

Rice Stewardship

2018 ANNUAL REPORT



Ducks Unlimited WORKS WITH PARTNERS TO

MAKE THE PLANET BETTER FOR PEOPLE AND PEOPLE BETTER FOR THE PLANET.

WE JUST USE WATERFOWL AS A MEASURING STICK!”

—Dr. Scott Manley, DU Director of Conservation Programs



A Message FROM OUR Leadership



As we look back on the fifth year of the USA Rice-Ducks Unlimited Rice Stewardship Partnership, there are many victories to celebrate. Foremost, our focus on optimizing water and nutrient management, energy efficiency, and wildlife habitat as ways to make rice farming even more sustainable has been steadfast. As with all farming, natural resources such as water and soil are the first and most important inputs rice growers depend upon. Fertile soil, clean water and air are under increasingly high demand, and we are dedicated to ensuring our industry remains good stewards of the environment and continues to do more with less.

In addition to the quality of the crop we produce, the way in which we produce it has become increasingly important to our consumers around the world. Companies up and down the supply chain understand this value, and they are embracing it. With the support of companies from Mosaic and Corteva to Nestlé Purina, Anheuser-Busch, Walmart, and others, Rice Stewardship is making great strides in helping rice growers across the country farm more sustainably and elevate conservation on their farms. Wildlife habitat and agriculture can and do coexist. In fact, waterfowl and rice agriculture enhance each other.

In just five years, Rice Stewardship has developed a field team of more than 20 knowledgeable and dedicated staff who strive to serve rice producers and work side-by-side with USDA Natural Resources Conservation Service (NRCS) staff at 90 field offices covering rice country. This partnership has collectively been awarded eight Regional Conservation Partnership Project (RCPP) contracts across all six rice-growing states. Project leads are diverse, including California Rice Commission, Ducks

Unlimited, Lower Colorado River Authority, and USA Rice. Collectively, these eight RCPP awards provide more than \$80 million in financial assistance for conserving water and wildlife on ricelands.

Of particular importance for the future of rice farming and conservation are the young beginning farmers we serve. The national average for young farmers as primary operators in rice is just 8%. Through aggressive and targeted outreach efforts, 22% of Rice Stewardship conservation contract holders are young farmers. You will see several of these young men and women featured in this report. The next generation of farmers is embracing natural resource conservation, and we will be here to support them for years to come.

Our combined publicity and policy efforts are designed to tell the positive conservation story surrounding rice farming and to secure sound conservation programs and funding in major legislation like the Farm Bill. These efforts continue to succeed. People of all walks of life take note when the agricultural industry, individual growers, conservation organizations, federal and state agencies, and corporations speak with a unified voice for programs they can all support. It is imperative that we continue to pursue these efforts not only for our own profitability, but also for the future of farming and our environment.



Jeff Durand & Al Montna
Rice Stewardship Co-Chairmen

Regional Conservation Partnership Program

THE FOUNDATION FOR RICE STEWARDSHIP

By DU Director of Conservation Programs, Dr. Scott Manley

As we have touted, the RCPP is a landmark initiative launched in the 2014 Farm Bill. Now reaching its phase one horizon, the program offers expanded opportunities for NRCS, conservation partners, and rice producers to work together to harness innovation, expand the conservation mission, and demonstrate the value and efficacy of voluntary private lands conservation. Rice Stewardship is built upon these same principals to conserve working ricelands, water, and waterfowl. We applaud the NRCS for their vision, for providing a solid foundation upon which we can build, and for holding steadfast on continuing this program in the next Farm Bill.

Rice Stewardship leaders have collaborated to apply for and receive eight RCPP projects to date. In 2015 three projects were secured: (1) National Rice Stewardship Partnership covering all six rice-growing states; (2) Expansion of Waterbird Habitat Enhancement Programs in California; and (3) Conservation in Micro-Watersheds of Southwest Louisiana. These projects are nearing completion with sunsets planned for the end of 2018 and early 2019.

In 2016 another RCPP project was awarded for Southwest Louisiana entitled Nutrient Management Conservation Practice 590. This project is currently at the halfway point with rice producers adopting precision-level practices for soil testing and fertilizer application.

In 2017 two more RCPP projects were secured, including the Mid-South Graduated Water Stewardship, covering the Mississippi Alluvial Valley, and the Lower Colorado River Authority (LCRA) led Prairie Conservation Reservoir in Texas. These projects are in the contracting stage and set to continue for another few years.

Finally, in 2018 two more were awarded, the Gulf Coast Water and Wildlife RCPP and an innovative Cultivating Water Conservation RCPP. The latter proposes to integrate surface waters from oxbow lakes and bayous in northeast Louisiana into irrigation systems on farms for the betterment of rice production and wildlife. If successful, this concept will be expanded more widely in the future.

These eight RCPP projects are led by diverse partners, including California Rice Commission, Ducks Unlimited, LCRA, and USA Rice. Together they form a solid foundation for rice producers and a venue for collaboration, innovation, and expansion of private lands conservation. Once again, we applaud the NRCS for their vision. Rice Stewardship looks forward to upholding and continuing RCPP, indeed a landmark initiative, in the upcoming Farm Bill.

RCPP FINANCIAL IMPACT TO RICE PRODUCERS

- The eight RCPP projects procured to date will be fully implemented by 2024.
- Across the next six years, more than 770,000 acres of rice and rice-rotation lands will be positively impacted.
- Financial assistance to rice producers to implement conservation practices will exceed \$80 million
- Rice Stewardship sincerely appreciates the NRCS, without whom, conservation impact of this scale would not be possible.



Recognition

FOR RICE STEWARDSHIP

THREE RICE FARMERS FEATURED BY FIELD TO MARKET

Each year Field to Market produces Farmer Spotlights, featuring innovative farmers engaging in continuous operational improvements and utilizing the Field Print Calculator. A farmer is highlighted each month with a media push to bring attention to the individual's efforts. Three of the 2018 spotlights are U.S. rice farmers: **Michael Bosworth** of Olivehurst, California; **Matthew Feilke**, of Stuttgart, Arkansas; and **Mike and Ryan Sullivan**, of Burdette, Arkansas. Considering the acres of rice production compared to other crops, having three rice growers featured is a testament to the industry's stewardship.

LOUISIANA RICE & CRAWFISH FARM HONORED FOR NUTRIENT MANAGEMENT

The Fertilizer Institute recognized Rice Stewardship participants and farming brothers **Jeff, CJ, and Greg Durand** for their exemplary use of 4R (Right Source, Right Rate, Right Time, and Right Place) nutrient stewardship practices. The Durands collect soil samples in 2.5-acre grids every few years to monitor the soil's ability to hold essential nutrients. Combined with other information, they developed better fertilizer prescriptions for each field, improved soil health, and continued increased yields.



Greg (right) and CJ (center) Durand accepted their family farm's Fertilizer Institute Award.

STEPHENS FAMILY – CROSS COUNTY FARM FAMILY OF THE YEAR

Rice Stewardship participating farmer **Brandon Stephens** is a sixth-generation farmer, and his wife, **Laura**, is a fifth-generation farmer. Their two boys, Kohen and Keaton, are growing up on the 2,000-acre farm and learning from their parents about taking care of the land. Brandon has focused on conservation practices for the last six years. He has implemented irrigation water management, precision nutrient and pesticide application, residue and tillage management, cover crops, and intermittent flood and early dry down on his rice acres. The Stephens family was named the Arkansas Farm Bureau's 2017 Cross County Farm Family of the Year.

RICE STEWARDSHIP STAFF RECOGNIZED

The Rice Technical Working Group recognized Rice Specialist **Dr. Merle Anders** with a distinguished service award. Dr. Anders is helping Rice Stewardship partners determine the impact of nitrogen management, variety selection, and water management on greenhouse gas (GHG) emissions and grain arsenic concentrations. His research helped to develop crop production recommendations that help rice farmers maintain profitability and flexibility while ensuring sustainable production.

DU Conservation Outreach Specialist **Kirby Brown** won the 2017 USA Rice Distinguished Conservation Achievement Award for his efforts in Texas to help address resource concerns related to water for rice agriculture, habitat for waterfowl and other wetland-dependent wildlife, and inflows for coastal estuaries. Since 2012, Kirby has been dedicated to finding common-sense, partner-focused, win-win solutions that protect sustainable agriculture and natural resources.

KAPLAN, LOUISIANA RICE GROWER RECEIVES MULTIPLE RECOGNITIONS

Between recognition from Field to Market as its Farmer Spotlight Honoree and winning the 2017 Farmer of the Year award from USA Rice, Kaplan, Louisiana rice farmer **Christian Richard's** commitment to conservation and stewardship is not going unnoticed. Christian believes that U.S. farmers should proudly tell the story of how they grow safe food for the world while conserving natural resources and improving land and water.



IN RICE FIELDS

By California NRCS & California Rice Commission

In an effort to recover California's Chinook Salmon populations, scientists with UC Davis, the state Department of Water Resources, and California Trout created the Nigiri Project, investigating whether the Central Valley's ricelands could be managed for the fish.

The vast historic floodplain of the Central Valley's rivers formerly served as the nursery habitat for young salmon to grow large enough to survive their strenuous journey to the ocean. Rice fields now dominate the floodplain. The major goal of the Nigiri Project—named for the classic type of sushi preparation—is to determine if these now “managed floodplains” can be used again as salmon habitat.

Fortunately, the managed wetlands of rice agriculture present many opportunities for maximizing wildlife habitat as demonstrated through efforts to provide migratory bird habitat in this critical wintering area.

“The idea is that farmers can manage lands in the Central Valley for flood control, farms, fins, and feathers,” said Jacob Katz, California Trout regional program manager and UC Davis doctoral student in fish ecology.

The project began at Knaggs Ranch, northwest of Sacramento in Yolo County. Flooded rice fields were experimentally designed to evaluate the growth and survival of Chinook Salmon. Researchers began by weighing, tagging, and releasing 50,000 hatchery salmon into the flooded rice fields where there was plenty of food, slow-moving water, and fewer predators. They found that the salmon grew at a faster rate, offering them better survival in their voyage to the ocean.

“The critical role of California rice fields in providing wildlife habitat is well recognized,” said California Rice Commission Environmental Affairs Manager Paul Buttner. “We appreciate efforts like the Nigiri Project. We welcome ways to expand the role rice fields play for all wildlife, including fish species.”

The next step for California Rice is to figure out strategies for bringing the fish into Sacramento Valley rice fields, allowing them to gain size and strength, and then getting them safely back into the river. Unlike the millions of birds rice fields help every year, fish can't fly where they need to go.

The California Rice Commission is currently working to secure a significant grant from the NRCS to conduct this cutting-edge work. The proposed project will radio tag young salmon and track them all the way to the Pacific Ocean to demonstrate increased survivability of fish that are able to grow in the winter-flooded rice fields.

“Matching donor funds are critical in our ability to move forward with this effort. We thank our partners who are already committed to helping fund this project once approved,” Buttner said.

Major funding will be provided by Syngenta. Other significant funders will include the S. D. Bechtel, Jr Foundation, Valent, Corteva Agriscience, Agriform, AgriSource, Growers Ag Service, Tessengerlo Kerley, Inc., and Gowan. The California Rice Commission is seeking more funding partners for what is expected to be a \$1.5-million project over the next three to four years.



After six weeks in the flooded rice fields, the juvenile salmon grow five times their original weight and 1.5 times their length.

Multifaceted Engagement

JON MUNGER • YUBA CITY, CALIFORNIA

Jon Munger started working for Montna Farms upon graduating from Cal Poly, San Luis Obispo in 2001. Today he is their vice president of operations, which includes overseeing approximately 4,000 acres of rice, some of which he farms with his wife, Alice. It was his job with Montna Farms that introduced Jon to rice farming, but his life-long engagement with Ducks Unlimited and upbringing on a farm had instilled in him an appreciation for working lands conservation and the importance of ricelands to waterfowl.

“Waterfowl are very dependent on rice everywhere it’s grown. Without rice farms, waterfowl populations would suffer,” Jon said. “Rice Stewardship is very important as it provides many different conservation programs to help farmers, which in turn helps waterfowl and other wildlife.”

Jon’s engagement in farming and conservation is multi-faceted. He is the chairman for the Dingville Ducks Unlimited chapter, a DU Diamond Life Sponsor, and serves on the Board of Directors for Sutter Mutual Water Company, Northern California Water Association, and Garden Highway Mutual Water Company. He also manages the Garden Highway Mutual Water Company, serves on the local Farm Service Agency committee, and just stepped down as a director of the Yuba Sutter Farm Bureau.

“It was time to give the younger farmers the opportunity to move up,” Jon explained. Like many of the folks engaged in Rice Stewardship, Jon is dedicated to ensuring farming is sustainable for future generations. His sons, Jonny (11) and Jack (13), participate in activities on the farm and are learning how important and integrated farming and conservation are.

One of the biggest challenges facing farmers in California is water availability. Between maintaining and storing the amount of water farmers and the environment need and keeping up with ever-changing regulations, Jon and other farmers in the region work hard to stay profitable and sustainable. This is where the Rice Stewardship Partnership can help.



This water management structure was installed as part of the Montna Farms’ RCPP practices to facilitate more efficient water use.

“We have enrolled in the Rice Stewardship Partnership RCPP and have received Environmental Quality Incentives Program (EQIP) funding to help install a new long-crested weir and water recirculation system. This project will help with water reuse and conservation,” Jon said. “This program was a great fit for Montna Farms to work in partnership with Garden Highway Mutual Water Company to obtain NRCS EQIP funding.”

The most important thing from Jon’s perspective is for the Partnership to continue what it’s doing.

“The Rice Stewardship Partnership needs to keep building on its past successes and continue to find ways to keep conservation programs going,” he said. “This sentiment is one of the reasons our close collaboration with the NRCS and our advocacy efforts in Washington, D.C. are so important. To continue helping farmers make improvements that we all benefit from, programs that support adoption of conservation practices and input efficiencies must continue to provide the financial assistance that makes such efforts feasible.”

Rice AND Ducks IN D.C.

*By DU Directors of Public Policy Kellis Moss and Andrew Schmidt
and USA Rice VP of Government Affairs Ben Mosely*



PHOTO: SCOTT MOODY

With the new Farm Bill on the horizon, the Rice Stewardship Partnership's primary focus in the policy arena continues to be passing a strong bill that builds on the environmental and economic successes that have come from voluntary, incentive-based conservation programs under the current law. To achieve this goal, Ducks Unlimited and USA Rice Federation staff in Washington, D.C. and across the country have been working tirelessly over the last year to ensure that the 2018 Farm Bill includes the robust funding and policy provisions necessary to incentivize practices that benefit rice producers, water quality, and waterfowl.

One of the biggest issues facing conservation in the next Farm Bill is funding. Conservation funding took a significant hit in 2014, and it is critical that the conservation programs not be further impacted by budget cuts. Nevertheless, in these tough budget times we also need to focus our efforts on how to stretch every dollar available to make the biggest possible

impact on multiple resource concerns. This includes improvements to working lands programs and longer-term contracts that encourage annual management practices that benefit both water quality and wildlife. The Partnership has also worked with the agriculture committees to find ways to create more opportunities for producers to access and participate in conservation programs. Finally, since its creation in the last Farm Bill, the RCPP has shown how much of an impact we can make when we join forces. Now that RCPP has been seen in action, Congress will be looking for ways to fine-tune and improve the program to increase its impact, and we will continue to give our input to the agriculture committees and USDA as the next Farm Bill is reauthorized and implemented.

As with everything in our nation's capital, building relationships and coalitions is critical when it comes to the Farm Bill. On Valentine's Day, leaders from Ducks Unlimited and USA Rice came together to host our annual "Ducks Love Rice"



Secretary of Agriculture Sonny Perdue; DU President Rogers Hoyt, Jr.; Speaker of the House Paul Ryan; and DU CEO Dale Hall at the DU Capitol Hill Dinner.

luncheon. Congressional members and staff and NRCS partners turned out in droves as always to visit with our team, enjoy some great rice-based foods and discuss the great work our partnership is doing. The success of the Partnership was also front and center at Ducks Unlimited's annual Capitol Hill Dinner in April, where producers, Partnership members, and Members of Congress and their staff came together for a great time and

to celebrate successes over the past year. In June, Ducks Unlimited and Nestlé Purina PetCare, another Partnership member, co-sponsored a tailgate for Congressional staff and other partners before the Congressional Baseball Game, taking advantage of another opportunity to show the valuable benefits of working together.



Rice Stewardship Co-Chair Al Montna visits with Chairman of the House Agriculture Committee, Mike Conaway at the DU Capitol Hill Dinner.



BEGINNING FARMER CARRIES ON

Family Traditions

ETHAN BIEBER • MOWATTA, LOUISIANA

Ethan Bieber took charge of the family's Acadia Parish family farm from his grandfather in 2013. The fourth generation to grow rice and crawfish, Ethan has a strong tie to the land and the farming way of life.

Ethan heard about the Rice Stewardship Partnership and the RCPP at a rice field day in Crowley. Rice Stewardship staff were there to talk to rice producers about engaging in the program.

"The programs matched the way we operate and lined up with what we want for the farm, so it was a natural fit," Ethan said.

Soon he enrolled in the national rice RCPP program and focused on improving nutrient management, using irrigation water more efficiently, and optimizing wetland wildlife habitat on the farm.

"We close our water control structures on November 1 and keep them closed until February 15," Ethan explained. "That extends the time we have flooded habitat, and we have seen more waterfowl for longer than when we just flooded during duck season. All sorts of birds are here a lot more, some even nest on the farm."

Ethan Bieber is the fourth generation to work his family's Louisiana rice and crawfish farm.



It's the close partnership effort with growers, Rice Stewardship staff, and NRCS staff that makes this program work so

well. Participating farmers get financial incentives through NRCS programs to implement water, nutrient, and habitat management practices. Rice Stewardship staff review and certify the practices so that NRCS can release the financial support. Working closely with local NRCS offices, Rice Stewardship staff provide much-needed manpower and expertise.

Beyond the incentives, which help farmers make capital investments to more sustainably and efficiently grow food and take care of the land, many of the practices have immediate savings.

**"THESE PROGRAMS IMPROVE
OUR BOTTOM LINE AND
OUR FARM'S HEALTH."**

—Ethan Bieber

"The irrigation management and pump testing helps us run the water wells more efficiently. We also track changes in water levels in the field more closely. All of that helps us save money and time," Ethan explained.

Taking soil samples as part of the nutrient management requirement informs fertilizer decisions. Not only does that improve input efficiency, but it also reduces the amount of excess nutrients in surrounding watersheds.

"These programs improve our bottom line and our farm's health," Ethan said. "I hope that when the next generation is ready to take over the operation, I'll be able to pass it on to them like it was passed down to me – better than ever."



*Rice Stewardship Rice Specialist
Richard Hardee goes over pump test
readings with Ethan Bieber.*

Louisiana is the largest domestic producer of crawfish. LSU AgCenter figures show Louisiana rice farmers produce 130-150 million pounds of crawfish per year, with a combined value to producers of over \$172 million.





MAKES \$2-MILLION COMMITMENT TO RICE STEWARDSHIP

Nestlé Purina PetCare Company is the newest corporate sponsor of the Rice Stewardship Partnership. Through a \$2-million commitment over four years, Purina's investment will help keep working ricelands healthy, preserve wetlands and create habitat for waterfowl and other wildlife. This commitment is part of Purina's long-term sustainability strategy to add value to the agricultural supply chain and ensure high-quality ingredients to feed people and their pets are available well into the future.

Rice is a critical dietary staple upon which billions depend and is also a key ingredient in Nestlé Purina's pet food recipes. Rice helps fuel energy and supports digestibility. It's one of the key ingredients in a variety of Purina's pet food recipes, and how it's grown is important to the company and its customers. Purina's contribution will support Rice Stewardship efforts, especially those focused on young farmers.

"Supporting Rice Stewardship is consistent with Nestlé Purina's purpose and values," said Joe Sivewright, Nestlé Purina's CEO. "We exist as a

company to create richer lives for pets and the people who love them, and this includes stewarding natural resources for future generations."

Purina, a global leader in pet care, has been making high-quality pet food for more than 90 years.

"We want to continue to offer the brands that pet owners trust, and that dogs and cats love, well into the future. Because rice is one important ingredient used in many of our recipes, we want to help ensure a healthy, consistent supply of the critical grain for years to come. That's why Purina is proud to be a supporter of the Rice Stewardship Partnership," said Nestlé Purina's Head of Sustainability Jack Scott.

In addition to supporting Rice Stewardship, Purina's ProPlan brand is also the official performance dog food of Ducks Unlimited.

**"AT PURINA WE BELIEVE THAT A
HEALTHY ENVIRONMENT GROWS HEALTHY
INGREDIENTS FOR HEALTHY PETS."**

—Jack Scott, Nestlé Purina Head of Sustainability



PHOTO: UPCLOSEPHOTO.COM



FARM FAMILY

Focuses on Conservation

AND CALORIES PER ACRE

WAGNER FAMILY • SUMNER, MISSISSIPPI

Located in the heart of the Mississippi Delta, Two Brooks Farm is owned and operated by 10th generation farmer Mike Wagner and his family. His son, Lawrence, and daughter, Abbey, are the latest in an unbroken, multi-generational string of farmers instilled with a reverence for nature and farming.

“To have them come back and want to farm is the most wonderful thing,” Mike said.

Mike has participated in Rice Stewardship efforts since the first sign-up opened in the Mississippi Delta and is very passionate about conservation. He was selected as the Conservation Farmer of the Year by the Delta Council. Lawrence and Abbey work diligently to follow in their dad’s footsteps.

“We realize the increasing burden on all farmers to grow sufficient food for a burgeoning human population, while saving our planet’s soils, waters, and other resources for the benefit of generations to come,” Abbey explained. “With this in mind, we grow as many quality calories possible at the least possible expense to our planet’s great natural resources. These are our obligations to humanity and the nature we are all a part of.”

Lawrence doesn’t see how anyone can farm without being involved in conservation. “This is our only planet,” Lawrence said. The family’s main goal for Two Brooks Farm is to maximize calories per acre while conserving our planet’s habitats for future generations.

While Two Brooks is primarily a rice farm, non-GMO soybeans are also grown on the family’s 3,000

acres. Along with the farm, the Wagners also manage several acres of woodlands, lakes, and bayou and river frontage around their land for the benefit of wildlife and plants growing there.

“I want people to see what thought and planning can do to make farms more sustainable,” Lawrence said. “What we’re doing won’t work on every farm, but every farmer should think about what will work for them.”

By serving mankind and nature, the Wagners strike a balance that minimizes environmental impact and maximizes food for people. For example, ducks play the key role in vegetation management.

“Rice and ducks get along swimmingly,” Mike smiled. “They love an aquatic environment, and we farm one. We’re able to supply a lot of the carbohydrates and protein they need to sustain their cycles of life. They fertilize our land and do our tillage for us. It’s a perfect rice production system as I see it.”



**“AS FARMERS, WE WORK
DILIGENTLY WITH OUR LAND
TO PROTECT A FUTURE THAT
IS NOT OUR OWN.”**

—Wagner Family

A Message From: THE ARKANSAS NRCS

Arkansas is the leading state in rice production, harvesting half of the U.S. crop in most years. Although Arkansas' portion of the lower Mississippi River Valley historically had abundant groundwater resources, the aquifer has been declining due to extended over use. Some critical areas of the alluvial aquifer have gone dry, and overuse of the deeper Sparta Aquifer impacts municipal areas that depend on this supply.

The draw on Arkansas' aquifers at current rates is not sustainable. However, with conservation practices such as irrigation storage reservoirs, pipelines, pumps, tailwater pits, and irrigation water management, the demand on groundwater supplies can be reduced. When installed properly, these on-farm conservation systems have the potential to provide greater benefits, including improved soil health, reduced energy usage, improved water quality, improved air quality, and reduced greenhouse gas emissions.

THE CALL TO ACTION TO ADDRESS THIS RESOURCE CONCERN HAS BEEN EXTRAORDINARY, AND WE HAVE SEVERAL PROGRAMS IN PLACE TO ANSWER IT.

- The Mississippi River Basin Initiative (MRBI) was created in 2010 with the ultimate goal of reducing the Gulf of Mexico hypoxic zone. It has helped producers accelerate implementation of conservation systems that conserve water, reduce nutrient runoff, improve wildlife habitat, and restore and enhance wetlands, all while maintaining agricultural productivity. MRBI has been a very effective mechanism for creating and strengthening local and state-level partnerships, increasing conservation knowledge among producers, and fostering locally-led conservation. To date, Arkansas has almost 2,000 conservation contracts covering 444,000 acres with financial assistance to landowners and producers approaching \$100 million.

- The RCPP was launched in the 2014 Farm Bill. In a first-round, competitive application process, the USA Rice-Ducks Unlimited Rice Stewardship Partnership was awarded \$10 million, one of the largest projects in the country. Capturing the true intent and spirit of RCPP, a supply-chain partnership was built, staff capacity was added, and NRCS programs were implemented to conserve precious water resources. This effective partnership continues to gain momentum, working closely with our field staff and implementing a total of eight RCPP projects.
- Lastly, in 2015, we combined forces with the Arkansas Natural Resources Commission and eight Soil and Water Conservation Districts to stand up a team of Irrigation Water Management (IWM) Technicians. These agents of change are critical in helping producers implement the long list of IWM practice options for rice and row crops.

We strongly believe that hands-on experience fosters adoption of new and effective conservation practices, and this belief resonates through each of the initiatives mentioned above. We will continue to work with our conservation partners to promote the Farm Bill and every avenue and opportunity to provide our customers the services they need to be good stewards of the land. Together, we help people help the land by providing one-on-one, personalized advice on the best solutions to address producer goals. We will continue to meet ever-changing challenges in managing our state's natural resources, and we take great pride in many conservation accomplishments in recent years.



“THE VALUE OF CONSERVATION PARTNERSHIPS IS GREAT TODAY,
BUT I EXPECT IT WILL BE EVEN GREATER TOMORROW, AS WE –
DU, USA RICE, CONSERVATION DISTRICTS, NRCS, AND OTHER
LIKE-MINDED PARTNERS – BAND TOGETHER TO AGGRESSIVELY
ADDRESS ARKANSAS’ NATURAL RESOURCE CONCERNS.”

—Mike Sullivan, Arkansas NRCS State Conservationist



Working Ricelands

CLEAN UP MUDDY BAYOUS

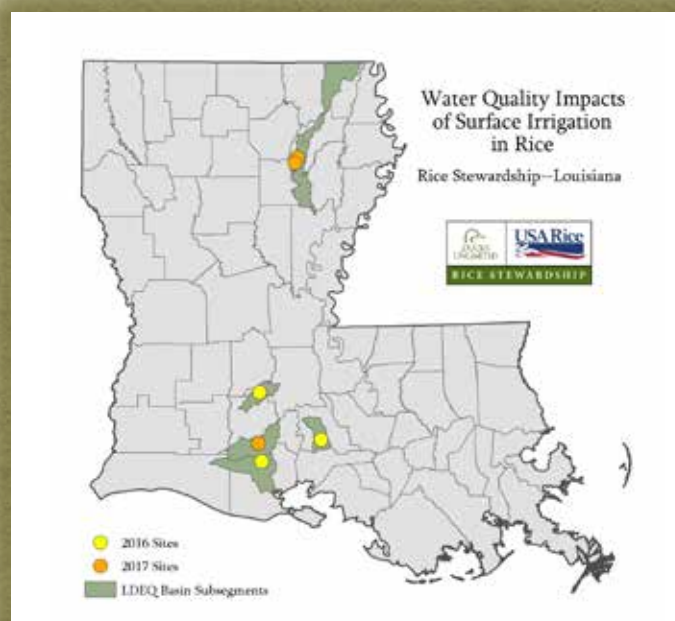
By Kyle Soileau, Southwest Louisiana Rice Stewardship Coordinator

Ricelands are working wetlands, and one job they can do is clean our waterways. Louisiana, often called the Bayou State, is rich in wetlands, rivers, and streams and supports a diverse culture based on these resources. However, many waterways are designated as impaired by the state's Department of Environmental Quality (DEQ) and need reductions in sediment and nutrient loads. For example, Bayou Queue de Tortue (Cajun French for Turtle Tail Bayou), which runs through the heart of southwest Louisiana's rice country, tops the state's list for much needed water quality improvements.

To evaluate the effectiveness of working ricelands to improve water quality, Rice Stewardship staff evaluated six farms in Louisiana that use surface water from adjacent muddy bayous for irrigation. These subsegments included Bayou Queue de Tortue, the Gulf Intracoastal Waterway, Bayou Portage, Bayou Mallet, and Boeuf River (see map at right). All are on the state's list of waterbodies in need of improvements due to excessive sediment, nutrients, and other challenges.

In 2016 and 2017, "Water On" samples were obtained from surface water irrigation sources at

the point of entry into the field. If multiple inlets were present, then samples were collected at each inlet and combined into a composite sample. "Water Off" samples were collected as close as possible to each release outlet within the rice field. Composite samples for each field were then made by thoroughly



mixing all sub-samples. Samples were delivered to the Louisiana Department of Agriculture and Forestry's Ag Chemistry Laboratory at Louisiana State University for analysis of total suspended solids (TSS), nitrite nitrogen, nitrate nitrogen, and total phosphorus concentrations.

Results from the water quality analysis indicated significantly better water quality of "Water Off" compared to "Water On" samples. Sediment-laden water lifted from the bayous averaged 339 mg/L of suspended solids. Water exiting the rice farm averaged 63 mg/L, a five-fold decrease. Nitrate and total phosphorus also had significantly lower concentrations in "Water Off" compared to "Water On" samples. Nitrite concentration had consistently low concentrations in both samples. Overall water quality was improved by the working ricelands system.

So, what are the factors influencing this ecosystem service outcome? First, producers applied as much as 500 pounds of commercial fertilizer products during the sampling period. But they did so with nutrient management plans and the 4R's in mind; Right fertilizer source at the Right rate, the Right time, and in the Right place. We thank The Mosaic Company and NRCS for teaching us all more on this important management framework. Second, several other structural improvements had been made to these rice operations, including precision land levelling, field borders, and grade stabilization structures for runoff control. Lastly, working ricelands are indeed wetlands and perform the same settling and assimilation processes as natural wetlands.

Rice growers are producing a healthy crop, feeding the world, and cleaning waterways in the Bayou State, and recognition for these important contributions is growing. A recent letter from Louisiana's DEQ states, "Our Senior Scientist has reviewed the data, and based upon review of these sampling events, it appears the best management practices are excellent choices for water quality improvements in rice fields."

Rice Stewardship expanded these water quality evaluations to Arkansas starting in 2017. Furthermore, there is a growing effort to develop more surface water irrigation projects, to reduce groundwater demand, and capitalize on ecosystem services of water quality improvements.

FIGURE 1. Mean \pm Standard Error of Total Suspended Solids in "Water On" and "Water Off" from six rice fields using Best Management Practices through Rice Stewardship in Louisiana. Significant difference ($P < 0.05$) is indicated by letters.

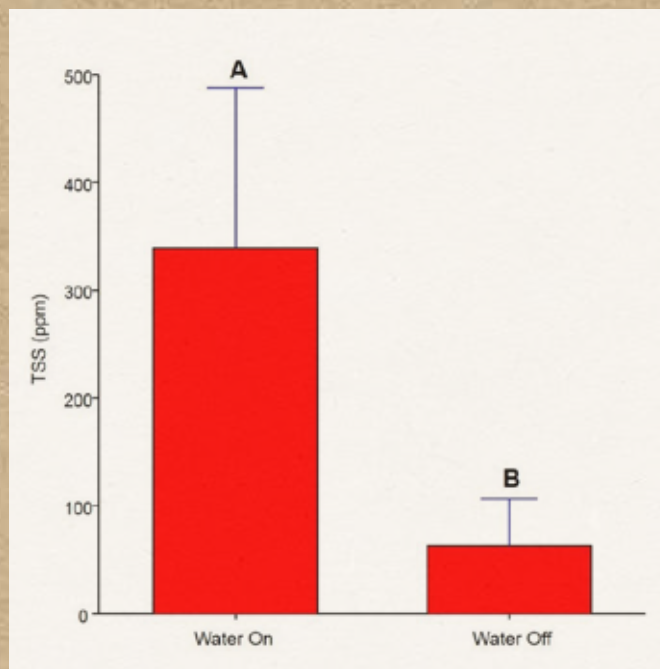
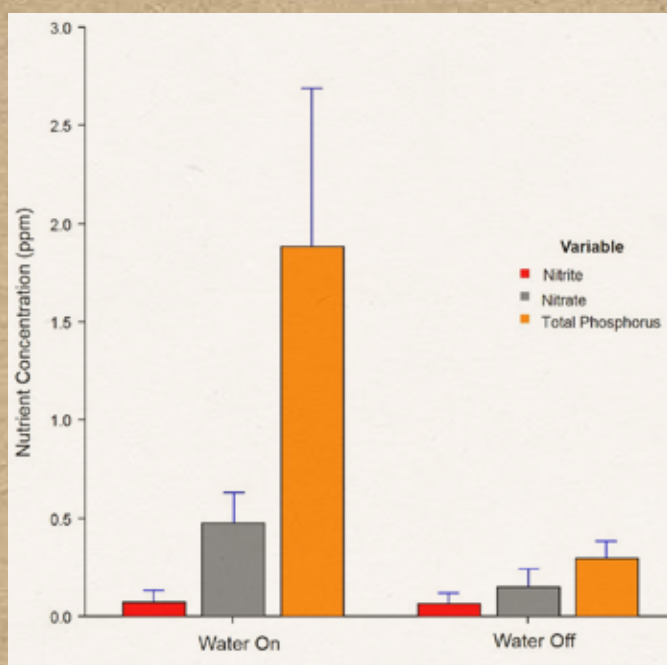


FIGURE 2. Mean \pm Standard Error of Nitrite, Nitrate, and Total Phosphorus in "Water On" and "Water Off" on six rice fields using Best Management Practices through Rice Stewardship in Louisiana. Nitrate and Phosphorus concentrations were significantly different ($P < 0.05$) between "Water On" and "Water Off" samples.



ANHEUSER-BUSCH JOINS *Partnership TO Strengthen* AMERICAN RICE INDUSTRY

America's largest end user of domestic rice invests in partnership to drive sustainability and support local and regional economies.

By USA Rice Director of Grower Relations and Rice Stewardship Partnership Josh Hankins

In June Anheuser-Busch and USA Rice proudly announced a major new investment in water efficiency, riceland preservation, and wildlife protection through the Rice Stewardship Partnership. Rice has been one of the four natural ingredients in many Anheuser-Busch great-tasting beers since Adolphus Busch first added it to Budweiser to set the brew apart from other lagers more than 165 years ago.

Their investment in Rice Stewardship brings the nation's leading brewer – and largest end-user of American rice – together with growers, environmental groups, and government agencies to strengthen the U.S. rice-growing industry through innovation, knowledge-sharing, and supporting sustainable and efficient practices.

Anheuser-Busch's investment will help fund strategies to protect working ricelands, including conservation planning, irrigation efficiencies, nutrient management and education of decision-makers on water, agriculture and wildlife habitats. The Partnership also helps to improve air quality, conserve energy, and support rice growers' bottom line by testing new irrigation strategies.

These efforts will help advance Anheuser-Busch's

2025 Sustainability Goals announced earlier this year, which include connecting 100% of their direct farmers to new technology and empowering them to try new agricultural practices, as well as engaging 100% of their facilities in water efficiency efforts.

"From seed to sip, every step of our brewing process is focused on responsible and sustainable water stewardship and smart agricultural practices. The last ten years have seen us reduce water usage in our facilities by 38 percent, and we are excited to keep moving in this positive direction," said Jess Newman, Anheuser-Busch's Director of U.S. Agronomy.

Anheuser-Busch's 15 agricultural facilities across the country include a rice facility in Jonesboro, Arkansas – a proud part of the \$4 billion Arkansas rice industry. Most of the rice milled at the Jonesboro facility is sourced within a 30-minute drive from local farming families, and by-products are used as inputs in the feed industry, providing a key element for cattle feed.

"We're thrilled that engaging in the Rice Stewardship Partnership will enable us to play an even stronger role supporting the Arkansas rice industry," said Bill Jones, Rice Agronomy Manager at the Arkansas rice mill. "At Anheuser-Busch, we're constantly looking for ways to build a more sustainable industry and even stronger local growing communities."



ANHEUSER-BUSCH

Smart Seeds TO Stewardship

RICETEC IS PROUD TO BE PART OF THE RICE STEWARDSHIP PARTNERSHIP

By RiceTec Global Solutions Development Lead Brian Ottis

Since RiceTec first introduced its high-yielding hybrid rice seed back in 2000, the company has pursued a process of continuous improvement in yield, quality and sustainability. With the world's growing population, we must find more efficient ways to produce rice using fewer resources while increasing yields. RiceTec is taking action with Smart Rice – a seed that produces higher yields using less land and other resources.

Consumers today are much more cognizant of where their food comes from and are requiring food companies to reduce their carbon footprint. This phenomenon is creating a trickle-down effect, putting pressure on the entire supply chain to be more sustainable. Much of this pressure is falling on the shoulders of farmers, who will have to continuously improve how they produce crops to not only maintain financial stability, but also reduce their carbon footprint at the same time.

Through the Smart Rice initiative, RiceTec is working with independent crop consultants and farmers to better understand the sustainability benefits of growing hybrid rice and determine how farmers can maximize profits while minimizing their carbon footprint. In addition, RiceTec is actively seeking to partner with the supply chain to help quantify these benefits throughout.

Research from the University of Arkansas has shown that by growing Smart Rice hybrids, farmers can reduce their greenhouse gas emissions up to 29% and water use by 35%. By combining the sustainability advantages of Smart Rice hybrids with progressive production practices supported by RCPP programs like precision grading, multiple inlet irrigation, and alternate wetting and drying, water use and methane emissions can be cut drastically.

RiceTec believes a big part of the global food solution is to grow rice with the built-in benefits of high yield, disease resistance and strong biotic and abiotic stress tolerance. These types of traits found in Smart Rice allow for the adoption of more sustainable production practices that provide the economic, social, and environmental benefits to which everyone, including the US rice industry, aspires.

Agriculture is passing through a new cycle of revolution, the sustainable cycle. RiceTec is proud to be an active part of this important time in the US rice industry by partnering with US rice farmers, the rice supply chain, and by being a member of the Rice Stewardship Partnership.



Conservation Impact Report

REDUCING GREENHOUSE GAS EMISSIONS AND SAVING WATER THROUGH ALTERNATIVE IRRIGATION STRATEGIES

By DU Director of Conservation Programs Dr. Scott Manley

One of the strategies Rice Stewardship has deployed to maximize water-use efficiencies on more than 27,000 acres, primarily in Arkansas and Mississippi, is the innovative Alternate Wetting and Drying (AWD) irrigation strategy. AWD executes timely dry downs to break methane formation and capture summer rains. Dr. Merle Anders, with the Rice Stewardship Partnership, has been at the forefront of research and delivery of the AWD irrigation technique and is assisting producers and NRCS Field Offices with the contract design, planning, and successful implementation across rice country. As we like to say, “Dr. Anders knows A to Z on AWD!”

Calculations based on our 27,000 acres and peer-reviewed research showed this technique reduced greenhouse gas emissions by 21,000 metric tons of CO₂ equivalent and saved approximately 19,000 acre-feet of groundwater. How do we put that into perspective? Using EPA calculators, that was the same GHG savings as taking 4,500 cars from U.S. highways for a whole year. Similarly impressive, the water savings is equivalent to filling 9,200 Olympic-sized swimming pools with irrigation groundwater. This innovative irrigation technique will remain a focus for Rice Stewardship going forward.

ALTERNATE WETTING AND DRYING (AWD) IRRIGATION STRATEGY

Results in Arkansas and Mississippi

**REDUCED GREENHOUSE GAS EMISSIONS BY
21,000 METRIC TONS OF CO₂**



**EQUIVALENT TO REMOVING
4,500 CARS FROM U.S. HIGHWAYS
FOR A WHOLE YEAR**

**SAVED APPROXIMATELY 19,000 ACRE-FEET
OF GROUNDWATER**



**EQUIVALENT TO FILLING
9,200 OLYMPIC-SIZED SWIMMING POOLS
WITH IRRIGATION GROUNDWATER**





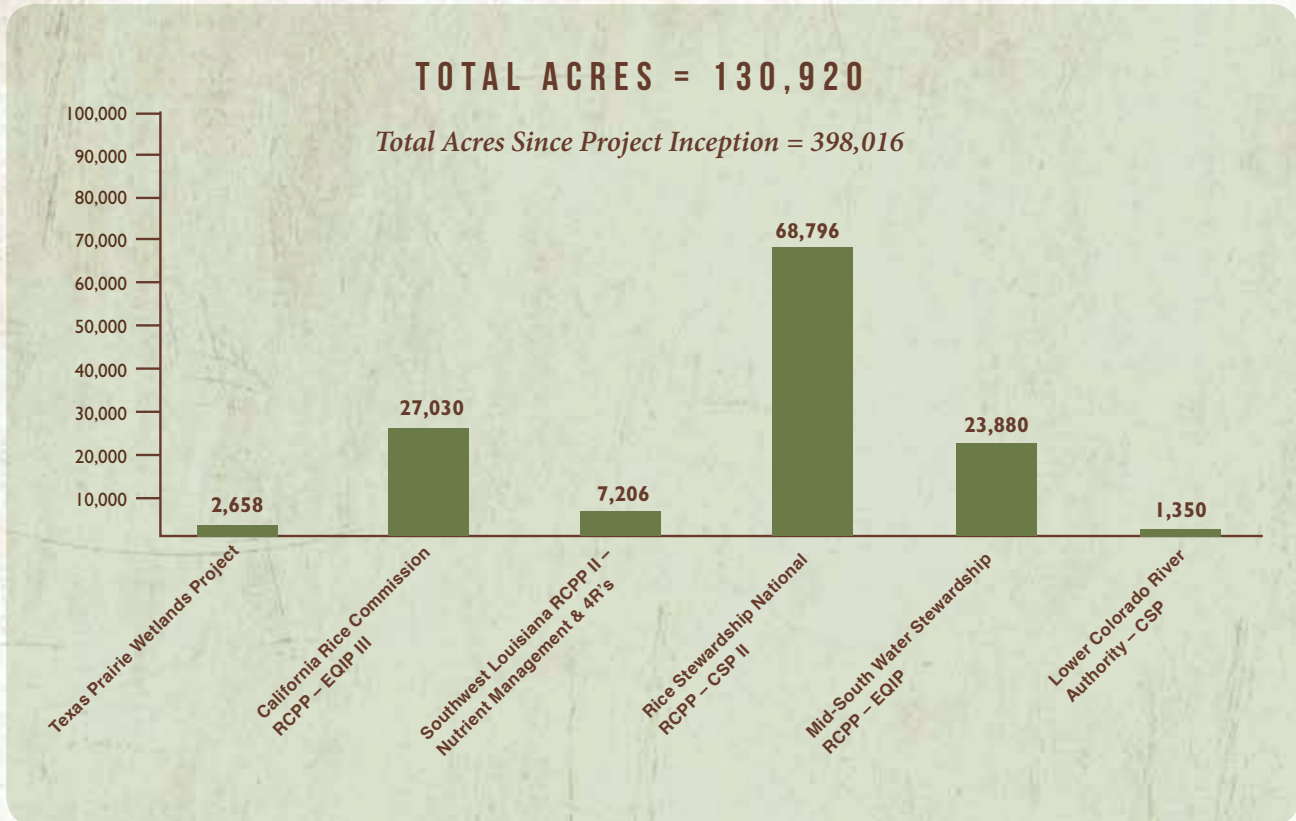
Rice farming's working wetlands provide important habitat for a variety of wading birds.

Financials

2017-2018

RICE ACRES IMPACTED

July 1, 2017 - June 30, 2018



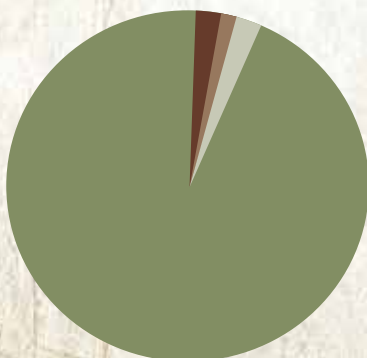
RCPP = Regional Conservation Partnership Program EQIP = Environmental Quality Incentive Program CSP = Conservation Stewardship Program

FINANCIAL SUPPORT

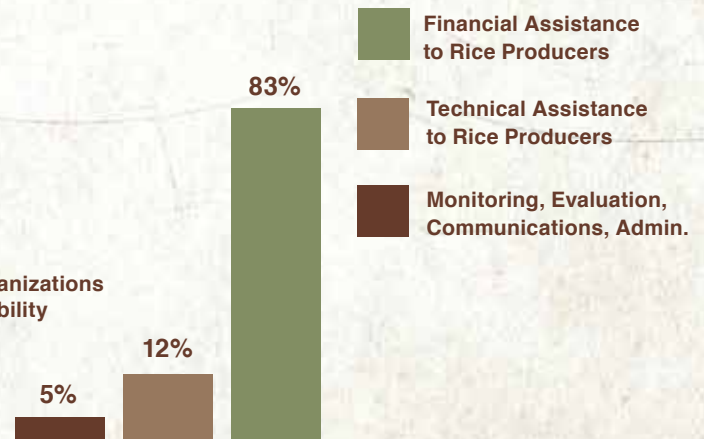
(July 1, 2017 – June 30, 2018)

\$16.7 MILLION

SOURCES OF SUPPORT AND REVENUE:



WHERE THE MONEY GOES

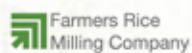


Financial reporting does not include in-kind contributions of time and talent.

Financial Supporters

THANK YOU TO OUR LEADING FINANCIAL SUPPORTERS

Walmart  Nestlé  PURINA.



*A Special Thanks to
Bob and Kim Spoerl for their financial support.*





SUPPORTERS



SINCERELY APPRECIATE THE TIME AND TALENT OFFERED BY SO MANY IN-KIND SUPPORTERS, WITHOUT WHOM, RICE STEWARDSHIP COULD NOT BE SUCH A SUCCESS.

Ag Council of Arkansas
Agri-Drain Corporation
American Carbon Registry-Winrock International
Applied Geosolutions
Arkansas Assn. Conservation Districts
Arkansas Chapter-The Nature Conservancy
Arkansas Farm Bureau
Arkansas Natural Resources Commission
Arkansas Rice Federation
Arkansas Rice Research & Promotion Board
Audubon Texas
Bay City Chamber of Commerce and Agriculture
Bunge North America
California Rice Commission
California Rice Research & Promotion Board
Central Valley Joint Venture
Chambers Liberty County Navigation
City of Eagle Lake, TX
Coastal Bend Groundwater Conservation District
Colorado County SWCD
Colorado County, TX
Delta Council
Delta F.A.R.M.
Delta Wildlife
Eagle Lake Chamber of Commerce
Entergy
Environmental Defense Fund
Field to Market
Garden Highway Mutual Water Company
Gulf Coast Joint Venture
Gulf Coast Water Authority
Independent Cattleman's Assn.
Kellogg's
Louisiana Department of Agriculture and Forestry
Louisiana Department of Environmental Quality
Louisiana Department of Wildlife and Fisheries

Louisiana Rice Growers Assn.
Louisiana Rice Mill
Louisiana Rice Research & Promotion Board
Louisiana State University AgCenter
Lower Colorado River Authority
Lower Mississippi Valley Joint Venture
Lower Neches Valley Authority
Mars
McCrometer
Mississippi Rice Research & Promotion Board
Missouri Department of Conservation
Missouri Rice Producers Group
National Black Growers Council
National Watershed Coalition
Northern California Water Assn.
Syngenta
Texas A&M AgriLife Extension Service
Texas A&M Institute for Renewable Natural Resources
Texas A&M Wintermann Rice Research Station
Texas Parks & Wildlife Department
Texas Rice Producers - CWIC
Texas Rice Producers Legislative Group
Texas State Soil & Water Conservation Board
Texas Water Resources Institute
The Climate Trust
The Landscape Flux Group
The Rice Foundation
Unilever
USA Rice Council
USA Rice Farmers
USA Rice Merchants' Assn.
USA Rice Millers' Assn.
Wharton County SWCD
White River Irrigation District
Yellow Rails and Rice Festival





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