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Louisiana Launches Rice Production School to Support Industry Growth

Abstract

The Rice Production School was developed by the LSU AgCenter in 2025 to address Louisiana's need for comprehensive, research-based training for rice producers and industry stakeholders. The inaugural Rice Production School was conducted from April to October 2025. It consisted of 12 total classes each with a full eight hours of instruction. A total of 15 students participated, each of whom paid a $300 registration fee. To evaluate the program's effectiveness, participants completed a pre-training and post-training knowledge assessment where participants rated their knowledge across key topic areas on a 0–10 scale. Results showed consistent and statistically significant increases across all subject areas, with mean scores increasing from moderate (4–6) to high (8–9) levels of perceived knowledge. The results will be used to refine future Rice Production School offerings and inform extension programming for rice producers and agricultural professionals across Louisiana.

Introduction

Rice is an important agricultural commodity in Louisiana, ranking among the top four in acreage and value. Approximately 461,472 acres were planted in 2024, valued at more

than $713 million (Goyal, 2024). Rice is produced in the states of California, Arkansas, Texas, Mississippi, and Missouri. However, production practices vary from state to state, and practices in Louisiana are particularly unique due to the rotation of rice with crawfish production (Levy, 2026).

The origins of the Rice Production School stemmed from the demonstrated success of the Sugarcane Production School, which had provided Louisiana sugarcane producers with a platform for deep learning in production practices (Orgeron, 2021). Building on that model, agricultural leaders and stakeholders recognized the opportunity to extend similar benefits to rice producers. Discussions among representatives from the LSU AgCenter, USA Rice, and other industry partners emphasized the need for a structured program that could deliver intensive, practical information to new and beginning rice producers along with other stakeholders such as crop consultants and extension agents. With support and funding provided through the USDA Sustainable Agricultural

History of the Louisiana rice industry	Economic overview of industry
Botany and physiology of rice	General principles of weed control
Insects, scouting and their control	Diseases and their control
Immigration labor policy and procedures	Variety development
Fertilization and soil testing	Drainage and irrigation
Rice policy	Cultural production practices
Farm planning and record keeping	Precision agriculture
Apple snail research	Crawfish economics
Aquifer management	Carbon capture and sequestration
Projecting production costs	Feral hog management
Bird management	Herbicide properties and principles of calibration

Systems Program, the concept of a Rice Production School was developed to mirror the successes of the sugarcane initiative while addressing the unique challenges of rice cultivation.

Materials and Methods

In August 2024, a planning committee for the Rice Production School was formed by the CRISP Rice Project extension associate (Christine Gambino, Baton Rouge, LA; USDA-NIFA: LAB94610), along with the rice specialist and rice entomology specialist. The committee chose a broad range of topics to be covered in the school Table 1.List of topics covered at Rice Production School

To be accepted, school participants had to complete an application and contribute a $300 registration fee. This covered monthly breakfast and lunch from a local caterer. The program was capped at 20 students. While the initiative was designed primarily for rice producers, it also drew interest from employees from rice mills, agricultural researchers, and county agents. Three people from outside of the state attended. Two county agents joined without charge. The program consisted of six sessions, each lasting two days. To minimize disruption to farming schedules, sessions were spaced so that producers were away from their operations for no more than two days per month. Meetings were held in April, May, July, August, September, and October. Each class ran for eight hours and typically included four to five lessons. Instruction leaned heavily on lectures, supplemented by field demonstrations. Participants had the opportunity to tour Supreme Rice to view their milling process, Crowley Grain to observe seed coating, and were given sprayer drone demonstrations with Randy Price of the LSU AgCenter. Participants were given two scheduled breaks. Informal networking and peer exchange were encouraged throughout the day.

Survey Design

A pre- and post-test survey was created manually based on the topics presented at the school. Participants completed a short-written survey at the start of the school (pretest)

and again at the end (post-test).self-rated their knowledge on school topics from a 0–10 scale, where: 0–2 means little or no knowledge, 3–7 means moderate knowledge, and 8–10 is high knowledge.

The questionnaire included items across multiple areas of rice production and marketing. For this report, analysis focused primarily on mean scores for each question and the percentage change between pre-test and post-test.

Data Summary Approach

Because the Rice School had a small number of matched respondents (N = 9), the evaluation emphasized descriptive indicators of change, including pre- and post-training mean scores, percent change, construct-level summaries, and key demographic characteristics. Importantly, although descriptive measures are the primary mode of presentation, paired t-tests showed statistically significant improvements across all knowledge items. Thus, the descriptive patterns reported throughout this section reflect statistically meaningful gains—a strong indication of the program's positive impact.

Results and Discussion

There were nine matched pre-test and post-test responses garnered from the 2025 Rice School evaluation. Perceived knowledge constructs were developed from the pretest/posttest survey responses and were categorized by area of concentration, biology and crop management, pest disease and stress management, wildlife biology management, weed identification, and economic and business management. The survey evaluation scale ranged from 1 to 10, where 1 represented a complete lack of knowledge and 10 represented a complete understanding of the subject area.

Participant Profile

Nine individuals participated in the 2025 Rice Production School, representing a diverse cross-section of the Louisiana rice sector (Figure 1). Participant occupations included rice growers, private industry professionals, consultants, extension personnel, and research staff. This occupational diversity demonstrates the wide relevance of technical rice education for both production and advisory functions.

Experience in the rice industry varied considerably. They ranged in age from 23 to 58 years. Several participants reported 40–50 years of involvement, while others were relatively early in their careers. Participants also differed in educational backgrounds, ranging from bachelor's to advanced graduate degrees. Among those directly involved in production, the size of rice acreage varied from 500 to more than 2000, indicating a range of operational scales and management responsibilities. Participants stated goals aligned closely with program content, with many seeking stronger understanding of fertility programs, weed control strategies, disease management, irrigation practices, and enterprise budgeting.

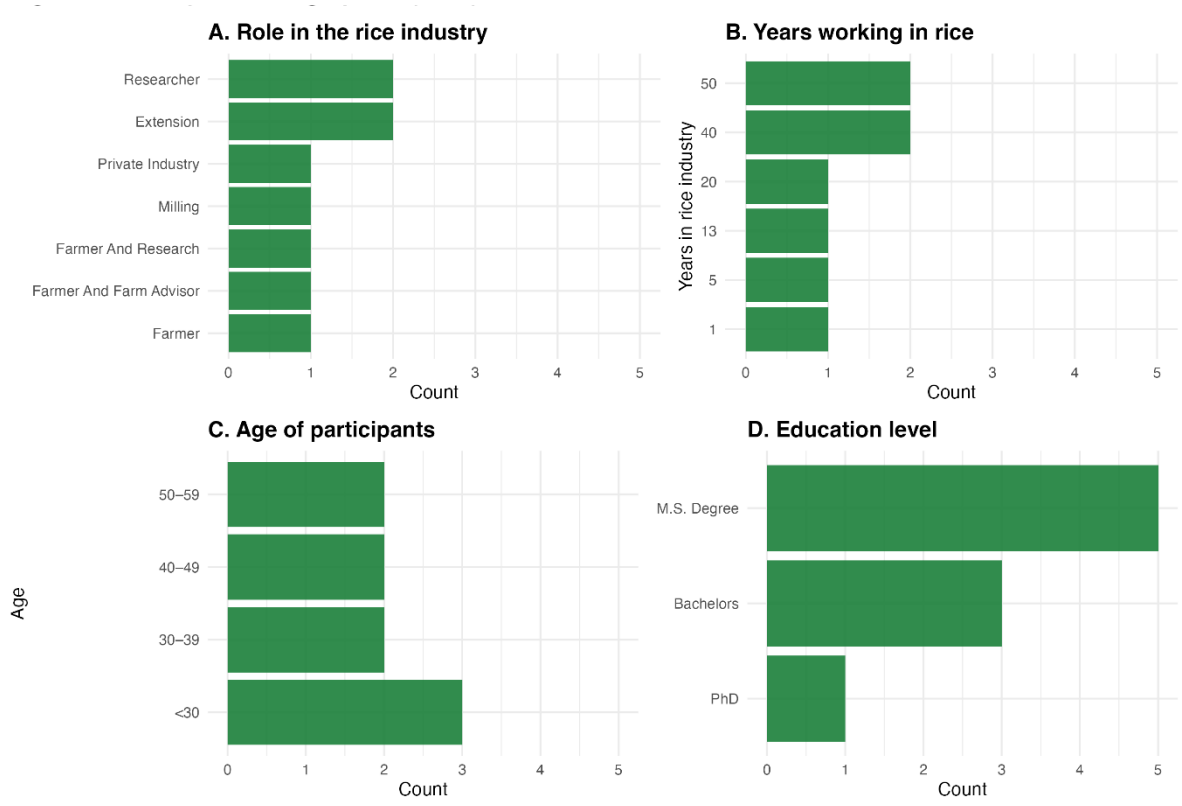

Figure 1: Participant Demographics (n=9)

Educational Results

Overall Knowledge Gains

Across all assessed topics, participants demonstrated clear and consistent improvement in their perceived knowledge. Most pretest means fell between 4 and 6, indicating moderate familiarity but signaling room for greater technical grounding. Following completion of the school, posttest means frequently reached the 8–9 range, reflecting strong confidence in the material presented. These results indicate that the Rice Production School effectively enhanced participants' applied understanding across both foundational and advanced topics.

Biology and Crop Management

Participants entered the program with moderate confidence in their understanding of rice biology and agronomic management. Pretest scores in this domain ranged between 5 and 6, suggesting familiarity with basic concepts but also highlighting clear learning needs. After completing the School, however, scores increased dramatically, with most posttest averages reaching the high 7s or 8s (Figure 2).

The most pronounced improvements were observed in areas where initial knowledge was lowest. Participants' understanding of precision agriculture rose from 4.33 to 7.56—an improvement of nearly 75 percent. Similarly strong gains were found in fertility management from 5.00 to 8.33 and irrigation strategies from 5.22 to 8.44, indicating that the school successfully addressed high-priority agronomic topics about which participants initially felt less confident about.

Several items reflected both high pretest familiarity and additional improvement. Knowledge of farm machinery and technology, for instance, began with one of the highest pre-tests means 7.33 yet still increased to 8.78. This pattern suggests that the school served not only to fill knowledge gaps but also to reinforce and expand existing competencies. Overall, the uniformly positive trends across the biology and crop management items demonstrate the strength of the program's agronomic instruction.

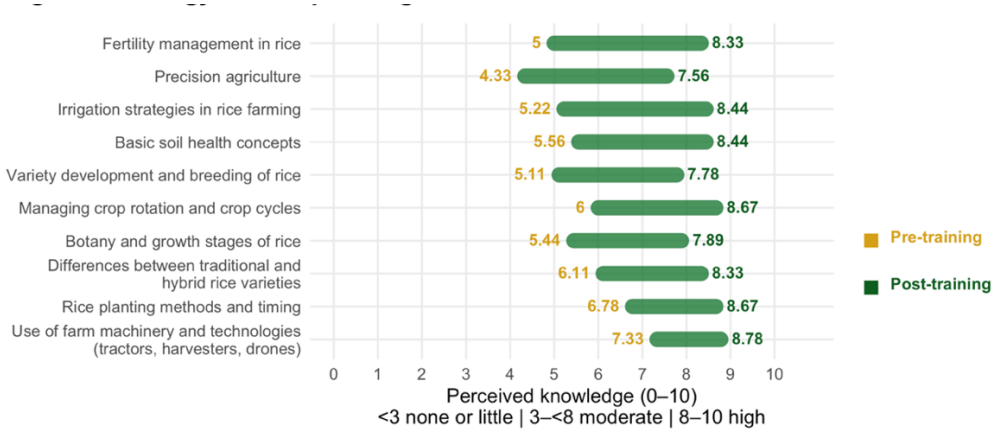

Figure 2: Biology and Crop Management

Pest, Disease, and Stress Management

Knowledge gains in the pest and disease domain were similarly substantial (Figure 3). Prior to the School, participants reported particularly low confidence in identifying diseases and understanding integrated pest management strategies. Average pretest scores for these topics hovered near 4.53, clearly indicating diagnostic and management challenges.

Following instruction, participants' disease-related knowledge increased sharply—pesticide resistance management rose from 4.00 to 7.78, representing one of the largest improvements in the entire assessment. Scouting and pest control practices also improved markedly from 4.32 to 7.33, as did disease identification, causes, and treatment, from 4.11 to 6.89.

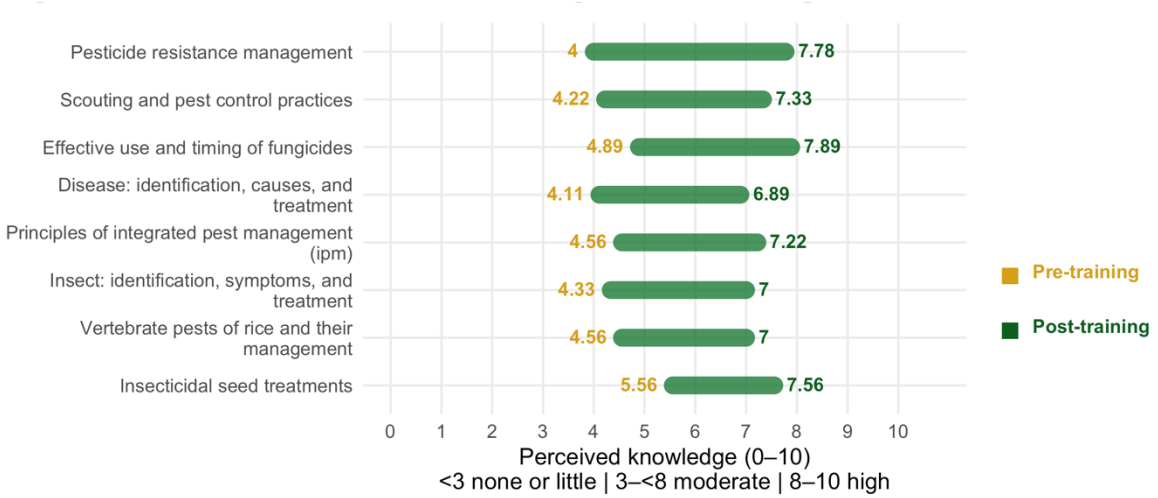

Figure 3: Pest, Disease and Stress management knowledge

Wildlife Biology and Management Knowledge

Participants also demonstrated substantial gains in their understanding of wildlife biology and the management of species commonly encountered in Louisiana rice

systems (Figure 4). Prior to the program, knowledge of crawfish biology and associated production challenges was moderate, with pretest means around 4.67 –6.11. After instruction, however, these scores increased sharply; for example, understanding of dissolved oxygen needs rose from 4.67 to 8.44, representing the largest improvement in this section. Participants also showed strong gains in their knowledge of the ecology and management of feral hogs, apple snails, and nuisance birds, all of which posed recurring concerns for producers. Posttest means in these areas reached the 8–10 range, suggesting that the School provided clear, highly applicable guidance on identifying wildlife-related risks and implementing appropriate management strategies. Collectively, these results indicate that the program effectively strengthened participants' capacity to address wildlife interactions that directly influence rice yield, water quality, and production efficiency.

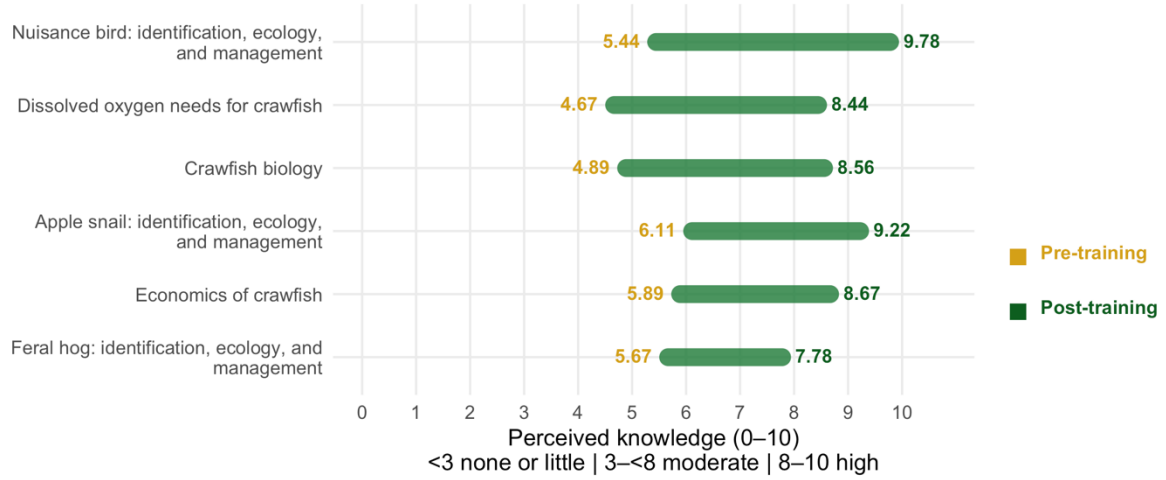

Figure 4: Wildlife biology and management knowledge

Weed Identification and Management

Participants reported substantial gains in their understanding of weed identification and management. Participants began with modest knowledge levels, frequently in the mid-4 to mid-5 range, and saw substantial improvements across all six assessed items (Figure 5).

Understanding of weed identification and herbicide characteristics showed particularly notable increases. Weed identification improved from 4.78 to 7.33, while knowledge of herbicide properties rose from 5.22 to 7.89. Sprayer calibration, an area where many producers initially felt more confident, also increased from 5.89 to 7.44, reinforcing participants' applied skills in accurate herbicide delivery.

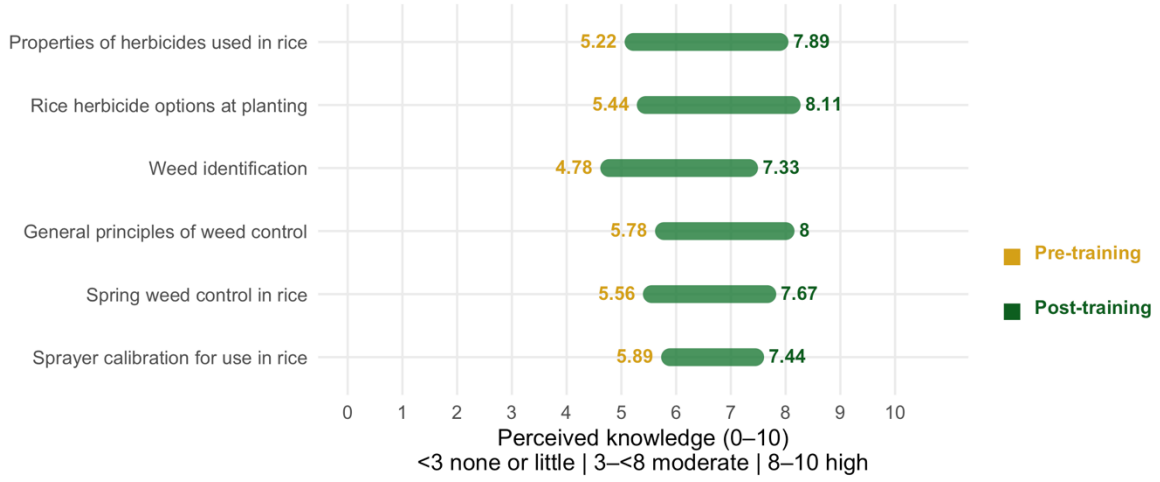

Figure 5. Weed identification and management knowledge

Economics and Business Management

Economics and business management was one of the strongest-performing domains across the entire evaluation. Although some items began with moderately high pretest knowledge, every area demonstrated meaningful improvement following instruction.

One of the most striking gains occurred in H2A/H2B labor programs, where scores rose from 1.78 to 5.67—an increase of approximately 219 percent (Figure 6). Knowledge of farm decision analysis also improved drastically from 3.33 to 6.89, reflecting participants' growing awareness of regulatory and labor considerations that influence production decisions. Participants strengthened their understanding of farm planning, production cycle economics, rice lease structures, and farm record keeping, with all topics showing improvements of 40–113 percent.

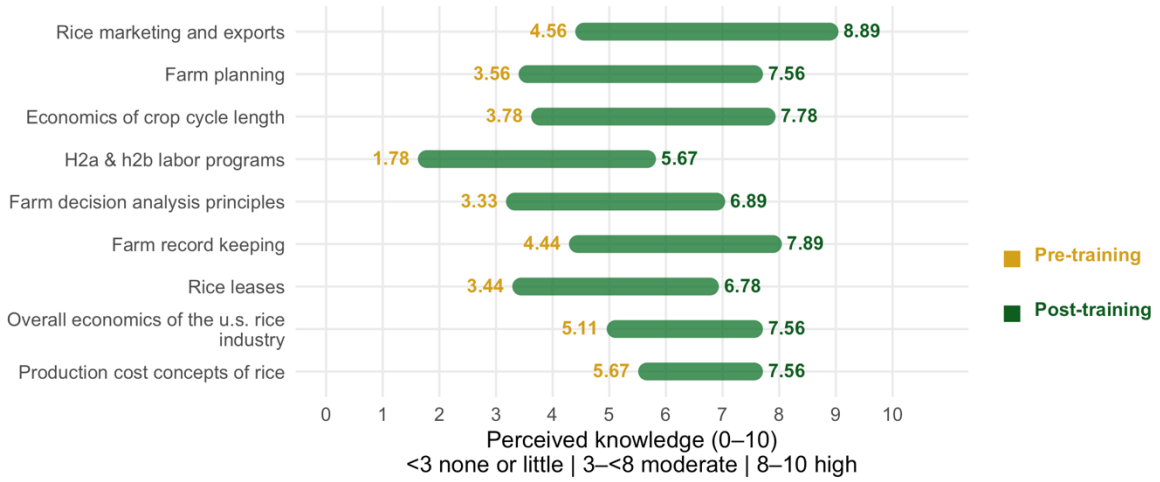

Figure 6: Economics and business management

Learning Preferences and Information Access

Participants also showed clear gains in their ability to access and interpret key information sources relevant to rice production (Figure 7). Confidence in using LSU AgCenter extension resources increased from 7.00 to 9.33, suggesting that the program strengthened participants' awareness of where to find reliable, research-based guidance. Skills related to pesticide label interpretation and soil test interpretation also improved substantially, with posttest scores rising to over 9. These gains indicate that participants left the program better prepared to make informed management decisions. The largest improvements were seen in understanding EPA regulations and the Endangered Species Act, both of which began with the lowest pretest scores. Posttest means near 9 suggests that the school effectively clarified regulatory frameworks that directly influence production practices.

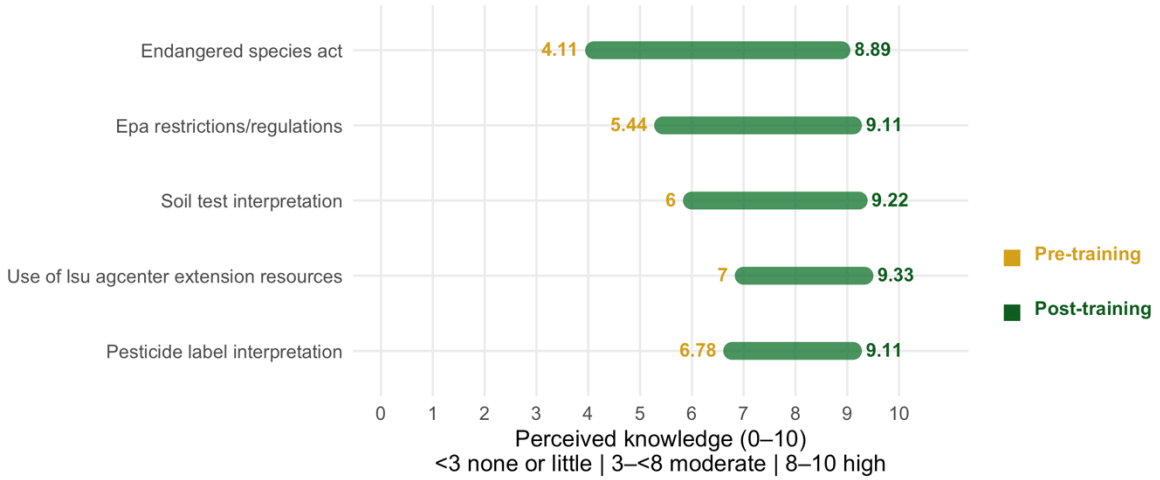

Figure 7: Learning preference and information access

Participant Feedback

Participants' open-ended responses emphasized the value of receiving comprehensive, scientifically grounded instruction directly from LSU AgCenter specialists. Many expressed appreciations for the clarity of explanations, the relevance of examples, and the opportunity to gain updated, research-based information in a focused setting.

Several participants requested expanded coverage of herbicide programs and disease management, while others expressed interest in additional budgeting or farm-planning exercises. These comments indicate that participants not only found the existing content useful but also desire deeper engagement with the topics most central to their production systems.

Some comments from participants are as stated:

"I like how the rice industry was looked at from nearly every angle. From farm management to seed distribution. Shedding light on different outlooks is important"

“What I liked most about the program was teaching each segment of the rice industry and getting to envision it firsthand. I wouldn’t change much other than maybe more time in the field.”

“Very informative good speakers. I would like more "in-field" talks, real life solutions to help farmers fix their problems!”

Conclusions and Implications

Findings from this evaluation indicate that the Rice Production School was highly effective in improving participants’ knowledge across all major domains of rice production. The magnitude and consistency of pre/post improvements demonstrate that the school successfully addressed both foundational learning needs and more advanced topics critical to profitable and sustainable rice production.

This model of developing formal, classroom-based extension programs has proven to be an effective method for increasing knowledge among both new and experienced agricultural producers. One challenge for extension educators is designing technical content that can be effectively understood by participants with diverse educational backgrounds. A key limitation was participant recruitment and scheduling constraints, particularly the need to minimize conflicts with critical growing season responsibilities. The School’s small class size fostered networking opportunities between participants and educators. Its format also minimized time away from farming operations, a critical consideration during busy production periods.

The School provides a robust platform for delivering applied, research-informed agricultural education. Feedback consistently mentioned the desire to do more hands-on field work. Continued investment in this program, coupled with refinement based on participant feedback, can further strengthen Louisiana’s rice industry by equipping growers and advisors with the knowledge necessary to adapt to evolving production

challenges. Success of similar initiatives, such as the sugarcane production schools conducted in 2017 and 2018 (Orgeron, 2021), underscores the demand for and value of these intensive, hands-on educational experiences across Louisiana's agricultural sectors.

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