Field Notes
San Joaquin County
February 2024

University of California
Agriculture and Natural Resources

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Dormant and Early Season Management of Summer Bunch Rot and Sour Rot

As California vineyards are now dormant, the battle against summer bunch rot and sour rot is far from over. The aftermath of the previous season's afflictions, fueled by weather conditions that promoted vine vigor and dense canopy growth as well as increasing fungal disease pressure, has growers affected by rot in 2023 focused on preventing a repeat this year. Furthermore, once summer bunch rot has had the opportunity to set in late in the growing season, the best of treatment can only hope to hold disease incidence to its current extent. In other words, the damage caused by rot can't be reversed and highlights the importance of disease prevention. The removal of infected fruit and canes during winter pruning to reset the stage for a clean start this coming season is key (Fig. 1). This critical step involves carefully pruning away dormant canes along with diseased clusters, placing them in the row middles, and incorporating them into the soil. Infected material, such as berries, canes, and leaves, can harbor *Botrytis cinerea*, a primary pathogen in bunch rot along with many other fungal pathogens. Rigorous sanitation during winter pruning is essential to minimize the potential for disease at the start of the upcoming season especially in vineyards that experienced high levels of rot last year.

Figure 1. Unharvested grapes affected by summer bunch rot can be a source of inoculum in the next season if allowed to remain in the vineyard.

Early Season Vigilance: Canopy Management

Beginning shortly after bud burst, effective and timely canopy management is foundational for disease prevention for the season. The objective is to create a canopy that allows for optimal air circulation and sunlight penetration. This involves strategic thinning and spacing of vine shoots, tailored to each vineyard's site/vine vigor, and production goals (Fig. 2). Regular leaf pulling and shoot positioning are essential in maintaining an open canopy, which significantly reduces the humid conditions that favor rot development. Canopy management techniques such as shoot thinning, leaf removal, and light pruning can modify canopy architecture, influencing reproductive performance and berry ripening. Shoot thinning and leaf removal are particularly effective in decreasing leaf area index and increasing canopy porosity and light interception, positively affecting berry ripening and reducing disease pressure. Additionally, early leaf removal has been shown to affect the source-sink balance in grapevines, leading to a reduction in fruit set, which could result in looser clusters and improved grape composition.

Figure 2. Shoot thinning early in the season promotes air circulation, light infiltration, and increases spray penetration to help decrease fungal diseases throughout the season.

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Understanding and Managing Summer Bunch Rot and Sour Rot

Prevention is the most effective approach against summer bunch rot and sour rot (Fig. 3). These diseases infect fruit by exploiting any wounds on berry skins, such as those caused by mechanical damage, bird pecking, powdery mildew infection scars, and even sunburn. Therefore, minimizing these injuries is crucial, which includes implementing bird control measures, using gentle handling during mechanical operations, and employing sunburn prevention through canopy management. Summer bunch rot is a disease complex caused by one or more of multiple organisms such as *Botrytis cinerea*, *Aspergillus tubingensis*, *A. carbonarius*, *A. niger*, *Alternaria* sp. *Cladosporium* sp., *Rhizopus* sp., and *Penicillium* sp.

Sour rot is a polymicrobial disease involving native yeasts and acetic acid bacteria, particularly in the presence of *Drosophila* fruit flies. The disease is a result of a complex interaction involving these microorganisms, which leads to the decaying of berries with high amounts of undesirable volatile acidity.

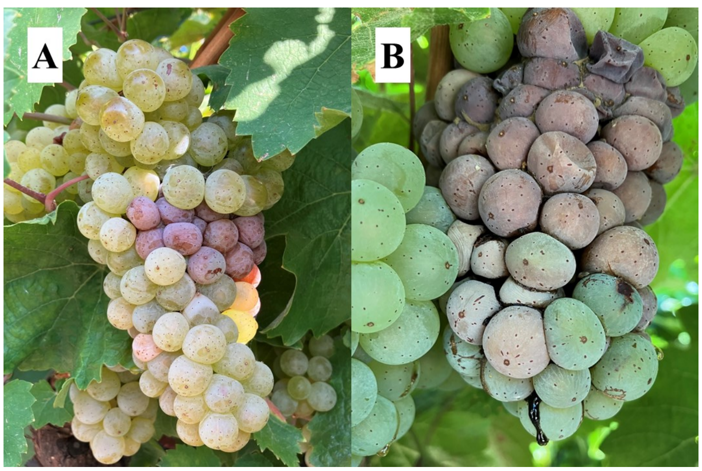

Figure 3A) Botrytis and 3B) Sour rot on clusters of Riesling. While similar in appearance due to oxidative browning of affected berries, sour rot can be easily distinguished by the leakage of fluid and vinegar odor emitted from rotting fruit.

A Preventative Stance

A proactive approach to disease management involves more than just properly timed fungicide applications. It's about creating a canopy environment less conducive to disease. This means balancing vine vigor through careful water and nutrient management. Excessive vigor, often resulting from over-irrigation or over-fertilization, can lead to dense canopies that favor disease development. In California's Central Valley, for example, monitoring evapotranspiration using remote sensing data has proven to be an effective tool for optimizing irrigation management, ensuring vines receive adequate but not excessive water, thus reducing disease pressure. When it comes to fungicides, the key is timing and rotation. Applications should be strategically timed based on disease forecasts (https://ipm.ucanr.edu/weather/grape-powdery-mildew-risk-assessment-index/) and vineyard conditions, and products should be rotated to prevent resistance build-up.

Impact of Insects on Disease Development

Insects, particularly fruit flies, play a significant role in the facilitation and development of sour rot. The presence of these insects significantly increases the severity and incidence of berry rot diseases. In grapevine, fruit flies prefer the shelter of a dense canopy which provides a more humid environment sheltered from wind. When sour rot occurs several weeks before harvest and fruit flies are present, simply dropping the fruit below the vine is not enough to prevent it from spreading. New adults emerge from infested fruit after only 7-8 days and will simply migrate back up into the canopy to repeat the cycle of infection and rot if not removed from the vineyard. In mechanically harvested wine grapes, if sour rot occurs close to harvest and rot levels are low, dropping fruit may be done right before harvest to exclude it from compromising the quality of the crop. The emergence of resistance to fungicides and insecticides among pathogens and insect vectors, respectively, is a growing concern. Studies have shown that *Drosophila melanogaster* populations in vineyards have developed resistance to commonly used insecticides due to their numerous short reproductive cycles within a season, leading to control failures of sour rot. This highlights the importance of monitoring for resistance and use of integrated pest management strategies.

For grape growers, the challenge of managing summer bunch rot and sour rot requires a blend of careful planning, vigilant monitoring, and adaptive management practices. Each season presents an opportunity to learn and refine these strategies, aiming for a balance between environmental stewardship and effective disease control. With diligence and a commitment to these practices, growers can look forward to a season with reduced disease pressure and healthier vineyards. Additional management considerations can be found at: https://ipm.ucanr.edu/agriculture/grape/summer-bunch-rot-sour-rot/ and https://ucanr.edu/sites/eskalenlab/Fruit_Crop_Fungicide_Trials/

Justin Tanner, Viticulture Farm Advisor

2023 Blackeye Bean Variety Evaluation

We evaluated blackeye bean varieties in a commercial field in Stanislaus County. The season began with cool and wet spring conditions, which lasted through the month of June and delayed planting. Seven varieties from the University of California blackeye breeding program were planted on July 7th. The varieties were grown on a Hanford sandy loam, and the soil temperature was approximately 75°F at the time of planting. Each variety was planted across six 30-inch beds, on a row length of approximately 275 feet. The seeding rate was 40 pounds per acre. This was a non-replicated evaluation due to a limitation in seed; therefore, no statistical analysis is presented.

The trial was planted in a field of CB46, and fertility and pests were managed by the grower in the same manner as the field. Data are presented in Table 1. Stand counts were made approximately two weeks after planting on July 20th. The stand was assessed as the number of plants per two-foot length. Twelve replicate counts were averaged. We evaluated aphid and lygus damage on September 8th, which

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were low due to the grower's management. For lygus, we took 10 sweeps from four locations in each plot and counted the lygus. Data were averaged and are presented as a 10-sweep count. For aphids, we used a rating scale from 0 to 10 that accounted for visible crown damage and aphid incidence. In addition to the in-field assessment of lygus, we also evaluated harvest samples for stings and found that, on average, about 1.2 percent of the beans had lygus damage. No diseases were observed.

We harvested on November 6th. All six rows of each variety were cut and raked into one windrow. At the time of cutting, the grower observed that CB77 plants were laying flat, but they were laying in such a way that the knives still picked up the plants. The grower also observed that CB74 had an upright growth habit that could potentially make it a variety viable for swather cutting. We evaluated 100-seed weight as a measure of seed size, evaluating five 100-seed samples per variety.

We would like to thank Martin Squires for cooperating with us on this trial, 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

Giuliano Galdi, Agronomy and Weed Management Advisor, Merced, Stanislaus, and San Joaquin counties

Table 1. 2023 blackeye bean variety evaluation results.

Variety	Stand Count (plants/ac)	In-field Lygus Counts (#)	In-field Aphid Score	Beans with Lygus Stings at Harvest (%)	100-seed Weight at Harvest (g)	Harvest Moisture (%)	Yield at 13% moisture (lb/ac)
CB2	74778	4	0	1.2	22.0	14.8	2436
CB5	72600	4	0	2.0	25.2	15.6	2258
CB46	76230	3	0	1.0	22.6	15.5	2520
CB50	72600	4	0	0.6	25.7	15.5	2157
CB69	73326	3	0	0.4	22.0	15.2	2685
CB74	79860	5	0	1.4	21.8	14.9	2694
CB77	70422	4	0	2.0	20.2	14.5	2969

ABC's of Winter Cereal Forages: Yield vs. Quality

Spring and winter cereal forage harvests are quickly approaching. Winter cereals are often the foundation of dry cow and replacement heifer diets. Depending on its quality, cereal silage can also be a component in lactating cow diets.

Work out of the University of Minnesota Extension (https://blog-crop-news.extension.umn.edu/2022/12/winter-rye-forage-yield-and-nutritive.html) demonstrated increased forage yield as winter rye matured from vegetative stages to flowering (Fig. 1). As forage matured, digestibility decreased.

Harvesting winter cereals with a focus on forage quality is challenging. Variable spring rains complicate when forages can be harvested. Typically, winter cereals are harvested with more consideration for forage yield than quality, but quality should not be overlooked. This may be increasingly important as water restrictions reduce California's ability to produce year-round forage.

Many factors affect forage quality. Important factors include plant species, variety, grain development, and plant maturity at harvest. With most forage plants, forage quality decreases with advancing plant maturity. A decrease in crude protein and an increase in fiber leads to decreased digestibility, and therefore, a decrease in energy content. For alfalfa hay, the California system uses acid detergent fiber (ADF) to measure quality. As ADF increases, alfalfa forage quality decreases. The relationship between maturity and fiber composition is not as straightforward for cereals.

Early work at UC Davis included a commercial winter forage mix containing oats, barley, wheat, and vetch harvested for hay. Forage was harvested at four stages of maturity based on the stage of maturity of the oats: bloom (flower), milk, soft dough, and hard dough. As maturity

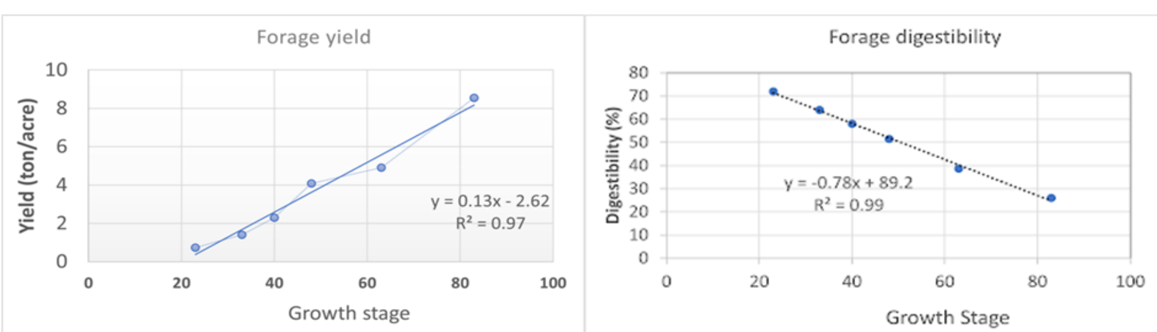

Figure 1. Winter rye forage yield and digestibility by growth stage (figures from UMN article).

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advanced, protein and fiber both decreased (Table 1). Wait! We just said that with advancing maturity, fiber of the plant increases. The complication with cereal forage is that as the plant matures and starts to set seed, the seed head becomes a larger proportion of the harvested weight. Because of this, as a proportion of the total plant dry matter, fiber declines. What is important to measure with cereal forages, in addition to fiber, is lignin. As the plant matures, the lignin content of the stems increases. Lignin helps the plant to stand upright. Lignin is indigestible and because it chemically associates with fiber (cellulose and hemicellulose), lignin decreases fiber digestibility by the rumen microbes.

In the lab (in vitro using rumen fluid), digestibility of dry matter decreased with advancing maturity. These four differing cereal forages were fed to sheep to measure digestibility (in vivo*)*. As maturity increased, digestibility of fiber decreased, and the overall impact was decreased energy digestibility (Table 2). Lignin content was highly correlated with digestibility. As lignin content increased, forage digestibility decreased. Fiber content was not related to a decrease in digestibility.

One consideration for cereal mixes is that the different cereal species do not always mature at the same time. Barley is often the first to boot stage and wheat the last. These differences in species maturity will impact forage quality of the forage mix harvested. Check with your seed representative to learn what the maturity times are of each component in the forage mix so you can better determine if this will meet your quality goals.

Take Home Message: As cereal forage matures, forage quality (digestibility and energy content) decreases, but dry matter yield increases. Fiber composition alone is not an adequate predictor of forage quality for cereal forages; lignin is an important chemical constituent to measure. Cereal silage harvest decisions should reflect your goals for forage yield and forage quality. This will likely depend on what other sources of forages or fibrous byproducts you have available.

Ed DePeters, Professor, UC Davis Animal Science
Jennifer Heguy, Dairy Advisor, Stanislaus, Merced, and San Joaquin counties

Table 1. Chemical composition of cereal forages harvested as hay.

	Bloom	Milk	Soft Dough	Hard Dough
Crude protein, %	9.5	9.0	8.5	7.5
Acid detergent fiber, %	41	40	39	37
Neutral detergent fiber, %	66	64	64	62
Lignin, %	4.6	4.4	4.7	5.3
In vitro dry matter digestibility, %	56	56	54	52

Table 2. Apparent digestibility of cereal forages harvested as hay.

	Bloom	Milk	Soft Dough	Hard Dough
Dry matter, %	55	55	52	49
Crude protein, %	60	60	66	60
Acid detergent fiber, %	48	44	40	35
Neutral detergent fiber, %	52	50	45	39
Total digestible nutrients, %	48	47	45	44

Processing Tomato Variety Evaluation

Many of our commercial processing tomato varieties are now resistant to Fusarium wilt race 3. This is great, but unfortunately this resistance does not translate into any protection against the other two Fusarium diseases we are seeing in local fields. There are a few varieties with resistance to Fusarium crown rot (e.g. HM varieties 5522, 5511 & 8237; SVTM varieties 9018, 9021, 9025 & 9032), but again this does not correlate with resistance to a third disease, Fusarium stem rot and decline (FRD), which can also cause a crown rot but is a different species of Fusarium. Thus far, there does not seem to be any resistance to FRD among our commercial varieties, but we do see a range of susceptibility to the disease. Some varieties seem to yield well despite being infected – this is in part due to having extended field holding trait – if vines decline late in the season but the fruit resist mold and breakdown. We have been evaluating commercial and pre-commercial varieties for susceptibility to FRD vine decline and machine harvested yield.

The results below (Table 1 pg. 5) are from a project in collaboration with Patricia Lazicki, Farm Advisor in Yolo, Solano and Sacramento counties, and the seed retailer AgSeeds. Field 3 from this table is a local commercial field located on Roberts Island. The trial was mechanically transplanted on May 31st, and plots were machine harvested on October 18th (140 days). Fields 1 and 2 are in the Sutter Basin. The Sutter fields were transplanted in the second half

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of April and harvested in mid- to late-August (120 to 134 days). The vine decline that we observed was primarily due to Fusarium stem rot and decline (FRD), although fields 1 and 2 also had some Southern blight incidence, and field 3 had some Fusarium wilt in the two varieties that did not have F3 resistance. Varieties with the highest yield performance included SVTM9016, SVTM9037, HM8237, SVTM9041, and SVTM9036 – all of which have the extended field holding (EFH) trait. We acknowledge the generous cooperation of AgSeeds, the grower-cooperators, the Swett lab at UC Davis, and the Processing Tomato Advisory Board for conducting the fruit quality tests.

Brenna Aegerter, Vegetable Crops Advisor

Table 1. Performance of 26 processing tomato varieties in replicated trials in the Sutter Basin (fields 1 & 2) and the central Delta (field 3).

		Vine decline (%)				Yield (tons/acre)				
Variety	Dis res[x]	field 1	field 2	field 3	Disease rank	field 1	field 2	field 3	average	Yield rank
HM8268	F3	0.0	5.8	9.6	1	71.33	47.50	43.59	54.14	14
HM8237	F3, Fr	1.6	10.9	8.1	2	72.49	48.64	58.32	59.82	3
SVTM9016	F3	0.8	9.4	11.6	3	69.93	58.56	58.52	62.34	1
SVTM1082	F3	0.4	4.9	19.2	4	63.53	49.73	43.56	52.27	19
HMC8512	F3	2.5	14.7	7.6	5	66.94	43.72	44.64	51.77	22
SVTM9037	F3	1.5	3.6	20.2	6	71.56	56.93	51.93	60.14	2
N6428	F3	1.3	4.1	22.2	7	71.18	51.34	47.96	56.83	7
HM58841		1.7	3.8	22.2	8	71.43	53.41	48.53	57.79	6
SVTM9034	F3	4.2	6.3	17.7	9	68.36	53.76	41.94	54.69	13
SVTM9011	F3	1.7	10.8	18.7	10	61.21	46.62	42.20	50.01	25
N6475	F3	2.0	3.0	29.8	11	66.42	50.18	36.29	50.96	24
BP74	F3	5.4	9.5	22.7	12	66.09	48.70	46.48	53.76	15
SVTM9019	F3	2.3	7.5	28.8	13	71.35	56.29	39.99	55.88	10
SVTM9036	F3	13.4	22.4	13.1	14	75.28	47.09	51.78	58.05	5
H2016	F3	2.6	29.6	19.2	15	70.56	43.08	54.60	56.08	8
SVTM9041	F3	3.6	37.5	11.1	16	75.50	49.35	52.79	59.21	4
HM5511	F3, Fr	4.8	36.8	11.1	17	68.53	47.13	40.66	52.11	20
SVTM9040	F3	13.9	26.8	14.1	18	65.46	43.48	52.17	53.70	16
HM5522	Fr	16.6	6.4	44.9	19	70.16	49.15	48.51	55.94	9
H1662	F3	1.3	15.3	52.5	20	64.35	43.17	46.19	51.24	23
SVTM9013	F3	8.5	49.5	11.6	21	64.79	40.84	51.26	52.30	18
HMC0371	F3	5.3	31.7	34.3	22	66.89	51.55	46.14	54.86	12
SVTM9023	F3	6.0	58.6	19.7	23	75.00	42.50	49.26	55.59	11
SVTM9032	F3, Fr	3.8	62.0	25.8	24	65.74	38.29	40.99	48.34	26
SVTM9021	F3, Fr	5.7	61.1	26.3	25	67.94	42.65	47.91	52.83	17
H1996	F3	12.3	86.4	48.5	26	69.67	36.11	50.21	52.00	21
trial mean		4.7	23.8	22.0		68.91	47.68	47.56		
P value		*0.001*	*<0.0001*	*0.0125*		*<0.05*	*<0.05*	*0.0011*		

Rankings are based on the average of three locations: for vine decline, 1 = lowest rate of vine decline. For yield, 1 = highest yields.

Disease resistance information is what is reported to us as anticipated by the seed companies.
F3 = Fusarium wilt race 3; Fr = Fusarium crown and root rot caused by *F. oxysporum* f. sp. *radicis-lycopersici*.

2023 Rice Variety Trial Results

UC Cooperative Extension collaborates with the California Rice Experiment Station to evaluate commercial varieties and advanced breeding lines. The San Joaquin County Delta location was one of nine locations in the 2023 statewide trial. The Delta is a test site for very-early and early maturing varieties because it has cooler growing conditions than other rice growing regions of the state.

The trial was drill-seeded on April 27th at a rate of 150 lb/acre, and varieties were replicated three times as 150 ft^2 plots. The trial was planted in a field of M-206, and fertility and pests were managed by the grower in the same manner as the field. We harvested the trial on October 12th, and yield was determined by hand-harvesting a 15 ft^2 area from each plot.

Table 1 shows results from the Delta location (advanced breeding lines omitted). Among the entries, M-206 is the most commonly planted variety in the Delta and across the state. It has good agronomic characteristics and consistent quality across different harvest moistures. Some Delta growers also plant M-105, which is a very-early variety that has yielded well in Delta trials but may be slightly more susceptible to rice blast disease than M-206. Among the newer varieties, M-210 is early maturing, blast resistant, and may be a good option for the Delta. While variety M-211 performed well in 2023, it is not as well adapted to cooler environments as M-210 and has had variable performance over the last three years (Table 2). Also, M-211 quality tends to decrease below 18 percent harvest moisture. Statewide results of all nine testing locations will be available soon from the UC Rice Research and Information Center website (https://agronomy-rice.ucdavis.edu/).

Special thanks go to Trevor Carlson for hosting the Delta variety trial. Thanks also go to Bruce Linquist and Ray Stogsdill, UC Davis, for coordinating the statewide effort, and to the CA Rice Research Board for financially supporting it. If you have questions about the trial or about Delta rice production, please don't hesitate to reach out to me, and good luck in 2024!

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

Table 1. 2023 Delta rice variety trial results.

Variety	Grain Type	Yield at 14% Moisture (lb/ac)	Moisture at Harvest (%)	Seedling Vigor (1-5)	Days to 50% Heading	Lodging (0-100)	Plant Height (cm)
L-208	L	11570	17.7	4.9	108	0	90
A-202	L	10750	15.9	5.0	114	0	103
L-207	L	10710	15.9	5.0	114	0	99
S-202	S	10280	19.9	4.9	112	0	98
S-202	S	10070	18.1	4.9	109	0	90
CM-203	S	9710	20.1	4.9	111	0	97
S-102	S	9550	16.3	4.9	107	0	91
M-211	M	9500	18.9	5.0	113	0	96
M-206	M	9490	18.0	4.9	109	0	95
M-210	M	9370	19.3	5.0	109	0	92
CH-203	S	9270	17.6	4.9	114	0	95
CM-101	S	8940	16.4	4.9	109	0	97
M-209	M	8900	19.2	5.0	114	0	97
M-105	M	8360	18.0	5.0	108	0	95
CJ-201	L	8050	19.2	5.0	117	0	94
M-521	M	7670	17.3	5.0	110	0	88
CA-201	S	7480	17.1	4.9	110	0	101
CT-202	L	7160	15.9	4.9	112	0	96
Average		9268	17.8	5	111	0	95

Table 2. Three-year Delta trial yield summary (lb/acre at 14% moisture).

Location	Year	M-105	M-206	M-209	M-210	M-211	M-521
San Joaquin	2021	10700	10090	8590	9950	9940	10710
	2022	9070	9150	7200	9060	7810	8990
	2023	8360	9490	8900	9370	9500	7670
Location Mean		9377	9577	8230	9460	9083	9123
Statewide Mean		8790	8815	8700	8758	8856	8537

New Herbicide Registered in California Rice for 2024: Cliffhanger™

California rice growers will have a new herbicide available this year: Cliffhanger™, manufactured by Gowan Co. The active ingredient is benzobicyclon, which is the same as one of the two active ingredients in the currently-registered herbicide, Butte®. Cliffhanger™ is a soluble liquid formulation (SC) which can be applied by ground-rig or airplane, including as a direct-stream application into the water. In contrast, Butte® is a granular formulation, as a pre-formulated mixture of benzobicyclon and halosulfuron. To use either product, applicators must attend a training and be certified. Dates for the training are posted on the California Rice Commission calendar (https://calricenews.org/events/), as well as the UC Rice website.

Controlled weeds are sprangletop, ricefield bulrush, and smallflower umbrella sedge. The application timing begins from day of seeding up to 82 days before harvest. Recommended timing for sedges is pre-emergent up to the 5-leaf stage, and for sprangletop, pre-emergent up to the 2.5 leaf stage as well as at tillering.

Flood water should be a minimum of 4 inches when the product is applied. The active ingredient, benzobicyclon, is a proherbicide, meaning that it is not active until it comes into contact with water. Therefore, for maximum efficacy, water should be held in the field for at least 5 days. Longer periods of flooding will result in better efficacy, whereas a drain soon after application will both reduce efficacy as well as encourage a new flush of weeds. The recommended waterhold is 10-14 days for maximum efficacy.

Cliffhanger™ should only be applied once per season. It is not recommended that it be applied in the same season as any other HPPD-inhibitor product (Butte®). Applying both in the same season can select for herbicide resistance and may cause significant phytotoxicity to the rice. Repeated applications, both during the same season, or season after season, can select for resistance, particularly in sprangletop, ricefield bulrush, and smallflower umbrella sedge.

Remember to always follow all label instructions when applying any pesticide, as the label is the law. Make sure to pay particular attention to the Use Precautions and Restrictions. Consult your local Agricultural Commissioner's Office regarding buffer zones and aerial restrictions, before making any applications. The label and SDS are available here. https://www.gowanco.com/products/cliffhanger-sc-herbicide.

Whitney Brim-DeForest, Rice Advisor, Sutter-Yuba counties
Roberta Firoved, Pesticide Regulatory Consultant

UC ANR Announcements and Calendar of Events

Rangeland Summit
Friday, February 23, 2024
8:00am – 5:00pm
SJC Cabral Agricultural Center
Contact: Theresa Becchetti, tabecchetti@ucanr.edu

Cover Crops in Rice – Field Demonstration Day
Thursday, February 29, 2024
9:30am – 12:00pm
Staten Island, 23319 N. Staten Island Road, Thornton
Contact: Michelle Leinfelder-Miles, mmleinfeldermiles@ucanr.edu
See attached flyer.

Principles of Fruit and Nut Tree Growth, Cropping, and Management
March 11-15, 2024
UC Davis
Registration is open: https://fruitsandnuts.ucdavis.edu/events/2024-principles-fruit-nut-tree-growth-cropping-and-management
For more information, email fruitsandnuts@ucdavis.edu.

Northern San Joaquin Valley Almond Day
Thursday, April 4, 2024
8:00am – 12:00pm
Modesto Centre Plaza/DoubleTree Hotel, 1000 L St., Modesto, CA, 95354
Contact: Brent Holtz, baholtz@ucanr.edu

Meeting Announcement

February 2024

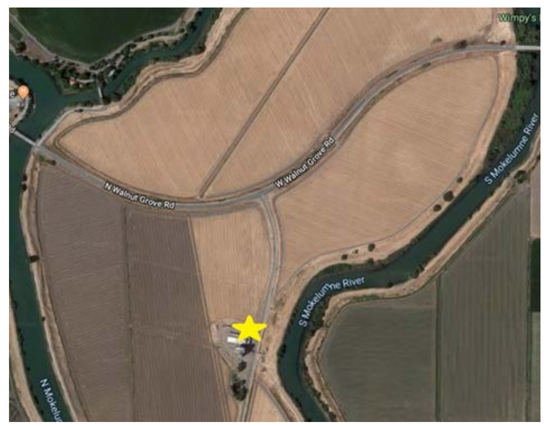
UC CE | University of California
Agriculture and Natural Resources | Cooperative Extension

Cover Crops in Rice - Field Demonstration Day

Thursday, February 29, 2024
10:00am – 12:00pm
Staten Island, 23319 N. Staten Island Road, Thornton

9:30am Arrive at Staten Island grain silo to sign in (See yellow star on the map)

9:45am Depart to field location – Don't be late!



10:00am **Welcome and Introductions**
Michelle Leinfelder-Miles, UCCE Delta Region

10:05am **Winter Cover Cropping in Rice Systems – Field Demonstrations**
Michelle Leinfelder-Miles, UCCE Delta Region

10:20am **Cover Crop Variety Evaluations**
Sara Rosenberg, UC Davis

10:35am **A Grower's Perspective on Cover Crops**
Jerred Dixon, Conservation Farms and Ranches

10:55am **Healthy Soils Program – Block Grant Pilot Program**
Chris Kelley, CA Land Stewardship Institute

11:10am **What's New in Rice Weed Management**
Whitney Brim-DeForest, UCCE Sutter/Yuba

11:25am **Weedy Rice Updates**
Whitney Brim-DeForest and Michelle Leinfelder-Miles, UCCE

11:40am **Discussion, Viewing of Field Plots, Evaluation**

CCA continuing education credits have been approved (0.5 PM, 1.0 CM, 0.5 PD). Refreshments will be provided. We thank our project sponsors and partners for supporting this work, and we thank you for your participation!

Healthy Soils Program — CDFA Office of Environmental Farming & Innovation
Conservation Farms & Ranches — Staten Island, California
California Climate Investments — Cap and Trade Dollars at Work
California Rice Research Board
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2024 Principles of Fruit and Nut Tree Growth, Cropping, & Management

March 11th to March 15th, 2024

Foundation Plant Sciences | UC Davis Teaching Orchards

Learn the fundamentals of fruit and nut tree biology through lecture, labs, and field demonstrations taught by leaders in pomology at the University of California.

Registration is open now until February 29th, 2024

An optional four-day field trip will be held in the Sacramento and San Joaquin Valleys during the following week (March 18th to 21st, 2024) for an additional fee.

For course content questions, please contact the Fruit & Nut Research & Information Center staff at **fruitsandnuts@ucdavis.edu**

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Notes from the Field

February 2024