed Weight at Harvest (g)	Harvest Moisture (%)	Harvest Yield (lb/ac)
94	91476	36.4	6.9	1417
95	92565	39.7	7.0	1490
96	93654	40.5	7.1	1476
102	91476	38.3	7.0	1540
104	86031	37.0	6.7	1611
110	92565	41.8	6.9	1513
Sutter	91476	33.1	7.2	1281
UC 27	92565	34.1	7.3	1179

Rangeland Wildfires and Forage Production

UCCE Advisors and Specialists have been researching wildfires on grazed landscapes more intensively for a few years now. Our efforts cover a wide swath of topics, from determining the value of forage loss due to a fire to how much fine fuels are removed by grazing and everything in between. I want to summarize a few key things we have found over the years to potentially help you as we move into what is shaping up to be a bad fire year.

Determining value of lost forage. After a wildfire, ranchers are left trying to decide what to do next, which often includes determining the value of the forage they lost. Everyone realizes they lost the standing forage they had saved for the fall, but the fire impacts the next two growing seasons as well. Through research plots, we have looked at forage growth after a fire and discovered that the growing season after the fire, there is a 40% reduction in forage production. The second year after the fire, there is still a 20% reduction. Why? Most of our annual grasses would have already dropped seeds for the fall and those seeds should not be damaged by the fire. We see a reduction because without any standing biomass (what we refer to as Residual Dry Matter – RDM) there is no microclimate to protect new seedlings as they germinate. The publication, Estimating the Cost of Replacing Forage Losses on California Annual Rangelands, UCANR Publication 8446, includes a set of spreadsheets helpful in determining how many tons of forage would have been lost in the current year, as well as in the next two growing seasons. The spreadsheet walks you through what you need to enter and then the final tab is where the value comes in, with replacing the forage with the price of hay delivered to the ranch. For more information and access to the spreadsheets, please visit: https://ucanr.edu/sites/forageloss/.

How many tons of fine fuels do cattle remove every year in California? For this, we used county Crop Reports, Ag Census data and UCCE data. Cattle are found in every county except San Francisco and graze on about 19.4 million acres of rangeland, primarily privately owned but with a mix of federal and other publicly owned lands in the mountains and desert areas. The amount per acre of fuel removal varied by region from 174 lb/ac in the southeast (desert) to 1020 lb/ac in the San Joaquin-Sierra region. The statewide average was 596 lb/ac. In the Santa Clara Unit Lightening Complex Fire (SCU Fire) footprint, we calculated forage removal by contacting landowners in the footprint to determine stocking rate (animal unit per acre). Grazing removed 10,602 tons of forage before the SCU Fire began in August 2020. We were able to calculate a reduction in emissions due to grazing, while also taking into consideration normal methane emissions from cattle grazing (rumination).

Flame length and grazing. Hand crews can fight fire on the ground if the flame length is below 4 feet. We wanted to see how high flames would be on different RDM levels. What we found was light to moderate grazing levels (from 2,500 to 1,250 lb/ac) would probably keep flame length around 4 feet but that there would be a higher chance the wildfire would keep burning. Moderate to heavy grazing (1,250 to 400 lb/ac) would keep flame length below 4 feet and would allow hand crews to stop the fire. Moderate to heavy grazing will have a patchy appearance, giving hand crews a better chance of stopping a fire.

Bottom line. Grazing plays a role in managing California's large landscape for many different benefits. Grazing not only can reduce the fire risk by removing fine fuels, grazing heavy in higher risk areas can increase the chances of low flame length and a higher likelihood of hand crews stopping the fire. By grazing, we are also reducing emissions from wildfires. I haven't even touched on how grazing can help extend the life of shrub removal, further reducing emissions. And grazing is done by all

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ruminants – cattle as well as sheep and goats. Yes, it is popular in some areas to see small ruminants grazing below houses or along a freeway with electric fencing, but cattle also play an important role. When there is a wildfire that destroys the ranch's forage base, ranchers should be compensated for what they have lost, and we have a mechanism to determine the value of lost forage. California's wildfire issue is not going to be solved overnight, but ruminant livestock can play an important role in the solution.

Theresa Becchetti, Livestock and Natural Resources Advisor, Stanislaus and San Joaquin counties

Weed Management in Agronomic Crops Survey

My name is Giuliano Carneiro Galdi, and I am the UCCE Agronomy and Weed Management Advisor for Merced and Stanislaus counties, with additional responsibilities for weed management in San Joaquin County. As an essential part of my research and education program, I am contacting my local clientele to learn the main concerns in our community and properly address these topics and issues with a clientele-focused research and extension program.

I look forward to collaborating with local farmers, industry, organizations, and the community in general to deliver science-based information focused on weed management in agronomic crops (e.g. alfalfa, cotton, corn, small grains, forages, etc).

I know filling out surveys is not our favorite thing to do, but this one is crucial for me to build a strong research program that is useful to growers in our region. I will work hard to be a reliable link between you and University of California's research.

All questions in the survey are optional, and responses are confidential. Thank you in advance for your time. Please feel free to contact me anytime at (209) 385-7403 or **gcgaldi@ucanr.edu**.
The link for the survey:
https://surveys.ucanr.edu/survey.cfm?surveynumber=43419

UC ANR Announcements and Calendar of Events

Hedgerows in Rice Field Demonstration Day
Wednesday, August 14, 2024
10:00am – 11:30am
Corner of Tule Road and Lodi Road, Colusa, CA 95932
See attached agenda.

UC Dry Bean Field Day
Thursday, August 15, 2024
9:30am – 11:45am
UC Davis, Agronomy Field Headquarters,
2400 Hutchison Dr., Davis, CA 95616
Contact: Michelle Leinfelder-Miles,
mmleinfeldermiles@ucanr.edu
See attached agenda.

Small Ruminant Workshop – Famacha
Monday, August 19, 2024
6:00pm – 8:00pm
Lander Vet Clinic, 4512 S. Walnut Road,
Turlock, CA 95380
Contact: Theresa Becchetti,
tabecchetti@ucanr.edu
See attached flyer.

UCD Vegetable Disease Field Day
Tuesday, August 20th, morning
UC Davis Plant Pathology field station, 1089 Old Davis Rd, Davis, CA, 95616 (38°31'23.9"N 121°45'25.6"W)
Full details coming soon, visit https://swettlab.faculty.ucdavis.edu/extension/ or email Brenna Aegerter bjaegerter@ucanr.edu

Rice Experiment Station Annual Field Day
Wednesday, August 28, 2024
7:30am-12pm (lunch included)
Rice Experiment Station, 955 Butte City Hwy.,
Biggs, CA 95917
For more information, visit https://crrf.org/event/california-rice-experiment-station-field-day/.

UC Rice Pest Management Workshop
Wednesday, September 4, 2024
7:30am – 3:00pm
Rice Experiment Station, West Hamilton Road between Hwy. 99 and Riceton Hwy., Biggs, CA
See attached agenda for registration information.

UC Alfalfa and Forage Field Day
Friday, September 13, 2024
7:30am-12:30pm (lunch included)
Kearney Agricultural Research and Extension Center,
9240 S. Riverbend Ave., Parlier, CA 93648
Contact: Michelle Leinfelder-Miles,
mmleinfeldermiles@ucanr.edu
See attached flyer for registration information.

Summer Forage and Cover Crops Field Day
Tuesday, September 17, 2024
10:00am – 12:00pm
USDA NRCS Plant Materials Center, 21001 N. Elliott Road, Lockeford, CA 95237
Contact: Theresa Becchetti,
tabecchetti@ucanr.edu
See attached flyer for registration information.

Western Alfalfa and Forage Symposium
December 10-12, 2024
Sparks, NV
For more information please visit:
https://calhaysymposium.com/. Registration coming soon!

Meeting Announcement

August 2024

UC CE | University of California
Agriculture and Natural Resources | Cooperative Extension

Hedgerows in Rice Field Demonstration Day

Wednesday, August 14, 2024

10:00am – 11:30am

Corner of Tule Rd & Lodi Rd, Colusa, CA 95932 *(39°00'44.3"N 121°55'54.1"W)*

Agenda

9:30am	**Registration**
10:00am	**Welcome and Introductions** *Whitney Brim-DeForest, UCCE Rice Advisor*
10:10am	**Hedgerow Demonstration Project Overview** *Whitney Brim-DeForest, UCCE Rice Advisor*
10:25am	**Weed Management in Hedgerows** *Rachael Long, UCCE Emeritus Advisor;* *Mandeep Riar, UCCE Restoration Ecology and Weed Science Area Advisor*
10:45am	**CDFA's HSP & SWEEP Update** *Heather Montgomery, CES Healthy Soils*
10:55am	**Hedgerow Plant Selection** *Sarah Marsh, UCCE Rice Advisor*
11:15am	**Hedgerows in Annual Crops** Jennifer Sanders, Wallace Brothers
11:30am	**Discussion & viewing of Demonstration Area** *Whitney Brim-DeForest, UCCE Rice Advisor* *George and Carson Tibbitts, Lodi Ranch*

No Registration Required!

Thank you for your participation!

*****1.0 CCA Credits Available*****

This project was supported by the California Climate Investments program (http://www.caclimateinvestments.ca.gov/) and the California Department of Food and Agriculture Healthy Soils Program (https://www.cdfa.gov/oefi/healthysoils/), with collaboration from UC Davis And UCANR

Healthy Soils Program
CDFA OFFICE OF ENVIRONMENTAL FARMING & INNOVATION

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Office (530) 822-7515 ♦ Fax (530) 673-5368 ♦ http://cesutter.ucanr.edu/

UC Dry Bean Field Day

Thursday, August 15, 2024
9:30am – 11:45am
UC Davis, Agronomy Field Headquarters, 2400 Hutchison Dr., Davis, CA
(Follow the UCCE sandwich board signs to the field location. Look for the pop-up tents.)

Agenda

9:15am	Arrival and sign-in
9:30am	Welcome and introductions Christine Diepenbrock and Antonia Palkovic, UC Davis Michelle Leinfelder-Miles, UC Cooperative Extension
9:35am	Developing breeding resources to improve lima bean adaptation and quality Christine Diepenbrock and Paul Gepts, UC Davis
9:40am	Seed and culinary traits in limas and evaluation of the USDA lima collection Jaclyn Adaskaveg, UC Davis, and Sarah Dohle, USDA-ARS
9:55am	Improving heat tolerance in grain legumes (with use of sensors and 3-D models) Sassoum Lo, Heesup Yun, and Earl Ranario, UC Davis
10:05am	Choosing varieties for pest resistance, high yields, and high quality – regional trial results Michelle Leinfelder-Miles and Nick Clark, UC Cooperative Extension
10:20am	Cowpea breeding for California Bao-Lam Huynh, UC Riverside
10:35am	Travel to Bee Biology Road
10:45am	Lima and chickpea breeding for California Antonia Palkovic and Christine Diepenbrock, UC Davis
11:00am	In-field agronomic evaluation of lima lines for culinary testing Antonia Palkovic and Jaclyn Adaskaveg, UC Davis
11:10am	Genotypic and environmental variation in nutritional traits in common bean Tayah Bolt, UC Davis
11:15am	Improving chickpea for aluminum tolerance and more effective nitrogen fixation Laura Perilla-Hanao, Ali Said, and Douglas Cook, UC Davis
11:25am	Defending lima beans from lygus bugs: breeding and emerging technologies Kimberly Gibson, UC Merced (alumna of UC Davis)
11:40am	Discussion and evaluation

DPR continuing education credits pending approval. CCA credits will be offered (1.0 of PM; 1.0 of CM).
Light refreshments will be provided.

UC CE

SMALL RUMINANT

WORKSHOP - FAMACHA

Learn how to manage your flock to reduce parasites, and determine which animals need treatment with FAMACHA scorecard.

WHERE

Lander Vet Clinic - 4512 S Walnut
Turlock, CA

WHO

Anyone who would like to learn FAMACHA and parasite management. Dinner included.

WHEN

August 19, 2024, 6:00pm - 8:00pm

HOW MUCH

Free unless you want FAMACHA certification, then $15.00 per family. EVERYONE gets hands on learning!

209-525-6800

https://ucanr.edu/famacha

UC CE UNIVERSITY OF CALIFORNIA Agriculture and Natural Resources Cooperative Extension

2024 Rice Pest Management Course
Wednesday, September 4, 2024

Hamilton Road Field (West Hamilton Rd. between Hwy. 99 & Riceton Hwy., Biggs, CA)
and **Rice Experiment Station** (955 Butte City Hwy., Biggs, CA)

This year will mark the 5th rice-specific pest management course at the Hamilton Road Field and the Rice Experiment Station in Biggs, CA. The day will begin with an interactive field tour of the herbicide research plots (Hamilton Road Field) where attendees can get up close to the weeds and rice (bring your boots!) The morning continues with a hands-on weed identification session on emerging and mature weeds, a disease identification session and a weed ID quiz. Following a light lunch, speakers will address several pertinent topics in CA rice, including arthropods and diseases, a regulatory update, weedy rice, new herbicides, and how to construct a weed management program. *CE credits pending.*

Agenda

BRING YOUR BOOTS!

7:30-8:00am	**Check in at Hamilton Road Field**
8:00-8:10am	**Introduction** - *Whitney Brim-DeForest, UCCE*
8:10-9:40am	**Tour of rice field research plots** - *Deniz Inci, Saul Estrada, Michael Lynch, UC Davis*
9:40-10:00am	**Travel from Hamilton Road Field to Rice Experiment Station** **Morning Break**
10:00-11:00am	**Breakout Sessions:** 1. Station A: Weed ID - Grasses and Weedy Rice - *Whitney Brim-DeForest, UCCE* 2. Station B: Weed ID - Broadleaves and Sedges - *Sarah Marsh, UCCE* 3. Station C: Disease and Invertebrate ID - *Luis Espino, UCCE; Ian Grettenberger, UC Davis*
11:00-11:30am	**Pest Identification Quiz** - *Whitney Brim-DeForest, UCCE*
11:30-12:15pm	**Light Lunch**
12:15-12:30pm	**Integrated management of rice diseases** - *Luis Espino, UCCE*
12:30-12:45pm	**Pesticide laws, regulations and permit conditions** - *Craig Riddle, CA Rice Commission*
12:45-1:00pm	**Integrated management of rice invertebrates** - *Ian Grettenberger, UC Davis*
1:00-1:15pm	**Algae and Nostoc management** - *Jens Beets, USDA*
1:15-1:30pm	**Afternoon Break**
1:30-1:45pm	**Common rice permit condition violations** - *Louie Mendoza, Butte County Ag Commissioner*
1:45-2:00pm	**New rice herbicides to manage herbicide-resistant weeds in CA** - *Deniz Inci, UC Davis*
2:00-2:15pm	**Emerging weeds** - *Sarah Marsh, UCCE*
2:15-2:30pm	**Watergrass management and double propanil alternatives** - *Whitney Brim-DeForest, UCCE*
2:30-2:45pm	**Evaluation and Wrap-up**

REGISTER NOW!

Last day for registration will be August 30th!

Received before Aug 15: $65
Received after Aug 15: $75

Questions? Call UCCE Sutter-Yuba, 530-822-7515 or visit https://agronomy-rice.ucdavis.edu/

UCDAVIS UNIVERSITY OF CALIFORNIA

UNIVERSITY OF CALIFORNIA

California Cooperative Rice Research Foundation, Inc. Rice Experiment Station

2024 Kearney Field Crops, Alfalfa and Forage Field Day

September 13, 2024

7:00 am - 12:00 pm

FREE

Kearney Ag. Research and Extension Center

9240 South Riverbend Avenue
Parlier, CA 93648

Registration:

https://surveys.ucanr.edu/survey.cfm?surveynumber=43346t

More info: gcgaldi@ucanr.edu

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LOCKEFORD PMC
21001 N. ELLIOTT RD,
LOCKEFORD, CA

JOIN US

SEPTEMBER 17, 2024

FALL FIELD DAY

LOCKEFORD PLANT MATERIAL CENTER

Summer Forage and Cover Crops
DEMONSTRATION PLANTING:

- ✔ Warm Season Perennials Grasses
- ✔ Warm Season Annual Grasses
- ✔ Legumes & Forbs

USDA United States Department of Agriculture
Natural Resources Conservation Service

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

WESTERN COVER CROPS COUNCIL

SARE Western Sustainable Agriculture Research and Education

Kamprath Seeds

Register:
https://ucanr.edu/fallforage
209-525-6800

USDA is an equal opportunity provider, employer, and lender

UC CE

University of California
Agriculture and Natural Resources

Cooperative Extension
San Joaquin County

2101 E. Earhart Ave., Suite 200
Stockton, CA 95206-3949

Notes from the Field

August 2024

The University of California working in cooperation with San Joaquin County and the USDA.