HEALTHY FOOD SYSTEMS | HEALTHY ENVIRONMENTS | HEALTHY COMMUNITIES | HEALTHY CALIFORNIANS

Rice Leaf Newsletter

November 2024

Butte County

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

Save the Date

2025 UCCE Rice Meetings

Woodland – February 10, 8 am – 12 pm

Richvale – February 12, 8 am – 12 pm

Willows – February 12, 1 – 5 pm

Colusa – February 13, 8 am – 12 pm

Yuba City – February 13, 1 – 5 pm

2025 Rice Production Workshop

July 23-24

Contents November 2024

Year in Review

Bruce Linquist, Rice Specialist, UCCE

Based on early projections, 478,000 acres of rice were planted this year. This is down 37,000 acres from last year. Lower acreage is in part due to a large rainfall event on May 4 and 5 which prevented some planting. This rainfall also delayed planting by about three days (50% planted on May 15 compared to the average of May 12 - according to the USDA). That said, the 50% harvest date was October 8 which is about average. Thus, the season length was a bit shorter (146 d from planting to harvest) which may be due to a warm summer and favorable harvest conditions with little to no rain.

Speaking of weather, July was an exceptionally hot month. For most rice, July coincided with panicle initiation through the booting stage. I regularly

analyze weather data from CIMIS stations in the rice growing area of the Sacramento Valley. CIMIS has weather data going back to 1984. On average, July maximum temperature is 92.3 °F. This year, it was 97.6 °F and was the hottest on record since these records first started being tabulated. This also coincided with the warmest average nighttime temperatures (62.2 °F), which was 2 °F above average. The September average maximum temperature (91.2 °F) was also the hottest it has been since 1991 when it was 92.5 °F. However, September average nighttime temperatures were average.

Based on data from Dustin Harrel at the Rice Experiment Station, roughly 94% of the acreage was planted to medium grain varieties this year. The remainder was planted to short (4%) and long (2%) grain varieties. Of the medium grain varieties, M-206 was the most widely planted (27%). The other main medium grains (M-105, M-209, M-210, and M-211) represented between 14 and 19% of the medium grain acreage.

Talking with others in extension, this year we also saw a lot of fields where watergrass got out of control, in addition to a lot of redstem. Two relatively new herbicides were used this year: Zembu (pyraclonil) and Cliffhanger (benzobicyclone). While results were generally, in some cases there were issues that need to be worked out to ensure effective control. Pests and diseases were not a huge problem and were generally within typical ranges.

Based on personal communications with growers, farm advisors and mills, yields are a bit lower than average. Lower yields are likely due to a later planting date and warmer than normal growing season temperatures. High nighttime temperatures can reduce yields due to increased nighttime respiration. We have also heard reports of lower than normal head rice yields. Low head rice is being reported for all varieties but especially M-211. One reason for this is, as mentioned above, September temperatures (during grain fill) were warmer than normal.

2024 No-Till Update

Bruce Linquist, Luis Espino, and Whitney Brim-DeForest, UCCE

This year we tested no-till (NT) drill-seeded planting of rice. This was our second year of these trials. No-till drill seeded planting offers some real opportunities to conserve water, plant early, save on tillage costs, and use herbicides with different modes of action. This study was conducted at the Rice Experiment Station looking at N management, pests, diseases and weeds. We tested NT drill seeding into three different seedbeds and compared this to a conventional water-seeded system. The treatments of our study were:

1. Fallow stale-seedbed (FSS): field was fallowed in 2023. It was disked and leveled during the summer of 2023 and not flooded during the winter. No tillage was done in 2024 before drilling the rice in early spring.
2. No-till. We had two strict NT treatments. Rice was grown in 2023. After harvesting with care not to rut the field, the straw in the field was subjected to one of two treatments:
    a. Chopped (NT-Chop)
    b. Half removed to simulate baling (NT-Remove)
3. Water-seeded. Rice was grown in 2023. Straw was chopped and disked, and the field flooded during the winter to promote straw decomposition.

For the FSS and NT treatments, we planted May 1 using a NT drill seeder, flushed once after planting and then applied a permanent flood on May 30. Just before the permanent flood, we applied N fertilizer (urea) and herbicides (Pendimethalin, Super Wham and Loyant). On July 11 we applied Clincher. The water-seeded treatment was seeded on May 27 and managed conventionally. We harvested the FSS and NT plots on September 17 and the water-seeded plots on October 14.

The water-seeded treatment had the highest yield at 93 cwt/ac; this was followed by 84 cwt/ac in the FSS, 76 cwt/ac in the NT-Chop, and 74 cwt/ac in the NT-Remove. All of these treatments achieved maximum yields at N rate between 175 and 200 lb N/ac. These

results are promising, but a bit different from last year. In 2023, we saw a yield reduction in the NT treatments, but the FSS and water-seeded yields were the same.

This year, several farmers tested these practices on their farms. While we do not have an exact comparison of yields at this time, the early indication is that the NT and FSS fields performed similar to water-seeded fields.

There are several reasons for using no-till practices. These include being able to plant earlier, saving water, using different herbicide formulations, and reducing tillage and herbicide costs. We were able to plant early; in fact, the FSS and NT treatments were the first planted fields at the Rice Experiment Station this year. Regarding water savings, the NT and FSS treatments conserved about 6 inches of water. This water savings came in the first month after planting where we only flushed the field once (right after drill-seeding) and then let it dry up until permanent flood about four weeks later. These practices allow for the use of soil water as well as reduce evaporation. In water-seeded systems, a major pathway of water loss in the first month is evaporation.

Arthropods and Diseases

Arthropods were not an issue in any of the basins where we conducted the study. Tadpole shrimp or rice seed midge would not be expected to be a problem in the FSS or NT systems, but they can be a problem in the water-seeded system. In fact, in our study, we used the insecticide lambda cyhalothrin in the water-seeded treatments but not in the FSS or NT treatments. This is a savings that can be realized in drill-seeded systems.

The only disease that occurred in the study area was stem rot. Stem rot severity was 20% lower in the FSS and water-seeded treatments than in the NT treatments. While the effect of the fungicide azoxystrobin on stem rot severity was not significant, its use reduced the severity of the disease 30% in the FSS and water-seeded treatments. Interestingly, we noticed that the timing of heading was not similar in all treatments. The NT treatments headed earlier than the FSS treatment. The fungicide application to all the drill-seeded treatments was made on the same date; at this time, the FSS treatment was at the very early heading stage while the NT treatments were past 50% heading. This may be the reason why we did not see an effect of the fungicide on the NT treatments. The differences in heading time may be due to differences in N availability between treatments.

Weeds

Weed management in NT systems is similar to managing weeds in a drill-seeded system. The main differences are:

- Necessary to manage winter weeds prior to planting (registered herbicides are glufosinate, glyphosate, saflufenacil (Sharpen), and 2,4-D). Always make sure to check the specific product label for use restrictions and registration.
    - **NOTE:** *oxyfluorfen is not an option due to plant-back restrictions (minimum of 10-month plant back period for rice).*
- Effects of straw on weed emergence in the NT-Chop treatment (reduced weed emergence compared to the straw removed treatment)
- If repeatedly using NT year after year, then perennial weeds are more likely to establish. Some we have noted initially include ricefield bulrush (roughseed) and tulles (cattails).

This system is dominated by grasses, similar to our other drill-seeded systems. The main species we saw in 2024 were sprangletop and the watergrasses (specifically barnyardgrass). One of the predicted positives of the fallow treatment (FSS) is a reduction in watergrass emergence, however we do not have conclusive data on this currently.

There are no current recommendations for specific herbicide programs for these systems, but we will be doing a study next summer which will hopefully provide some specific combinations and sequences. Due to the inability to use granular formulations in this system, pendimethalin was applied upfront as a pre-emergent (please check the label for specific use instructions), followed by a foliar tank mix applied pre-flood (SuperWham and Loyant). We also followed up with a cleanup spray at tillering (Clincher).

The other option for a pre-emergent is Abolish (thiobencarb). For foliar tank mixes, there are many

options for grass and sedge control, but keep in mind that sprangletop control is necessary, and the only two foliar options are Clincher (cyhalofop) or Loyant (florpyrauxifen-benzyl). All programs should include one or both of these options, and rotation of chemicals (within and between seasons) is necessary to prevent the selection for herbicide resistance.

2024 Heat Stress in Rice

Sarah Marsh and Bruce Linquist, UCCE

It's hard to quantify the effect this summer's heat has had on rice yields so far. The one thing I can say for certain is that there has been an effect; some growers are saying their yields are off by as much as 10 sacks, which counts for a lot in a year like this one, plagued by too much carry-over supply and rock-bottom commodity prices. Across the Sacramento Valley, we have been hearing yield gaps of about 5-10%. This season, there were many temperature-related factors that could have contributed to the yield effects we are starting to see in the Sacramento Valley, some of which occurred far before the heat spell we saw in July.

The wet weather this spring delayed plantings, which hurt yield potential before the rice was even planted. Yield potential in California is typically high due to the high solar radiation and long days, especially prior to the summer solstice. Delayed plantings means losing some of the available solar radiation early in the rice development stage. Research from Bruce Linquist's lab found that every day delay in planting can reduce yield by 0.23 to 0.26%, which can equate to over 21.1 lb/ac lost per day. In 2024, the 50% plant date was around May 17, a week later than the historical average date of May 10.

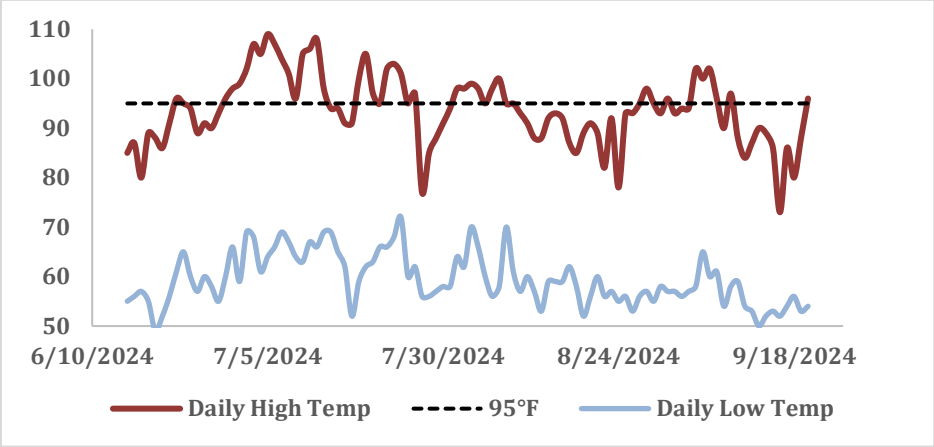
If you planted M-105 around May 17, the high July temperatures could have hit the rice during the reproductive stage through to flowering. However, high day temperatures (>100°F) can be damaging to rice at all stages in rice development.

In vegetative stages, high temperatures can result in reduced tillering and phytohormone imbalances – an effect of which can be stem elongation, which was definitely seen this year. This may have also resulted from rice putting more energy into vegetative growth versus using it for reproductive purposes. Tillering and yield are highly correlated; Soda *et al* 2018 reported panicle number and yield per plant decreased by 35% and 28%, respectively, in rice subjected to high temperature stress.

Once the rice reaches panicle initiation and formation, high temperatures can result in reduced spikelet number and degeneration of the spikelets already formed. At flowering, high temperatures are the most destructive, causing high spikelet sterility. Satake and Yoshida reported that rice exposed to temperatures of 95°F for five days during the reproductive period failed to produce seeds (Satake & Yoshida, 1978).

High temperatures at maturity lowers starch accumulation and reduces grain fill, which can drop yields by 50% (Sreenivasulu *et al* 2015). This occurs for several reasons: the grain fill period can be shortened, conversion of sucrose to starch can be impeded, and photosynthesis can be inhibited, which leads to less carbon supply from vegetative organs to reproductive. Additionally, high daytime temperatures increase nighttime respiration rates, which can reduce yields as well. A side effect of the heat is that it can damage DNA in the rice seeds, which can delay germination of the rice when planted next year (Suriyasak *et al* 2020).

Bruce Linquist, when asked to comment on yield expectations in a September episode of the UCCE rice podcast, "Thoughts on Rice", phrased it this way: "It's still a bit early to say, but I think we are going to see a little lower yields because of the hotter July and the later plantings that we saw." I tend to agree with Bruce, and so far, the yields we are seeing also concur with that statement. development.



Temperature Chart from Colusa Weather Station, June 10 – August 15, 2024.

Weeds Update 2024

Whitney Brim-DeForest, UCCE

General review of the year

Walter's barnyardgrass AKA coast cockspur (*Echinochloa walteri*) continues to spread across the valley. Kassim Al-Khatib and I continue to work on understanding more about the biology and management of this new weed and will have more data coming in the future about its competitive abilities and tolerance for different irrigation methods.

A greenhouse screening shows it is resistant or tolerant to most of our registered rice herbicides. The herbicides still showing the greatest efficacy (alone) are: Cerano® (clomazone), Clincher® (cyhalofop), and SuperWham®/Stam® (propanil).

While field studies are being conducted to look at late-applied tank mix combinations or sequential applications of many registered rice herbicides, we currently have no species-specific data (for late watergrass, Walter's barnyardgrass, barnyardgrass, etc.) so recommendations would be the same regardless of the specific species found in a particular field.

For specific recommendations for your field, please submit samples to the UC Weed Science Research Herbicide Resistance Screening Program with Kassim Al-Khatib.

General control recommendations for all watergrass species are:

Best grass control:
- Abolish® + SuperWham®/Stam 80DF®
- Regiment® followed by SuperWham/Stam® (may cause injury on certain specialty varieties)

Good grass control:
- SuperWham®/Stam 80DF® + Loyant®
- SuperWham® /Stam 80DF® + Shark H2O® (some phyto)
- Regiment® + Clincher®
- SuperWham® /Stam 80DF® + Clincher ®

New weed species
Eastern annual saltmarsh aster (*Symphyotrichum subulatum* var. *elongatuma*) is a perennial herb that is not native to California. It was found in a rice field in Colusa County this year and has been found previously in 3 locations in Butte County (but not in rice fields).

At this point in time, there is no concern with finding this plant in a field, as it is not considered noxious. However, no herbicide recommendations are available. It has been found in a field that is using no-till planting and may be showing up there due to the selection pressure caused by no-till planting, which causes a shift from annual weeds to perennial weeds over time.


Eastern annual saltmarsh aster (Photo Credit: PictureThis).

Seed Production Update

Timothy Blank, Director of Seed Certification, California Crop Improvement Association

Rice acres approved for seed production in 2024 totaled 24,000 acres, of which, 872 acres were in the Quality Assurance (QA) program. The seed production acreage in 2024 was a 3,818 acre decrease from 2023, but it is worth noting that rice seed producers generally overproduce seed and there should be ample seed in 2025.

Variety summary:
In 2024, there was production of 38 rice varieties (9 long grain, 17 medium grain, 12 short grain). Seed production exceeded 1000 acres only for the 5 Calrose varieties. Of the Calrose-type varieties, the current ranking in acres approved is M-206 (5,583 acres), M-211 (3,980 acres), M-105 (3,640 acres), M-209 (3,431 acres), and M-210 (3, 003 acres). These 5 varieties made up 81% of the seed production. Some trends to note:

- M-206 saw a ~2K acre decrease in acres approved compared to 2023, and there are no new fields being transitioned into M-206 (for additional 2025 seed production).
- M-211 had a 606 acre decline in seed production, but also had 494 acres in transition to seed production for 2025.
- M-209 acres had a 206 acre decline in seed production, with 78 acres in transition to seed production for 2025.
- M-210 and M-105 had increases in seed production by 152 and 330 acres, respectively. M-210 and M-105 also had increases of 774 and 1011 acres, respectively, in transition to seed production for 2025.

To summarize, M-206 is trending downward, and M-210 and M-105 are trending upward. More acreage details and analysis can be found on the CCRRF website: https://crrf.org/

Seed Field Inspections:
~100 acres of seed were rejected due to the presence of weedy red rice. There were additional partial rejections due to excessive weeds and other varieties. Several Certified class fields required roguing due to

excessive off-types. Incidence of rice blast was rare this year.

The Certified seed and QA programs ensure that every rice seed field is inspected by field inspectors from the California Crop Improvement Association, and every seed lot is tested, to ensure that planting seed meets industry expectations for quality seed.

Delta Rice Recap

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

Delta rice acreage has been steadily increasing, and yields are comparable with the statewide average (Table 1). I estimate that acreage approached, if not exceeded, 15,000 acres in 2024. This article is my seasonal update on UCCE Delta rice research and observations.

Table 1. San Joaquin County rice acreage and yield.

Year	Acres	Proportion of State	Yield (cwt/a)	Statewide Yield (cwt)
2023	10,990	N/A	102	N/A
2022	8,930	4%	101	90
2021	7,070	2%	95	92
2020	4,990	1%	88	89
2019	4,360	0.90%	81	86
2018	3,620	0.70%	86	88
2017	3,060	0.70%	82	86

Variety Trial: UCCE collaborates with the California Rice Experiment Station to evaluate commercial varieties and advanced breeding lines. The San Joaquin County Delta was one of eight locations in the 2024 statewide trial. The Delta is the only drill-seeded site and is a test site for very-early maturing varieties because it has cooler growing conditions than other rice growing regions of the state. Variety trial results will be available in early 2025.

Armyworm Monitoring: In 2024, we monitored for true armyworms on three Delta farms, and moth catches peaked around July 1st (Fig. 1). I observed that feeding damage was highly variable across the three farms but also across fields on the same farm. This has important implications for in-season management and highlights the importance of scouting for crop damage and the presence of worms. UC IPM guidelines provide monitoring guidelines and treatment thresholds. While a second peak has sometimes been observed in the Sacramento Valley, we have not observed a second peak after heading in the Delta.

Weedy Rice: We need to stay vigilant in our efforts to prevent the spread and manage weedy rice. Early in the season, weedy rice is often mistaken for watergrass because it grows taller than the cultivated rice. However, I have noticed that watergrass (and barnyardgrass) will head sooner than weedy rice, and weedy rice has a lime green color in full light. There is a video on the CA Weedy Rice website (https://caweedyrice.com/) that can help with identification, or call your local farm advisor if you would like help. In-season management includes rogueing or spot spraying before viable seed is produced. The organic herbicide Suppress is registered for spot spraying. Post-harvest management should include straw chopping, but ***not*** incorporation, and winter flooding. This will keep seed on the soil surface where it can potentially deteriorate over the winter. With Whitney Brim-DeForest and Luis Espino, I will host a meeting for the Delta rice industry in early 2025 to provide weedy rice research updates and management information. Stay tuned for the meeting announcement.

Cover Cropping: With funding from the CDFA Healthy Soils Program and CA Rice Research Board, we are evaluating whether cover cropping improves soil carbon and nitrogen dynamics in the rice system. We are also assessing cover crop species performance, like survivability and biomass production. Since rice may be grown over multiple

seasons without rotation, cover crops may provide an opportunity to introduce plant diversity, including nitrogen-fixing legumes. There are three trial locations: in the Delta, Colusa County, and Butte County. While the 2022-23 winter season was excessively wet, which hindered cover crop establishment, the 2023-24 season started off dry, so sowing and establishment were successful. We observed that the brassicas emerged quickly and started covering the soil after just one month, but when rainfall became more frequent after the new year, the brassicas died off. In contrast, the two vetches and balansa clover started off slowly but had vigorous stands by early spring, despite the wet conditions. For more information on Delta trial results, please visit my blog article (https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=59659). The 2024-25 winter season will be our third and final year of trialing.

Disease Observations: In past years, I have been called out to fields to help diagnose diseases, which were later confirmed as stem rot, aggregate sheath spot, or rice blast. The 2024 season, however, was a relatively light disease year, and Luis Espino also observed that in the Sacramento Valley. Just to recap, it is important to scout for these diseases at late-tillering and early-heading because fungicide treatments are most effective when applied between late-boot and early-heading. Rice blast may be exacerbated by too much nitrogen, and stem rot and aggregate sheath spot by low potassium (K), so proper plant nutrition is a good strategy to mitigate disease. K can be limiting in some Delta soils, so one of my future goals is to do K fertilizer rate trialing to determine if it can reduce disease incidence and/or boost yields.

Herbicide Resistance Testing: UCCE, under the direction of Extension Specialist Kassim Al-Khatib, provides herbicide resistance testing for rice growers. If you suspect that weeds have developed resistance to certain herbicides, please collect mature weed seeds at the end of the season and submit them to your local farm advisor.

Alternate Wetting and Drying: Earlier this year, I applied for funding from the Delta Science Program to evaluate the practice of Alternate Wetting and Drying (AWD) in the Delta. AWD is a management practice where a flooded field is temporarily drained during the growing season and then re-flooded. Research from other states and countries has shown that the practice can reduce methane emissions from rice fields, but there has not been research done in the Delta, with its unique soil and climate conditions. If the grant is awarded, this project would begin during the 2025 season.

I want to take this opportunity to thank all the growers who collaborated with us on these projects. I wish everyone a happy, healthy end to 2024.

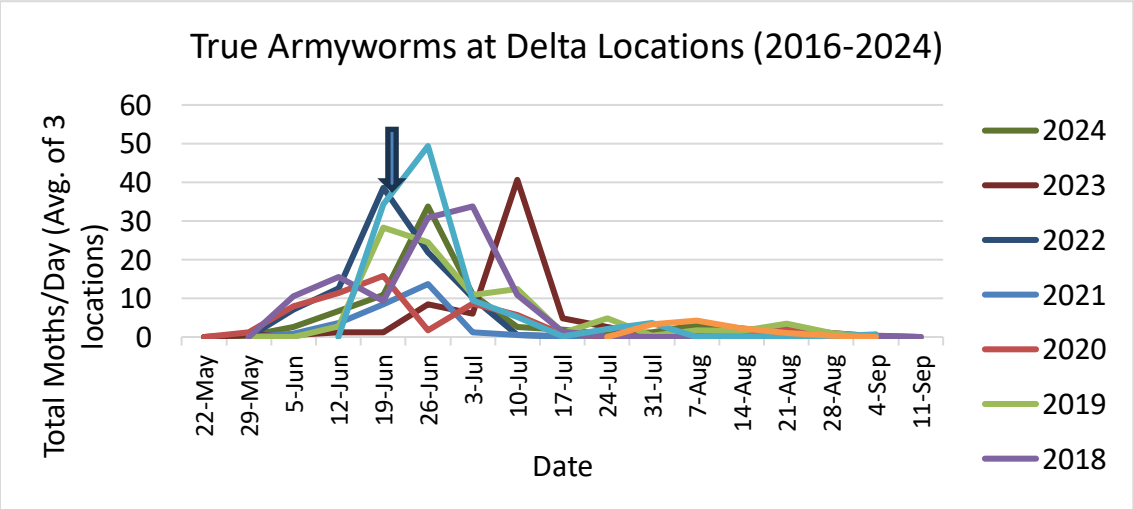


Figure 1. Delta true armyworm trap counts, 2016-2024.

Economic Needs Assessment of Agricultural Producers in Butte, Glenn, and Tehama Counties

Domena A. Agyeman, Agriculture and Natural Resources Economics Advisor; Butte, Glenn, and Tehama Counties, UCCE

Introduction

The role of the Economic Advisor program is to promote rural economic development and support agricultural and natural resources businesses by providing economic insights that enhance decision-making and improve their economic viability. To develop an effective program, a series of in-person discussions with agricultural producers was conducted, along with a survey. This report summarizes the primary challenges reported by the 52 producers who completed the survey and offers recommendations for addressing their concerns.

Location of business and main products produced by respondents

The majority (75%) of respondents had their businesses located in Butte county, while 15% and 14% were based in Glenn and Tehama counties, respectively. Additionally, 37% of respondents indicated other counties, including Colusa, Plumas, Sierra, Stanislaus, Sutter, Sonoma, Solano, Tulare, Merced, Lassen, and Yuba as the locations of their businesses. Most respondents (71%) were crop producers, 42% were livestock and hay producers, and 4% were timber producers. Figure 1 shows the percentage of respondents by the types of products they produced.

Main challenges impacting the future success of operation

Among 50 respondents who listed the top 3 challenges impacting the future success of their operations, 74% cited regulations as one of the top three challenges (Figure 2). This was followed by concerns about low prices, which was cited by 42% of respondents, and high cost of production, mentioned by 38%. Notably, 92% of respondents indicated at least one of these challenges in their top three challenges, while 14% listed all three. “Other challenges” represents a combined list of challenges for which each was cited by a few respondents. These challenges included inflation, interest rates, insurance, trade, transportation, fire, drought, encroachment, and unstable world situations. This indicates that while these issues are not as commonly reported as the top challenges, they still contribute to the broader set of concerns impacting the future success of farm operations in the region.

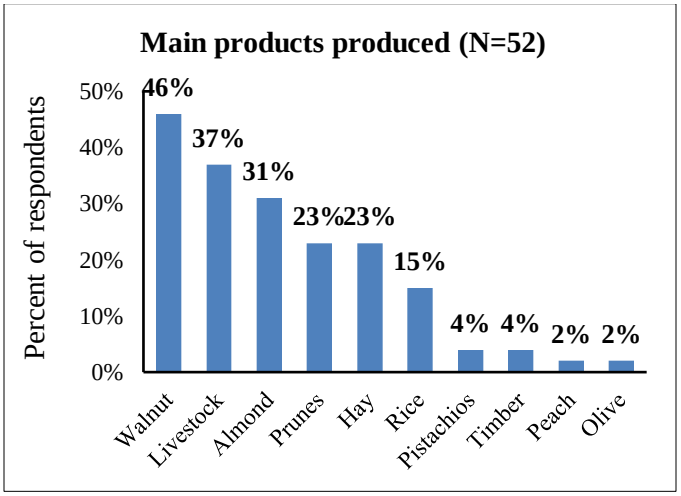


Fig 1: Percent of respondents by types of products they produced.

Regulations were the only challenge cited by more than 50% of both crop and livestock producers as among their top three challenges. Only 2 of the 19 respondents who produced livestock reported low prices in their top three challenges, while 20 of the 37 crop producers did. Despite the small sample size, these results are reflective of the 2024 crop prices with livestock at record highs and many other commodities having depressed markets (e.g. rice, walnuts, almonds). All the rice producers who responded to the survey reported water availability as among their top three challenges, a historically common challenge among rice producers.

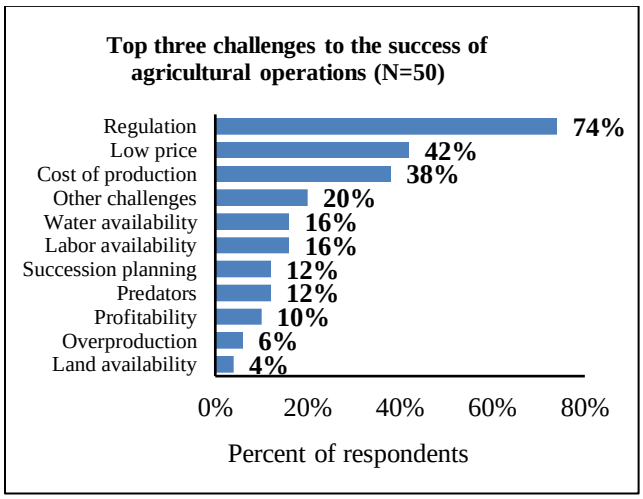


Fig 2: Percent of respondents by their top three challenges.

Respondents identified various regulations when asked to indicate the most challenging regulation of their operation (Fig 3). Groundwater regulation was the most frequently cited regulation by producers (36%), followed closely by the Irrigated Lands Regulatory Program (ILRP) for water quality and labor regulations, each cited by 32% of respondents, and then surface water availability (20%). These results underscore the critical role water management and labor issues play in agricultural operations in the region. Responses categorized under 'other' included spraying regulations and regulations related to wolves.

Producer request to UCCE

Thirty-one respondents provided recommendations on how UCCE could better support the success of their operations. The highest percentage (42%) of respondents called for UCCE to advocate for reduced government regulations and increase efforts to educate legislators and the public about the regulatory burdens on producers. Additionally, respondents expressed a desire for UCCE to provide economic insights into their operations, with 29% requesting strategies for reducing operational costs and improving profitability. A few crop producers requested insights into potential new crop candidates that are more drought and disease resistant and can command higher prices. Additionally, a few crop producers requested increased efforts to develop local markets for their products. Overall, UCCE is urged to continue providing valuable information and support while advocating for measures that alleviate the pressures faced by agricultural businesses in the region. Below is a response from a producer who seeks education of the public on the regulatory burdens producers face:

"Education of federal and state government officials and the public on the burdens put on farmers. They must let us farm if we are to keep the world in food. Cut the regulations!"

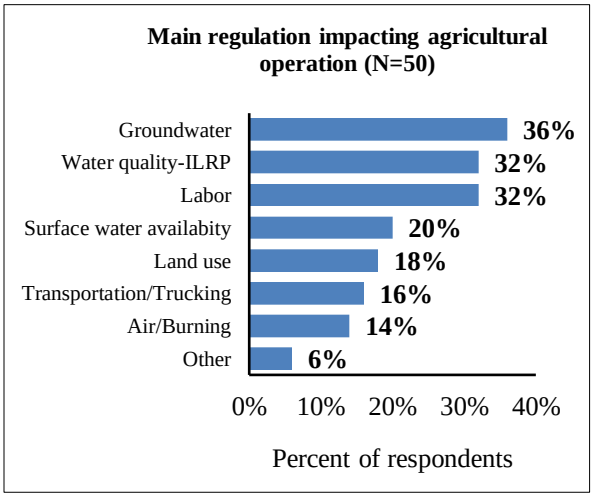


Fig 3: Percent of respondents by type of regulation.

Recommendations

There is a need for increased awareness about the economic impacts of regulations on farm operations, along with education for producers on regulatory compliance requirements and streamlined pathways for fulfilling those regulations. In addition, research and education of producers on market trends, financial management, profitability, risks, and management practices are needed to help them improve profitability and identify new market opportunities. Producers should also receive guidance on evaluating economic factors before investing in new agricultural enterprises. The economic program will contribute to efforts to address these producer challenges and respond to their requests to UCCE by collaborating with other extension programs to conduct research and education initiatives. Information will be delivered to producers via their preferred means including

workshops, newsletters, field visits, webinars, and fact sheets.

Special thank you to the farmers and ranchers who took the time to provide their perspectives by completing the survey, and to the Butte County Farm Bureau for their assistance with its distribution. Acknowledgment to the staff at USDA-Farm Service Agency and to all the Advisors who helped distribute the survey.

The University of California Cooperative Extension (UCCE) has launched "Thoughts on Rice", a new podcast from the UCCE rice advisors, available on all audio streaming services. This podcast is for growers, PCAs, consultants, and other industry professionals in the rice industry. Episodes, released every two weeks, will primarily be focused on the Sacramento Valley and Delta Region of California.

The hosts are Sarah Marsh (Rice Farm Advisor – Colusa and Yolo), Whitney Brim-Deforest (Rice Farm Advisor – Sutter, Yuba, Sacramento and Placer Counties), Luis Espino (Rice Farm Advisor – Butte and Glenn), and Michelle Leinfelder-Miles (Farm Advisor – San Joaquin, Contra Costa, Sacramento, Solano, and Yolo).

The goal is to deliver extension information relating to the California rice industry, but UCCE is also looking for suggestions for topics that would be of interest to stakeholders. Episodes have ranged from no-till rice field research to group panel episodes with updates from across the rice-growing regions. The most recent episode was an explanation of the rice seed certification program with California Crop Improvement's Timothy Blank.

The podcast website can be found here at https://thoughtsonrice.buzzsprout.com.

The link to the feedback form can be found here or in the show notes of each episode. There is also a text link available for listeners to submit feedback on each episode. Listeners can also contact the podcast through email at thoughtsonrice@ucdavis.edu.

For more information, please contact Sarah Marsh, UCCE Rice Farming Systems Advisor for Colusa/Yolo counties at (530) 203-8585 or smarsh@ucanr.edu. You may also contact your local rice advisor.

Support for this newsletter is provided by the Support Group of Butte County UCCE