

2023

RICE STEWARDSHIP

ANNUAL REPORT



RICE STEWARDSHIP

CELEBRATING
10 YEARS

**RICE STEWARDSHIP IS BUILT UPON THE
FOUNDATION OF THE USDA'S NATURAL
RESOURCE CONSERVATION SERVICE.**

**WE GRACIOUSLY THANK NRCS FOR THEIR
VISION, LEADERSHIP AND SUPPORT.**



LEADERSHIP MESSAGE



The USA Rice-Ducks Unlimited Rice Stewardship Partnership celebrated its 10th anniversary in 2023. Many buzzwords describe this great partnership: sustainable, regenerative, collaborative, etc. But we believe the best word to define Rice Stewardship is resiliency. Resiliency is the capacity or ability to withstand and adapt to change. Over the last decade, there has been nothing but change. Nonetheless, we have stood true to our mission from the beginning, and that is to conserve three of the nation's most important natural resources: working ricelands, water, and wildlife.

Changes in 2023:

- The U.S. Senate and House of Representatives both passed resolutions recognizing the 10th anniversary of Rice Stewardship.
- Betsy Ward, USA Rice President & CEO, retired after 18 years at USA Rice and almost four decades advocating for U.S. agriculture and forestry in Washington, DC, and worldwide.
- Al Montna, rice farmer, miller, and founding Co-Chairman of Rice Stewardship, steps down and encourages growth in leadership.
- Sadly, Beverly (Biff) Bayles Handy, III, Rice Irrigation Specialist, passed away on August 8, 2023.

Resiliency Measures:

- Peter Bachmann takes over as the new USA Rice President.
- National Black Growers Council becomes a foundational partner of Rice Stewardship, with a mission to improve the efficiency, productivity, and sustainability of all black row crop farmers.
- We are equally proud and supportive of numerous other rice-focused Climate-Smart grants and projects.
- The Walmart Foundation has become Rice Stewardship's biggest supply-chain supporter.

Now a final message from Al Montna, Co-Chair from the Ducks Unlimited side of the committee.

It is with a heavy heart that I inform you that I'll be stepping down after calendar year 2023. There comes a time on any committee, organization, or group when it needs to be refreshed. I find the best way to send that message is to lead by withdrawing from the Committee. Due to personal issues at home, attending most of the meetings has been very difficult. That is unacceptable because I live by the mantra, if you take out a uniform, you show up for the ball game.

Therefore, I want to thank Paul Bonderson and Ducks Unlimited for the opportunity to help form and lead this prestigious group, Betsy Ward for embracing Rice and Ducks by fully supporting the effort, Scott Manley for doing such a tremendous job of building this program, my friend Jeff Durand for Co-Chairing the USA Rice side of the Committee, Leo LaGrande for his leadership, and last but not least, the dedicated and unselfish committee members that have served to make the Rice Stewardship Partnership the model for working lands conservation in United States Agriculture.

Rice Stewardship Defines Resiliency.

Jeff Durand
Co-Chairman

Al Montna
Co-Chairman

REFLECTIONS ON A FRUITFUL HARVEST WITH USA RICE

BETSY WARD



As I look back over my tenure at USA Rice, one of the things I am most proud of is the strong partnership with Ducks Unlimited. In 2013, USA Rice and DU formed the Rice Stewardship Partnership (Rice Stewardship) to combine the people and resources of our organizations to preserve the unique, interconnected relationship of rice production, waterfowl, and water. The partnership is believed to be one of the first, if not the first, formal conservation partnership between a commodity organization and a conservation organization.

Over the last decade, Rice Stewardship has built a field team of professionals who possess great expertise and experience with on-farm conservation. Rice-targeted conservation programs have surpassed 1000+ unique and individual rice farms covering more than 800,000 acres. Twenty-five supply chain financial sponsors have contributed more than \$10 million to leverage conservation impact and U.S. Department of Agriculture investments in conservation. Eleven Regional Conservation Partnership Program (RCPP) awards have been delivered, two of which received renewals, all totaling more than \$110 million in financial assistance to rice producers.

Although I am retiring, I know these impressive conservation efforts will continue as Rice Stewardship moves into its second decade with the announcement of the \$80 million Partnership for Climate-Smart Commodities project agreement that was signed in late July. It is also fitting that we have expanded our partnership with the National Black Growers Council, joining our Climate-Smart program. Our conservation partners have already begun to move forward on project deployment, providing an additional \$63 million of financial assistance to rice producers across all six rice-growing states. Rice Stewardship is once again in a lead position to navigate this brand-new conservation program, helping bring innovation and opportunity to the farm.

I will continue to cheer from the sidelines as USA Rice and DU work together to synchronize efforts to increase the implementation of conservation across the rice landscape, improving wildlife habitat, water quantity, and water quality. What's good for rice, is good for ducks!

IN MEMORIAM TRUSTED ADVISOR BIFF HANDY

EMILY AUSTIN

Ducks Unlimited Regional Communications Manager Southern Region



In his time with DU, Biff had a lasting impact on all those he worked with. Sadly, Beverly “Biff” Handy, III passed away on August 8, 2023. He will be missed, but the work he did, and the positive impacts it had will live on.

There are people you meet in life that, after one conversation, you feel like old friends. Biff Handy was one of those people. His genuine disposition, kind smile, and thoughtful conversations immediately instilled a level of comfort and trust to all who knew him.

Growing up in Morehouse Parish, Louisiana, Biff was surrounded by farmland. After graduating from Louisiana Technical College, he returned home to the family cattle farm and began working for the Natural Resources Conservation Service (NRCS) shortly after. Biff joined the USA Rice-Ducks Unlimited Rice Stewardship Partnership (Rice Stewardship) in 2017 after retiring from his role as a state irrigation engineer with the NRCS.

As a technical advisor, Biff helped rice producers understand the help available to them through Rice Stewardship and the impact it can have on their operation.

“I get up every day excited to go help people,” Biff once remarked. “At the end of the day, I rest easy because, Lord willing, I’ll get to do it again the next day.”

Throughout his time with DU, Biff introduced rice producers to surface water irrigation programs, helping them see how to best use available water resources.

“Producers see what Rice Stewardship has to offer, the impact that it has on their production, and more producers are waiting to participate,” Biff said.

Producers in his area of Louisiana are most interested in pump automation and nutrient management. *“Program participants have access to a group of experts that look for ways to increase efficiency and explain the ‘why’ behind what we do.”* Interest in the program has grown, thanks in part to Biff’s outreach efforts. *“This hasn’t been a job; it really is a joy to come to work,” Biff said.*

“Biff was one of the most knowledgeable and productive field experts in rice agriculture,” said Dr. Scott Manley, Director of Agriculture Support – Ducks Unlimited’s Southern Region. “He remains unreplaceable.”

2023 TRUSTED ADVISOR RICHARD HARDEE

EMILY AUSTIN

*Ducks Unlimited Regional Communications Manager
Southern Region*



Richard Hardee is a fourth-generation farmer. A native of Louisiana, Richard attended the University of South Louisiana, where he attained his degree in Agribusiness before returning home and working the land for over 40 years. While Richard mainly farmed rice and soybeans, he eventually added crawfish to his rotation.

Although being a farmer was very rewarding, Richard decided he wanted to step down to do something part-time that would allow him to spend more time with his family. In May of 2017, an opportunity literally walked through the front door.

“Kyle Soileau came over with a Rice Stewardship conservation contract for the farm, and asked if I wanted to join the field team,” Richard said. “And the rest is history.” Since joining the Rice Stewardship team, Richard has been a valuable part of the on-the-ground conservation operations.

As a trusted advisor, Richard helps to educate rice producers on innovative practices that can help improve the efficiencies on their farms. *“I am able to talk to these producers like a farmer because I am a farmer,”* Richard said.

“I like to believe that I am but one part of a team that works hard to help rice farmers survive. As a farmer, I am able to have conversations that someone from outside the farming community couldn’t.”

According to Richard, Rice Stewardship is like a big family. *“Everyone helps everyone, which helps us be better able to help the producers,”* he said. The farming community is a close-knit group, much like a big family. *“I have watched a lot of the local producers grow up, working family land, and they are always looking for ways to improve how they work.”*

Over the years, Richard has developed a strong sense of trust with local producers. He helps them understand that while change can be intimidating, it is inevitable. *“The best advice I can give to our producers is to be patient and trust the system.”* Educating producers on the latest water-wise practices and innovative irrigation techniques and helping them see that if something is good for rice, it is also good for ducks is part of what makes Richard Hardee one of the Partnership’s most Trusted Advisors.



PRODUCER SPOTLIGHT
**SENER FARM &
HOLTHOUSE FARMS**
ARKANSAS

WORKING TOGETHER FOR RICE

EMILY AUSTIN

Ducks Unlimited Regional Communications Manager Southern Region



**LOCATED IN MISSISSIPPI
COUNTY, ARKANSAS,
SENER FARMS IS A NEARLY
9,000-ACRE PROPERTY
THAT PRODUCES COTTON
AND RICE. THE PROPERTY
HAS BEEN FARMED BY THE
SENER FAMILY SINCE 1979.**

“As a third-generation farmer, I know how important it is to leave things better for the next generation,” said Travis Sener, II. “My grandfather started farming in 1947, and my father and I still work this same ground. But, the way we do the work has changed significantly over the past 70 years.”

For years, the Sener family worked the land next to the Holthouse 11,500-acre family farm, many times in competition for all aspects of production. *“One day, we got together to discuss the unique needs of rice production from getting seed in the ground to transport to the mill and how we could work together, combining resources, rather than against each other,”* said Travis. Recognizing the benefits of being partners rather than competitors, the two families began pooling resources in 2011.

When asked how the group became involved with the USA Rice-Ducks Unlimited Rice Stewardship Program (Rice Stewardship), Travis said, *“We are very progressive farmers. We want to be on the cutting edge of the trade, using whatever innovative techniques we can. So, we went to our local NRCS office to see what they could offer.”*

The partners were introduced to Rice Stewardship, which has greatly impacted how they operate. *“If you are not improving, you are not moving forward,”* said Chase Chafin, one of the producers with Holt-house Farms, who is also a third-generation farmer. One of the most impactful improvements has been implementing pump automation. The program has improved the efficiency of how water is moved on and off the fields. *“Without programs like Rice Stewardship, we would not be able to flood the fields so precisely; it would be cost-prohibitive. But, with the assistance and guidance we have received through the program, we can literally put water on specific fields with the push of a button from our phones.”*

Travis agrees with his partner that better means of irrigation, utilizing surface water over groundwater, has greatly improved the way they do business. *“We utilize all aspects of the program from leveling fields to water management, and the greatest thing is, everything we do out here helps the environment and wildlife.”*

The Senters and Holthouses are truly two families farming for the future. *“We have to try and do better,”* Chase said. *“Everything we do out here is to help improve the land for the future. Our kids are out here, working the fields with us. We need to do it right.”* Implementing the strategies and techniques outlined in Rice Stewardship impacts water quality and harvest yield and benefits wildlife. *“Working together like this, you have to have a level of trust. Trust between the producers. Trust between the producers and Misty Adams, our rice technician. And we have that.”* Travis said. *“If we can be more efficient, make better use of natural resources, and help wildlife, why wouldn’t we do it?”*



WALMART FOUNDATION
SUPPORTS
RICE STEWARDSHIP

A MODEL PLACE-BASED INITIATIVE



Rice Stewardship and Walmart Foundation strongly support the Arkansas Department of Agriculture's irrigation water management team.





PRODUCTION OF AGRICULTURE, LIVESTOCK, FORESTRY, AND OTHER COMMODITIES SUPPORTS ECONOMIC GROWTH AND FOOD SYSTEMS AROUND THE WORLD BUT CAN COME WITH UNINTENDED ECOSYSTEM IMPACTS AND LOSSES OF PRODUCTIVITY AND NATURAL RESOURCES.


Supplychain efforts to adopt conservation practices are a critical step, but no one company can resolve nature loss alone, nor can individual governments or other stakeholders.

Place-based initiatives bring together diverse stakeholders in productive landscapes for these exact reasons; to identify shared goals, strategies, and resources to achieve sustainability at large geographic scales. These strategies may include actions like mapping high-conservation value areas or delivering capacity and incentives to farmers to use more productive and sustainable practices. *“The USA Rice-Ducks Unlimited Rice Stewardship Partnership is a model example of such a place-based initiative that utilizes a shared vision, planning, and teamwork to succeed, which is important to Walmart’s commitment to reversing nature loss,”* said Gregory Bohrer, Walmart Foundation’s Director of Natural Capital.

The Rice Stewardship Partnership, now celebrating its 10-year anniversary, has a mission to conserve working ricelands, water, and wildlife habitat. The Walmart Foundation has provided support for much of this history, helping Ducks Unlimited and partners build capacity and provide incentives to farmers who adopt conservation

practices, expand surface water use for irrigation to save groundwater, and now for building stronger alliances among supplychain companies, governments, and conservation organizations. In total, the Walmart Foundation has provided over \$3 million to support Rice Stewardship, with the most recent grant in spring 2023. Walmart Inc. has also provided important leadership and positive influence across the U.S. rice supplychain.

“Innovative collaborations among companies, governments, and conservation organizations show increasing potential to tackle underlying challenges like preserving groundwater, reducing greenhouse gas emissions, and improving wildlife habitat,” said Dr. Scott Manley, Director of Agriculture Support at Ducks Unlimited. *“Collaboration is essential to meet climate and nature goals set by the world’s leading companies, including Walmart.”* We sincerely thank the Walmart Foundation and look forward to serving as a model place-based initiative that achieves sustainable outcomes across large geographic scales.



CONGRESS HONORS RICE STEWARDSHIP PARTNERSHIP

HOUSE AND SENATE INTRODUCE RESOLUTIONS
RECOGNIZING 10 YEARS OF CONSERVATION SUCCESS

PARKER WILLIAMS

Ducks Unlimited Senior Communications Manager

The U.S. Senate and U.S. House of Representatives introduced resolutions recognizing the 10th anniversary of the USA Rice-Ducks Unlimited Rice Stewardship Partnership. This program offers aid to rice producers to help them address water quantity, water quality and wildlife habitat on their land.

“Rice and ducks are a match made in heaven,” said Ducks Unlimited CEO Adam Putnam. “Over the last ten years, Rice Stewardship has taken the existing collaboration between conservation and agriculture to a new level. Now, it’s a template for other partnership-driven projects that are mutually beneficial for producers and wildlife alike. Thank you to USA Rice for such a strong partnership, and we appreciate Sens. Boozman and Padilla and Reps. Crawford and Thompson for recognizing the positive impacts.”

Rice is the world’s third largest crop commodity, providing nearly 20% of the calories consumed by humankind every day. Rice is also the most important food resource for North American waterfowl. Rice not collected during harvest is a high-energy food that resists decomposition when flooded, providing critical winter food for migrating waterfowl. Since its inception, Rice Stewardship has impacted over 800,000 acres of rice on over 1,000 farms.

“U.S. rice farms are located primarily throughout the Mississippi Alluvial Valley, Texas’ and Louisiana’s Gulf Coast, and California’s Central Valley, which are critical landscapes and habitat for migratory waterfowl and shorebirds,” said Betsy Ward, USA Rice President & CEO (retired). “The work of Rice Stewardship is essen-

tial, and USA Rice is extremely proud of our partnership with Ducks Unlimited because, as in all things, we're more effective working together. We look forward to continuing to build on our great conservation and sustainability accomplishments and thank Senators John Boozman and Alex Padilla and Congressmen Rick Crawford and Mike Thompson for this recognition."



The success of Rice Stewardship's voluntary approach has been the inspiration behind the creation of other programs, like the Regional Conservation Partnership Program (RCP), which was established in the 2014 Farm Bill.

The resolution was introduced in the Senate by Sen. John Boozman and Sen. Alex Padilla (CA) and introduced in the House of Representatives by Rep. Rick Crawford (AR) and Rep. Mike Thompson (CA).

"Rice Stewardship supports critical research and development of innovative techniques and practices to improve production, conservation, and sustainability measures. This collaboration between USA Rice and Ducks Unlimited will help Arkansas rice producers continue to provide a safe,

reliable food source to help feed the world and support practices to shape waterfowl habitat so our state continues to be a destination for duck hunters and other outdoor enthusiasts," Boozman said.

"As the second-largest rice-producing state, California relies on strong conservation partnerships like Rice Stewardship to address water quality and wildlife habitat on working ricelands," said Padilla. "I am proud to lead this bipartisan resolution with Senator Boozman and Representatives Thompson and Crawford to celebrate 10 years of conservation planning and collaboration between rice producers, wildlife conservation organizations, and USDA."

THE SUCCESS OF THE RICE STEWARDSHIP PARTNERSHIP'S VOLUNTARY APPROACH HAS BEEN THE INSPIRATION BEHIND THE CREATION OF OTHER PROGRAMS, LIKE THE REGIONAL CONSERVATION PARTNERSHIP PROGRAM (RCP), WHICH WAS ESTABLISHED IN THE 2014 FARM BILL.

"During the winter, harvested rice fields are flooded to prevent soil erosion – creating the perfect habitat for migrating ducks who enjoy any leftover grain," said Rep. Crawford. "Rice Stewardship demonstrates this strong connection between agriculture and conservation. The work of USA Rice and Ducks Unlimited has helped our rice farmers carry out responsible land management and protect these important ecosystems."

"Ten (10) years ago, our country formed a partnership with USA Rice and Ducks Unlimited to serve as stewards and conservationists of rice lands across our nation," said Thompson. "Proud to introduce a resolution commemorating this anniversary with Rep. Crawford and Senators Padilla and Boozman. I am focused on ensuring that all 3-million acres of rice and rice rotation lands are conserved for future generations of Americans and our rice farmers."





PRODUCER SPOTLIGHT
SYLVESTER BROTHERS
FARMS
LOUISIANA

FARMING FOR THE FUTURE ON THE SYLVESTER FAMILY FARM

EMILY AUSTIN

Ducks Unlimited Regional Communications Manager Southern Region



NESTLED JUST OUTSIDE THE SLEEPY TOWN OF VILLE PLATTE, LOUISIANA, IS THE 6,000-ACRE SYLVESTER BROTHERS FARM. STARTED IN THE 1950S AND NOW RUN BY THIRD-GENERATION FARMER ALEX SYLVESTER AND HIS FATHER JEFFERY, THE RICE OPERATION IS A FIXTURE IN THE COMMUNITY.

“My grandfather started crawfishing in 1956 after winter rains would flood large parts of his land,” said Alex. “In 1970, he started growing rice and rotating the land between rice and crawfish.” The Sylvester family is Cajun-French, and crawfish and rice are a big part of their heritage.

Beginning around 2019, Alex and his father enrolled in the USA Rice-Ducks Unlimited Rice Stewardship Program (Rice Stewardship). “We had been involved with USA Rice for a long time, and when we learned about the program they were doing with Ducks Unlimited, we knew it was something we should look into,” Alex said.

Alex and his father unknowingly had been implementing some of the Rice Stewardship best practices. Being formally part of the program offered them cost incentives to fully embrace innovative techniques to not only improve their yield but also



make better use of resources. *“One of the biggest challenges with any crop lately has been narrow profit margins. The price of ag has gone up significantly.”* Alex went on to say that Rice Stewardship provides them with the knowledge and tools to make the best use of surface water and install pump automation systems. This allows them better control of their resources.

“The fully automated pumps we use from Valley Irrigation are the best part of the Rice Stewardship program,” Alex said. *“Keeping the water on fields for rice and crawfish has become much more efficient with the new pump system,”* Alex noted that when other producers ask him about the program, he shares that Rice Stewardship is able to assist with pumps, lines, everything that is needed to make your operation more efficient.

While Sylvester Farms is mainly a crawfish and rice operation, they also grow soybeans and often rotate them into rice cropland to add nitrogen to the soil. *“Crawfish are good for the soil, which makes it better for rice, which provides winter habitat for ducks. The farm is like its own ecosystem.”*

Being good stewards of the land is very important to the Sylvester’s. *“We see a lot of spoonbills, pintails, woodies, mallards and snow geese in the winter,”* Alex went on to say. *“While we do allow for hunting on some of the fields, others we don’t in order to let the ducks rest.”*

Alex and his wife Reshma have a young son who often comes to the farm to “help.” *“He loves being out here and seeing how everything works. Taking care of our resources now helps to ensure it will be here in the future.”*

CALIFORNIA RICE COMMISSION

CALIFORNIA RICE ADVANCES PROGRAMS TO HELP WILDLIFE AND FISH



In 2023, the California Rice Commission (CRC) and its many conservation partners continued their work supporting winter flooding programs, special shorebird projects, waterfowl nesting cover, the science surrounding drought resilient incentive programs, and further testing of salmon habitat management practices on rice fields.

WATERBIRD HABITAT CONSERVATION PROGRAMS

Drought Relief Waterbird Program

After receiving almost \$16 million from the CA Dept of Water Resources to create more flooded habitat on rice fields and wetlands during drought, we created another 78,000 acres of habitat in 2023. We are also expanding our science around supporting drought-resilient incentive programs with over 400 waterbirds tagged with GPS transmitters to understand how birds use landscapes—whether we are in a drought or deluge. We appreciate DWR partnering with California Rice to help waterbirds thrive.

California Winter Rice Habitat Incentive Program

CRC administers this program on behalf of the CA Department of Fish and Wildlife. We've worked to add flexibility and, therefore, greater participation to help sustain winter flooding in California. Enrollments for the 2023-24 winter program are over 63,000 acres.

Regional Conservation Partnership Program

This Natural Resources Conservation Service program provides financial assistance to implement waterbird conservation practices, including flooding for habitat, cover cropping and upland habitat enhancement. Over \$1,414,000 was obligated in 2023 for 36 producers.





California Ricelands Waterbird Foundation's Bid4Birds Program

California Ricelands Waterbird Foundation (www.calricewaterbirds.org) continues to expand and provide growers with opportunities to create critical habitat seasonally for migratory shorebirds (>2,000 acres in 2023) as well as try innovative ways of planting cover crops and tackling other challenges to support waterbirds in rice.



CALIFORNIA RICELANDS SALMON PILOT PROJECT

CRC continued its work to develop strategies for managing winter-flooded rice fields to help salmon. Our Phase II Pilot Study with UC Davis and California Trout will continue for at least one more year. Our primary objective in the 2022-23 field season was to implement the draft salmon management practice on a full-sized rice field and assess the extent to which natural-origin or “wild” salmon used the 125-acre rice field after the floodwaters had receded. We counted 389 wild salmon; representative of all salmon runs. Due to a second bypass flood event in mid-March, we were unable to drain the whole field and count every fish as they exited the field. However, based on the capture of nearly 400 wild salmon, we estimate there were about 6,000 wild salmon that used the project field.

CRC appreciates its ongoing partnership with the NRCS as they support our current \$1.2 million Phase II Pilot Program. We also thank our match funding partners. This includes major funding provided by Syngenta and State Water Contractors as well as contributions from Grow West, Corteva, American Commodity Company, California Family Foods, Rice Research Board and Lundberg Family Farms.

Please visit Salmon.Calrice.org for detailed project information and a full list of sponsors.



CLIMATE-SMART GRANTS

WORKING TOGETHER

RICE-FOCUSED CLIMATE-SMART COMMODITIES PROJECTS

In September 2022, U.S. Department of Agriculture (USDA) Secretary Tom Vilsack announced that the USA Rice – Ducks Unlimited Rice Stewardship Partnership, along with project partner National Black Growers Council, would receive \$80M in funding through its Partnership for Climate-Smart Commodities program. Rice Stewardship seeks to build on rice's reputation as an environmentally friendly crop by helping producers reduce greenhouse gas (GHG) emissions and water consumption. Thanks to support from the Climate-Smart grant, we will reduce GHG emissions on 320,000 acres of working rice lands through irrigation strategies of alternate wetting and drying, row rice or furrow irrigation, efficiency in fertilizer use, crop protectants, and energy. These strategies address more than 90% of the GHG footprint of rice production.

While we are proud of the Rice Stewardship award, we are equally proud and supportive of numerous other rice-focused Climate-Smart grants and projects. Plans for collaboration include outreach to rice producers assuring they know of all their project opportunities, sharing best conservation practice techniques and tactics, periodic coordination meetings to learn what is working and what is not, and more. Although there are numerous rice-focused Climate-Smart projects, there is only one U.S. rice industry, and collaboration is more important now than ever before. The projects listed below look forward to working together for the rice producer and the industry.



AgriCapture Climate-Friendly Rice

- Lead partner: AgriCapture
- Point of contact:
Tyler Hull, thull@agricapture.com, 512-917-4092
- States included in the project: Arkansas, California, Louisiana, Mississippi, Missouri, Texas
- Approved federal funding: \$7,499,978
- This project will benefit climate-smart farmers while expanding climate-smart rice markets and guaranteeing customers a supply of climate-smart rice. All farms will be certified under the AgriCapture Climate-Friendly Rice Standard.

Launching the North Valley Food Hub for Climate-Smart Agriculture

- Lead partner: Chico State Enterprises
- Point of contact:
Cynthia Daley, cdaley@csuchico.edu, 530-518-4157
- States included in the project: California
- Approved federal funding: \$4,999,795
- This project will work with regional small and historically underserved producers to launch the North Valley Food Hub for Climate-Smart Agriculture. The Hub plans to provide farm-to-fork integration through marketing and sales support for climate-smart commodities by consolidating transaction costs, creating a one-stop shopping platform for buyers, and a marketplace for growers to post and promote their products.

Supreme Rice, LLC's Climate-Smart Initiative to Reduce Greenhouse Gas Emissions and Water Use Through the Adoption of Alternate Wetting and Drying Irrigation Practices in Rice Production

- Lead partner: Supreme Rice, LLC
- Point of contact:
Kasey Shaber
kasey.shaber@supremerice.com, 337-783-9777
- States included in the project: Louisiana, Arkansas
- Approved federal funding: \$45,000,000
- This project will expand climate-smart markets and provide financial incentives for underserved and small-scale producers to reduce methane emissions through alternate wetting and drying irrigation and adopt other sustainable growing practices to reduce emissions and water consumption. This project plans to offer financial incentives for changing management practices and reducing perceived risk barriers. Pre-established baselines are planned to be used to quantify methane emissions in rice by peer-reviewed research. Automated water level measuring devices and crop links will be

deployed at a rate of 1 per every 100 acres. This project plans to design a campaign that will be multi-faceted in nature to educate consumers and bring recognition to farmers and climate-smart commodities in the project.

Texas Climate-Smart Initiative

- Lead partner: Texas A&M AgriLife Research
- Point of contact:
Jason Vogel, climatesmart@ag.tamu.edu, 979-314-8095
- States included in the project: Texas
- Approved federal funding: \$64,999,967
- This project will transition Texas' large agricultural sector to climate-smart agriculture and forestry practices and develop new markets for climate-smart commodities. This project plans to develop decision tools for producers based on a cost-benefit analysis of climate-smart practices and to create and evaluate a "Climate-Smart" brand for its ability to develop and expand new markets for commodities produced with climate-smart practices.

Alliance to Advance Climate-Smart Agriculture

- Lead partner: Virginia Polytechnic Institute and State University
- Point of contact:
Jamie Lucero, jlucero@vt.edu, 540-231-3990
- States included in the project: Selected soil and water conservation districts within Arkansas, Minnesota, North Dakota, Virginia
- Approved federal funding: \$80,000,000
- This project will build climate-smart markets for a variety of agricultural commodities and help make adopting climate-smart agriculture and forestry practices more economically viable for producers by compensating them at a rate that guarantees a reasonable return with a price floor that surpasses costs.

Growing Value for Producers Through Increased Access to Markets for Climate-Smart Commodities

- Lead partner: Winrock International Institute for Agriculture Development
- Point of contact:
Megan Wall, megan.wall@winrock.org
- States included in the project: Arkansas, Missouri
- Approved federal funding: \$20,000,000
- This project will create and pilot-test a farmer-friendly system that builds capacity with institutions interacting with a range of producers, including underserved producers, to support adopting climate-smart practices and interacting with commodity buyers in climate-smart markets.

RICE GHG EMISSIONS

WHAT CAN A RICE PRODUCER DO TO REDUCE GREENHOUSE GASES?

MEGAN MARTIN

Ducks Unlimited Research Scientist

In 2022, the USA Rice-Ducks Unlimited Rice Stewardship Partnership was awarded an \$80 million USDA Climate-Smart Commodities grant. Among the priorities of this grant is to create a market for climate-smart rice. As a producer, you may be wondering: what is climate-smart rice, and how do I produce it?

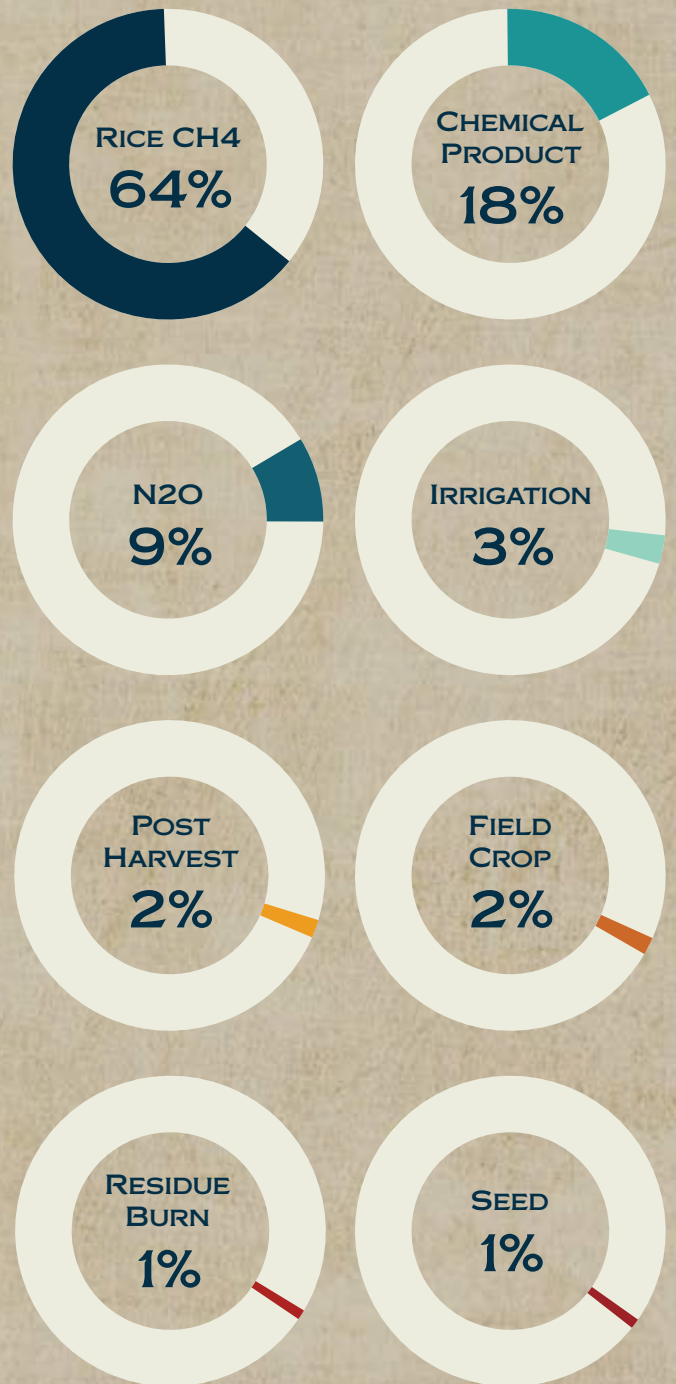
Rice is an important industry with 20 billion pounds of rice produced in the U.S. each year. Typical rice production releases a significant amount of methane into the atmosphere—more than any other crop. But rice also has several environmental benefits, including providing winter habitat for waterfowl, minimizing soil erosion compared to other crops, and a producer commitment to resource use efficiency and improving environmental impact. In a climate-conscious market, what can rice producers do to reduce emissions?

A University of Arkansas study (B. Moreno-Garcia et al. 2021, *Journal of Cleaner Production*) found that in rice production, greenhouse gas emissions are most affected by ratoon crop production, soil type, crop res-

idue, and water management. A ratoon or second-crop results in additional methane emissions as the growing season is extended and residues from first crop are incorporated. Clay soils are denser with less air space than silt loam soils and therefore produce as much as 90% less methane. Crop residue outcomes were similar in a rice-soybean rotation, but in a rice-rice rotation, burning the residue produced 73% less methane. However, the drawbacks of burning residue are formation of air particulates, nutrient loss, and the loss of the soil health benefits that would have been gained from incorporating residue. Finally, alternate wetting and drying as an irrigation strategy breaks the methane cycle by adding mid-season oxygen to the soil. Even with only one dry down event, methane emissions were 39% less than they were in continuously flooded fields. Two dry downs results in a 78% decrease in methane emissions. Sulfur application also stunts microbial methane production. Using ammonium sulfate fertilizer, which is about an equal balance of nitrogen and sulfur, decreases methane production by 25%.



GREENHOUSE GAS FOOTPRINT OF RICE PRODUCTION (LB/CWT)



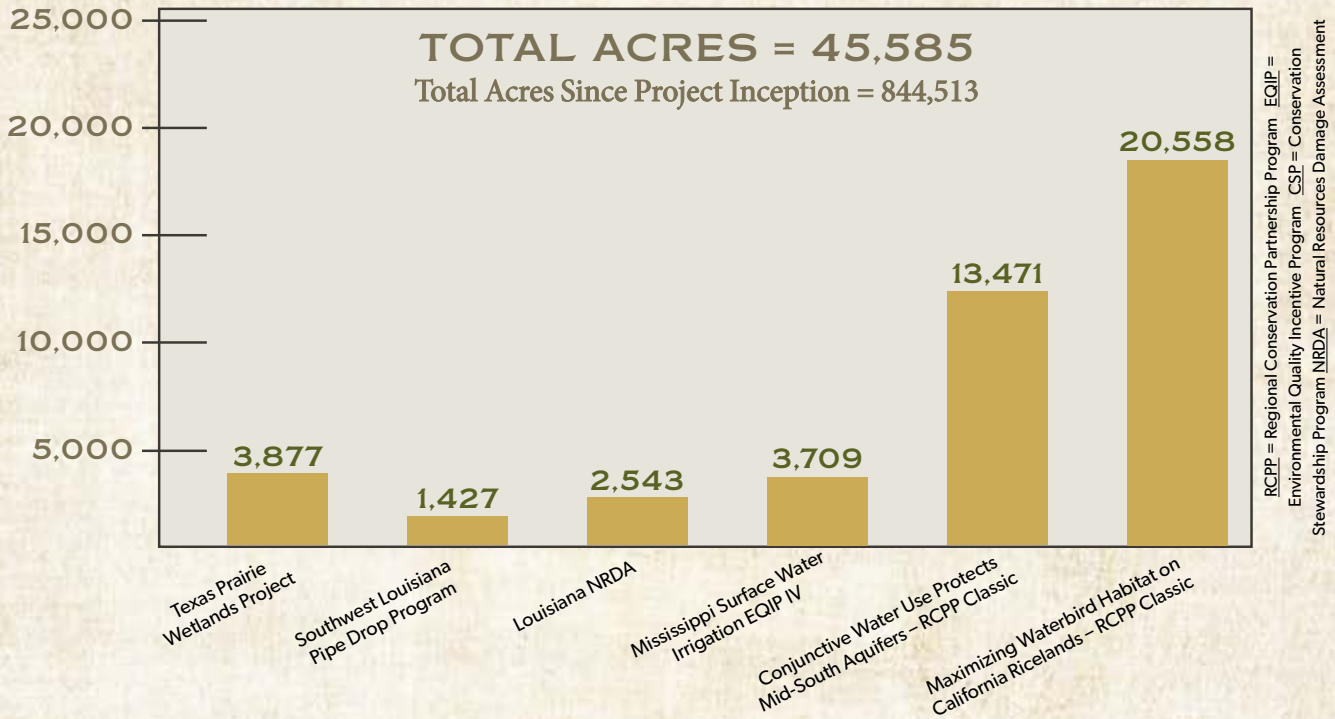
If the primary goal is to reduce greenhouse gases, producers should focus on translating the biggest offenders into real-world practices. For example, a major practice for Rice Stewardship will be Irrigation Water Management. This includes treatments of alternate wetting and drying and furrow-irrigated rice. In turn, these practices also produce other benefits to the environment in addition to reducing greenhouse gases.

Rice production will continue to become more and more pivotal as the world population grows and arable lands shift northward due to climate change over the coming decades. As has been the history of Rice Stewardship, the program will continue to trailblaze a path toward a more sustainable rice industry and a healthier planet. Stay tuned in 2024 for more information about how the Rice Stewardship Partnership can help you achieve climate-smart rice!

Sources: Dr. Beatriz Moreno-Garcia; Moreno-Garcia, B. et al. 2021; Linquist, B.A. et al. 2018, U.S. Rice Sustainability Report

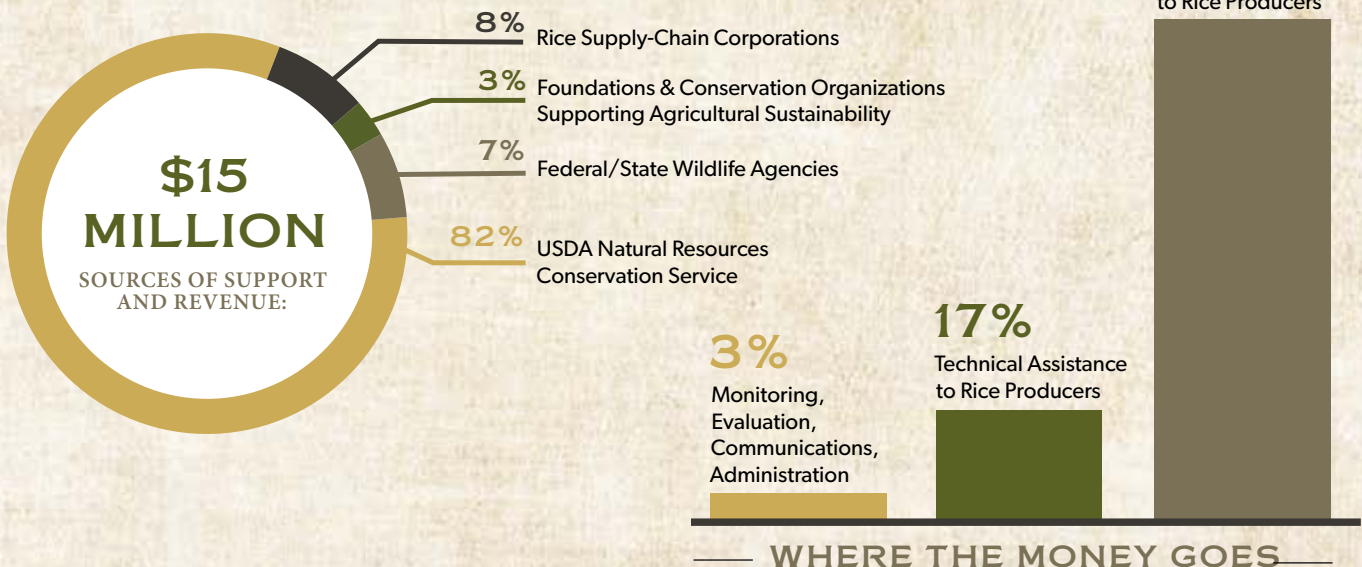
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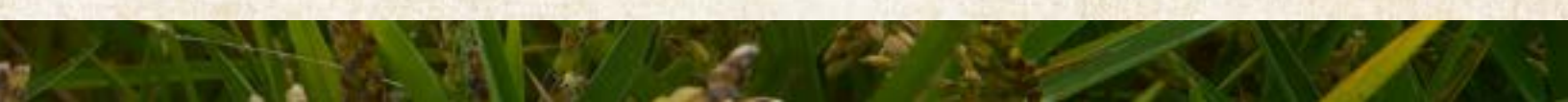
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