

LOUISIANA RICE RESEARCH VERIFICATION PROGRAM 2001

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Introduction

The Louisiana Rice Research Verification Program (LRRVP) began in 1997 in three parishes: Allen, Calcasieu and Jeff Davis. In 1998 the program was funded and expanded to ten parishes: Acadia, Avoyelles, Calcasieu, East Carroll, Evangeline, Jeff Davis, Madison, Morehouse, St. Landry and Vermilion. In 1999 the program was funded again and conducted in ten parishes with the absence of Morehouse and addition of Catahoula parishes. In 2000 funding continued. Ten parishes participated but included Morehouse parish and discontinued Madison parish. Funded again in 2001, the ten parishes included Acadia, Allen, Avoyelles, Calcasieu, Concordia, Evangeline, Jeff Davis, Richland, St. Landry and Vermilion (Figure 1).

The fields were visited on at least a weekly basis by a Specialist, County Agent or the Extension Associate. Production practice recommendations were made by the Specialist or Agent. These recommendations included, but were not limited to: fertilization, weed control, disease control, insect control and water management to a limited degree. The fields were followed from planting to harvest.

Yield data were collected for each of the fields (Table 1). Yields of the first crop averaged 6259 pounds per acre (38.6 bbl/A or 139 bu/A) at 12% moisture. When the second crop yields are added the yield averages increase to 7104 pounds per acre (43.9 bbl/A or 158 bu/A).

Economic data continue to reveal large production cost differences, especially in water costs, between growers. It is also clear that more needs to be done to help farmers reduce production costs. (Table 2).

The program continues to provide an accurate evaluation of current recommendations and provide insight into other areas of research. The educational value of the program to all concerned (farmers, researchers and extension personnel) increases each year.

¹This project is supported in part by funding provided by rice producers through their check-off contributions to the Louisiana Rice Research Board.

Acadia Parish

This field was grid sampled and fertilized in the fall of 2000, but because the recommendations were not deemed excessively out of line with the LSU AgCenter's it was utilized. It was water planted with untreated Cocodrie seed at 120 pounds per acre.

Wind, cold temperatures and red rice forced a slight departure from the favored two applications of nitrogen to three for the season. The first was made just prior to establishing the pinpoint flood, the second about three weeks later and the third at mid-season for a total of 147 pounds of nitrogen per acre. Near mid-season the color of plants suggested a nitrogen deficiency. It was anticipated that the third application of nitrogen would correct this problem, but it did not. Loss of water in one portion of the field could explain only part of the problem leaving only speculation about the remainder.

Weeds were controlled with water, Londax and Ordram. Ordram was applied only to the top paddy of the field where water levels had dropped enough to allow barnyardgrass to germinate.

Karate was applied with Londax to control water weevil adults. Later in the season stink bug numbers approached, but never reached threshold values.

The first crop, harvested on July 19, produced 6246 pounds per acre (38.6 bbl/A or 139 bu/A) dry. The field was topdressed with 60 pounds of nitrogen per acre on July 20 and flooded for second crop.

Stink bugs exceeded values normally utilized for their management in first crop prompting a recommendation of methyl parathion, but the grower elected not to apply the insecticide.

Second crop yielded 1984 pounds per acre (12.2 bbl/A or 44 bu/A) for a total of 8230 pounds per acre (50.8 bbl/A or 183 bu/A). This yield was surprising considering the apparent unexplained nitrogen deficiency observed during the first crop.

Acadia Parish

Cooperator: Pat and Charles Reiners

Agent: Ronnie Levy

Field Size: 60.6

Cultural Practices

Variety: Cocodrie

Seeding Rate: 120

Method: Water Plant

Date of March

Water: Pinpoint Flood

Date of April 3

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	May 10	May 9
PD	May 23	May 20
50% Heading	June 13	June 15
Drain for Harvest	July 2	-----
Harvest	July 19	July 20

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	62.46	67.7 / 73.1	246.91	3.000	181.050
2nd Crop	19.84	68.3 / 72.7			

Average Parish Yield (1st & 2nd crop): 57.50 cwt./A

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Acadia Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
100 # 46-0-0	April 5	Variable	Fall	Grid Sample
100 # 46-0-0	April 19			
120 # 46-0-0	May 10			
130 # 46-0-0	July 20 (Second Crop)			

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Ducksalad, Nutsedge, Redstem, Texasweed	April 18	1 oz. Londax
Barnyardgrass	May 28	27 lbs. Ordram

- Ordram was applied to the top cut only, not the whole field.

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
None	-----	-----

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil (Adult)	April 18	1.9 gal. Karate

- Karate was tank mixed with the Londax on April 18.

Allen Parish

The field originally intended to be the verification field in Allen parish had to be abandoned when the farmer found out the soil type there did not lend itself to water leveling. Luckily an adjacent field already planted with Icon treated Cypress seed being managed like the first field was available. At this point the crop was already in the two to three leaf stage with a flood being established to suppress potential red rice problems.

Approximately 70 pounds of nitrogen per acre was applied just ahead of the flood. Phosphorus and potassium had been applied preplant according to soil test recommendations in a blend to supply 48 pounds of phosphorus and 80 pounds of potassium per acre.

When the plants were in the four leaf stage extremely heavy adult rice water weevil pressure was observed. This coincided with timing of a Londax application as a spray with crop oil to be followed with an application of granular Ordram. The two separate herbicide applications were necessary because of the weed spectrum and the fact that all necessary fertilizer had already been applied preventing a single application of blended material.

After serious deliberation the specialist recommended an application of Karate to control rice water weevil adults be added to the Londax application. Even though there is no current recommendation to control rice water weevil adults other than to prevent their reproduction and subsequent larval feeding damage the application of the insecticide was thought to be justified because the crop was clearly being injured, weather conditions (cool and cloudy) were adverse and Londax was already scheduled eliminating an application cost. Crop response eliminated any doubt concerning the treatment.

Because the bottom paddy of the field contained large amounts organic debris hydrogen sulfide was monitored. Levels in the suspect area reached a high of 2.97 ppm without symptoms appearing on the plants.

Disease pressure was monitored closely as the farmer had expressed intentions of producing a second crop which often adds to the return on investment of a fungicide application. However, disease pressure never reached treatable levels.

Stink bug pressure also never reached threshold values.

Shortly after draining the field it started raining. This delayed harvest, diminished grain quality, made harvest extremely difficult (it took five days to harvest a little over 40 acres) and prevented the production of a second crop. Had a fungicide been applied as a precaution the money would have been lost. By harvest grain moisture had dropped to 16.1% well below the recommended 20% harvest moisture. Yields were a somewhat disappointing 5686 pounds per acre (35.1 bbl/A or 126 bu/A) dry. Overall appearance of the field at drain caused us to anticipate at least 6400 pounds per acre (39.5 bbl/A or 142 bu/A) green. Clearly much of that difference could be associated with the rainy period between drain and harvest.

Allen Parish

Cooperator: Kyle Sonnier

Agent: Eddie Eskew

Field Size: 41.6 Acres

Cultural Practices

Variety: Cypress

Seeding Rate: 130

Method Water Plant

Date of April 4

Water Pinpoint Flood

Date of April 10

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	May 22	May 21
PD	June 3	May 28
50% Heading	June 30	June 23
Drain for Harvest	July 23	-----
Harvest	August 12-15	July 28

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	56.86	66.9 / 72.3	291.80	5.132	3.872

Average Parish Yield (1st & 2nd crop): 51.84 cwt./A

¹Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

²This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Allen Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
150 # 46-0-0	April 14	240 # 0-20-33	February 21	A & L
150 # 46-0-0	May 18			

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Alligator, Southern Watergrass, Hemp Sesbania	April 26	1.5 oz. Londax + 1 % Crop Oil
Barnyard, Smartweed, Fall Panicum	April 27	20 lbs. Ordram

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight	-----	-----

- Sheath Blight never reached a threshold to apply any Fungicide.

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	Seed Treatment	ICON
Rice Water Weevil (Adults)	April 26	1.9 oz. Karate

- Karate was tank mixed with the Londax and Crop Oil on April 26.

Avoyelles Parish

Because the field in Avoyelles was the same field used in 2000 we felt more comfortable with weed control recommendations and decided to try a few practices with which the grower was less familiar. We began by burning down existing weeds, working the soil lightly then drilling Cocodrie at the rate of 97 pounds per acre. After consulting with the FMC representative we applied 1.33 pints of Command per acre then flushed the field. For reasons never determined the herbicide provided little or no weed control.

When the rice reached the three leaf stage ammonium sulfate was applied at 100 pounds per acre followed by a second flush. Three quarts of Stam were applied to two paddies where grass pressure justified it. Just prior to establishment of the permanent flood .38 pounds per acre of Facet was applied and the field was flooded. Londax was applied later for suppression of Texasweed, but performed poorly resulting in a follow-up application of Grandstand. This finally wrapped up the weed control program.

Disease pressure never reached treatable levels until the field was beyond 95% headed, but stink bugs required treatment twice.

As was the case in 2000 this field appeared to have much better yield potential than was realized. It, like Allen, Concordia and Richland was severely impacted by about 10 consecutive days of rain just as the crop was ready to harvest. The farmer had to locate a set of high flotation tires to be able to harvest when he did. Without the additional equipment harvest would have been later with potential decreases in both quality and yield quite likely. Yield was a disappointing 6172 pounds per acre (38.1 bbl/A or 137 bu/A) dry when it appeared 6500 pounds per acre (40.1 bbl/A or 144 bu/A) should have been harvested.

Avoyelles Parish

Cooperator: Robert Thevis

Agent: Carlos Smith

Field Size: 63.2 Acres

Cultural Practices

Variety:Cocodrie

Seeding Rate: 97

Method Drill Plant

Date of April 12

Water Delayed Flood

Date of April 24

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	June 14	June 11
PD	July 1	June 21
50% Heading	July 21	July 12
Drain for Harvest	August 5	-----
Harvest	September 11	August 16

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	61.72	55.6 / 69.5	274.55	4.448	46.394

Average Parish Yield (1st & 2nd crop): N/A

¹Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

²This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Avoyelles Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
100 # 21-0-0	May 4	None	-----	LSU
180 # 46-0-0	May 29			
125 # 46-0-0	June 14			

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Barnyard	April 12	1.3 pts. Command
Barnyard, Hemp Sesbania, Mexicanweed	May 10	3 qts. Stam
Barnyard and Mexicanweed	May 25	0.38 lbs. Facet + 1 % Crop Oil
Mexicanweed	June 11	Grandstand

- Stam went out on only 2 cuts, not the whole field.

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
None	-----	-----

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	Seed Treatment	ICON
Rice Stink Bugs	July 18	0.25 lbs. Methyl
Rice Stink Bugs	July 25	0.25 lbs. Methyl
Rice Stink Bugs	July 31	0.25 lbs. Methyl

Calcasieu Parish

In addition to serving as a verification field, the field chosen in Calcasieu parish provided information on water quality and hydrogen sulfide. Water samples were obtained from both the interior of the field as well as the drain water at the end of the season. Hydrogen sulfide was monitored with a specific ion electrode meter provided by Aventis Crop Science. The soils in the vicinity were suspected of being conducive to hydrogen sulfide formation resulting in severe crop injury accompanied by significant yield reduction.

The field was water planted with Icon treated Cocodrie seed at 120 pounds per acre, drained then flooded about seven days later. Nitrogen fertilizer was applied during the brief drain interval.

Zinc chelate was applied to alleviate chlorosis. Londax herbicide was applied at one ounce per acre about 5 days later.

Hydrogen sulfide levels steadily increased from 1.22 ppm on April 17 to 5.20 ppm on May 8. At this point the field was drained at the insistence of the farmer even though no visible symptoms were observed on the plants. By the next week clear symptoms had appeared on plants in lower spots in the field that had not dried completely. It appears 5 ppm may be the critical value however this is only one year of testing.

The field was topdressed and flooded. Monitoring for disease followed, but no fungicide was applied. Stink bugs reached threshold values then insecticide was applied.

The field produced 5870 pounds per acre (36.2 bb/A or 130 bu/A) dry or nearly twice the amount an adjacent field had produced the previous year.

We recommended the field be fertilized and flooded to produce second crop. The farmer indicated he was not interested in second crop and had a limited water supply. Even though he never fertilized or flooded the field he did harvest 518 pounds per acre (3.2 bbl/A or 12 bu/A) as a second crop. A little fertilizer and water would likely have produced more profit per acre than this “providence” crop.

Calcasieu Parish

Cooperator: Jamie Leonards

Agent: Jerry Whatley

Field Size: 61.9 Acres

Cultural Practices

Variety: Cocodrie

Seeding Rate: 120

Method Water Plant

Date of March

Water Pinpoint Flood

Date of April 6

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	May 15	May 27
PD	May 28	June 3
50% Heading	June 15	June 28
Drain for Harvest	July 6	-----
Harvest	July 24 - 25	August 2

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	58.70	66.2 / 73.9	215.15	3.368	117.026
2nd Crop	5.18	N/A			

Average Parish Yield (1st & 2nd crop): N/A

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Calcasieu Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
130 # 46-0-0	April 6	Basic	April 19	LSU
1 gal. Zinc	April 18			
140 # 46-0-0	May 19			

- Zinc went out due to the rice stretching.

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Alligator, Spikerush, Ducksalad, Redstem	April 23	1.25 oz. Londax + 1 % Crop Oil

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Hydrogen Sulfide	May 8	Drain Field

- Hydrogen Sulfide readings: 5.20 ppm, 4.24 ppm and 2.63 ppm.

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	Seed Treatment	ICON
Rice Stink Bugs	June 13	0.5 pts. Penncap M

Concordia Parish

This was our first year on Angelina plantation in Concordia parish. The field was an 80 acre precision leveled field that had been in rice the previous year. The field was drilled with Cocodrie as it had been the year before. Command was applied at 1.33 pints per acre and the field flushed.

Volunteer rice emerged ahead of the planted crop which emerged unevenly because it was influenced by soil moisture. Once the crop was deemed large enough to tolerate herbicides 4 pounds of propanil plus 1 ounce of Londax was recommended. After the county agent consulted with the grower and the Extension weed scientist .4 pounds of Facet plus .75 ounce of Aim was applied. The herbicide, Aim produced more foliar burn than was expected though the effect was temporary.

Disease pressure remained light until the crop was between panicle differentiation and early boot. This difference in maturity remained until the crop was harvested. Distinct patterns were clearly visible at maturity and were associated with old ditches and levees that had either been filled in or knocked down. Moncut fungicide was recommended because the grower indicated he would try to harvest crawfish from the field this winter. False smut appeared in significant amounts. This disease rarely causes yield reductions, but does stain the sample when it is abundant.

Stink bug pressure was extreme resulting in three separate treatments to keep them in check.

Just as the crop reached harvest maturity it got caught with the same ten or so consecutive days of rain that affected Allen, Avoyelles and Richland. However, one effect noted here but not elsewhere was sprouting of grains in the heads of standing rice. This was the first time this specialist had witnessed this problem. Sprouting of seeds in lodged rice is common; standing rice is another issue. Had the farm's combines not been equipped with tracks and/or high flotation tires harvest would have been delayed even more.

Ultimately delaying harvest took its toll on both yield and grain quality. Yield potential of this field appeared to be in the neighborhood of 6600 pounds per acre (40.7 bb/A or 147 bu/A). A very disappointing 5853 pounds per acre (36.1 bbl/A or 130 bu/A) dry were harvested.

Concordia Parish

Cooperator: Tommy Ellett (Angelina Plantation)

Agent: Glenn Daniels

Field Size: 79.6 Acres

Cultural Practices

Variety: Cocodrie

Seeding Rate: 91

Method Drill Plant

Date of May 4

Water Delayed Flood

Date of May 18

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	June 26	June 14
PD	July 7	June 25
50% Heading	July 26	July 18
Drain for Harvest	August 23	-----
Harvest	September 12	August 22

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	58.53	62.6 / 68.9	222.72	3.805	81.636

Average Parish Yield (1st & 2nd crop): N/A

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Concordia Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
100 # 21-0-0	May 3	None	-----	LSU
200 # 46-0-0	June 4			
130 # 46-0-0	June 24			

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Barnyard and Sprangletop	May 7	1.3 pts. Command
Sesbania, Sickle Pod, Sedge, Morningglory, Johnsongrass, Broadleaf Signalgrass	June 14	0.4 lbs. Facet + 0.75 oz. Aim + 1 pt. Takeup

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight	July 18	1.25 lbs. Moncut

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	Seed Treatment	ICON
Rice Stink Bugs	July 31	1 pt. Malathion
Rice Stink Bugs	August 9	1 pt. Malathion
Rice Stink Bugs	August 23	1 pt. Malathion

Evangeline Parish

The field in Evangeline was one of two in the program planted with Cypress seed. It was in a field near the 2000 verification field which provided some insight into its management. Weather conditions for the couple of weeks following planting upset the intended fertilizer rates and timing. Cold rainy conditions and potential red rice problems resulted in a flooded, emerged crop with no fertilizer applied to it.

In an effort to give the struggling seedlings a boost and avoid scum, 100 pounds of urea was applied into the flood. This is diametrically opposed to standard recommendations. Once the seedlings recovered an additional 50 pounds of nitrogen plus the required phosphorus and potassium were flown on. Rice water weevil pressure developed coincidentally with weed pressure so Karate, Londax and Facet were applied as a mixture.

Toward mid-season nitrogen deficiency symptoms began to appear. Some water had been lost at one point which could have accounted for some of the problem. Application into the flood (contrary to recommendations) probably contributed as well. Even following the normal topdressing symptoms remained. After consulting with Dr. Bollich and others an additional increment of nitrogen was applied bringing the total to about 175 pounds of nitrogen per acre. In the verification field on the same farm and located a few hundred yards from this field only 120 pounds of nitrogen was required.

Neither disease nor insects reached threshold levels.

The field produced 6464 pounds per acre (39.9 bbl/A or 144 bu/A) dry. Test weights were very high (48.2 lbs per bushel) at a harvest moisture of 16.2%. Harvest had been delayed because the farmer ran out of bin space.

The field was fertilized with 62 pounds of nitrogen per acre and flooded for second crop. Stink bugs were monitored, but never reached threshold levels. Second crop yielded 2074 pounds per acre (12.8 bbl/A or 46 bu/A) for a combined first and second crop yield of 8538 pounds per acre (52.7 bbl/A or 190 bu/A).

Evangeline Parish

Cooperator: Neal Lejeune

Agent: Keith Fontenot

Field Size: 20.8

Cultural Practices

Variety: Cypress

Seeding Rate: 120

Method Water Plant

Date of March

Water Pinpoint Flood

Date of April 2

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	May 15	May 12
PD	May 22	May 19
50% Heading	June 18	June 15
Drain for Harvest	July 16	-----
Harvest	August 2	July 20

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	64.64	71.2 / 73.2	292.13	3.422	151.846
2nd Crop	20.74	64.1 / 70.5			

Average Parish Yield (1st & 2nd crop): 62.37 cwt./A

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Evangeline Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
100 # 46-0-0	April 12	300 # 17-7-20	April 18	LSU
110 # 46-0-0	May 9			
70 # 46-0-0	May 24			
150 # 46-0-0	August 17 (Second Crop)			

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Smartweed, Redstem, Alligator, Sedges, Barnyard, Ducksalad	April 18	1 oz. Londax + 0.33 lbs. Facet + 1 % Crop Oil

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
None	-----	-----

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil (Adult)	April 18	1.9 gal. Karate

- Karate was tank mixed with the Londax, Facet and Crop Oil on April 18.

Jefferson Davis Parish

The field selected in Jeff Davis had water paspalum, knotgrass and alligatorweed all growing prior to planting which required an application of Roundup to reduce pressure. The potential for red rice also necessitated pin point flood management.

This field was the only field planted with Wells seed. As soon as the flood was established following planting and draining, 25 pounds of nitrogen, 40 pounds of phosphorus and 60 pounds of potassium plus 20 pounds of Ordram was applied. At about the three tiller stage of growth 1.5 ounces of Londax was applied.

About 10 days prior to green ring the plants started to exhibit symptoms of nitrogen deficiency in irregular patterns. After consulting with Dr. Bollich we decided to apply the topdress application of nitrogen early. At this time we also noted some break through of grasses on high areas of the field where the flood had not been consistent.

Disease pressure remained light until just before tropical storm Allison hit the coast. Quadris fungicide was applied at the rate of 9.2 ounces per acre shortly after the storm. The grower added 1 pint of methyl parathion without consulting AgCenter personnel. There were three errors in this application; first, the rate was twice the amount required, second there were not enough stink bugs present to justify the application and third, the crop was not in a stage susceptible to stink bug injury at the time. This added cost and accomplished little if anything toward pest management. Within two weeks stink bugs had reached treatable levels prompting an application of .5 pint of methyl parathion.

Near the end of June symptoms of bacterial panicle blight were observed. It was around this time that other calls began to come in to AgCenter personnel of complaints of panicle blight in Wells. Several fields were observed to have the disease present in them at levels ranging from slight to severe.

The first crop was harvested on July 19 yielding 6600 pounds per acre (40.7 bbl/A or 147 bu/A) dry. At the time of harvest the specialist observed significant hulling of rice in the harvested sample. Milling later was reported (by the mill) to be very low.

The field was immediately fertilized and flooded for ratoon crop production. Although stink bug levels reached treatable levels (the opinion of AgCenter personnel) and methyl parathion was recommended, the grower elected not to apply the insecticide. Because the AgCenter has no published threshold values for stink bugs in second crop this application was up the discretion of the grower.

Even though first crops in this field and the one in Acadia were harvested on the same day second crop maturity of the two was vastly different. The field of Cocodrie in Acadia was harvested at low moisture fully two weeks prior to this field which averaged 20.5% moisture at harvest. Yield was a very satisfying 2689 pounds per acre (16.6 bbl/A or 60 bu/A). This brought the total for the season to 9289 pounds per acre (57.3 bbl/A or 206 bu/A), the highest in the verification program.

Jefferson Davis Parish

Cooperator: Kevin Berken

Agent: Eddie Eskew

Field Size: 21.6

Cultural Practices

Variety: Wells

Seeding Rate: 140

Method Water Plant

Date of March 20

Water Pinpoint Flood

Date of March 31

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	May 10	May 15
PD	May 22	May 20
50% Heading	June 10	June 15
Drain for Harvest	July 2	-----
Harvest	July 19	July 20

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	66.00	56.2 / 73.1	320.41	3.449	162.618
2nd Crop	26.89	60.6 / 72.7			

Average Parish Yield (1st & 2nd crop): 58.32 cwt./A

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Jefferson Davis Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
100 # 46-0-0	April 6	207 # 25-40-60	April 14	A & L
130 # 46-0-0	May 5			
130 # 46-0-0	July 20 (Second Crop)			

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Water Paspalum, Knotgrass, Water Starwort, Brook Paspalum	March 19	2 qts. Round - Up
Sedges, Barnyard, Redstem	April 14	20 lbs. Ordram
Alligator, Sagittaria, Ducksalad	April 18	1.25 oz. Londax

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight	June 11	9.2 oz. Quadris

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	Seed Treatment	ICON
Rice Stink Bugs	June 11	1 pt. Penncap M
Rice Stink Bugs	June 23	0.25 lbs. Methyl

- Penncap M was tank mixed with the Quadris on June 11.

Richland Parish

The Richland parish field was the best precision leveled field that has ever been in the verification program and one of the best the AgCenter personnel associated with it have ever seen. This proved valuable throughout the season.

In early spring the field was cleaned of vegetation with an application of Roundup herbicide. Then at planting the grower applied another pint of Roundup Ultra with 1.33 pints of Command herbicide per acre. The need for the second application of Roundup was not clear to AgCenter personnel, but the grower based his decision on past experience. The grower planted Cocodrie seed treated with Icon insecticide, fungicide and Release. Immediately after planting 100 pounds of 18-46-0 fertilizer was applied by air and the field was flushed.

Shortly after obtaining a near perfect stand of rice broadleaf weeds and sedges emerged while grass control remained excellent. Following discussion with the grower 1 gallon of Duet plus .3 ounces of Permit was applied. Then the field was fertilized with 90 pounds of nitrogen and flooded. At mid-season an additional 70 pounds of nitrogen were applied.

Near heading light sheath blight pressure and fairly heavy stem rot resulted in a recommendation of 9.2 ounces of Quadris fungicide. Stink bug pressure reached treatable levels and methyl parathion was applied. Near harvest maturity stink bug numbers came up again, but because harvest was expected to be within the preharvest interval it was decided the second application was not justified.

At this time this field like the other three already mentioned was victim of about 10 consecutive days of rain. Because the grower had other fields ahead of this one it delayed harvest even further. Had this event been anticipated a second application of methyl parathion might have been justified.

The field was finally harvested at around 14.2 percent moisture. Yield was precisely what LSU AgCenter personnel anticipated 7447 pounds per acre (46.0 bbl/A or 165 bu/A) dry and although it was the highest single crop yield in the program this year the grower was a little disappointed because the field “looked better” to him. Had their not been heavy rains which delayed harvest and reduced grain quality yields might also have been slightly better.

Richland Parish

Cooperator: John Owen

Agent: Keith Collins

Field Size: 65.9 Acres

Cultural Practices

Variety: Cocodrie

Seeding Rate: 100

Method Drill Plant (No - Till)

Date of April 30

Water Delayed Flood

Date of May 6

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	June 11	June 10
PD	June 30	June 21
50% Heading	July 23	July 14
Drain for Harvest	August 16	-----
Harvest	September 18-19	August 18

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	74.47	59.4 / 69.9	240.22	3.226	147.024

Average Parish Yield (1st & 2nd crop): N/A

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Richland Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
100 # 18-46-0	May 4	None	-----	A & L
200 # 46-0-0	May 25			
150 # 46-0-0	June 15			

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Burndown	April 19	1 gal./5 acres Roundup Ultra
Barnyard	May 1	1.3 pts. Command + 1 gal. Roundup Ultra
Morningglory, Texasweed, Hemp Sesbania, Nightshade, Sedge, Barnyard	May 25	1 gal. Duet + 0.3 oz. Permit

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight and Crown Sheath Rot	July 17	9.2 oz. Quadris

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	Seed Treatment	ICON
Rice Stink Bugs	July 27	0.25 lbs. Methyl

St. Landry Parish

Phosphorus and potassium fertilizer were applied to the verification field in St. Landry in the fall of 2000. Icon insecticide treated Cocodrie seed was flown in at the rate of 140 pounds per acre in March of 2000. Because of potential red rice problems a pinpoint flood management system was employed.

During the brief drain interval between planting and flood establishment 70 pounds of nitrogen was applied. After flood establishment 20 pounds of Ordram herbicide was applied. One ounce of Londax herbicide was applied for broadleaf control. Although not confirmed, water movement from top to bottom of the field in the course of adding only what was necessary to maintain an even flood, Londax activity appeared to be diminished in the top cuts of the field.

Sheath blight developed suddenly late in the season. Ten ounces of Quadris was applied and two days later tropical storm Allison dumped 8 inches of rain on the field. Stink bug numbers reached treatable levels, but weather delayed methyl parathion application for about five days.

The first crop yielded 6355 pounds per acre (39.2 bbl/A or 141 bu/A) dry, just about what was anticipated. The field was fertilized with 60 pounds of nitrogen and flooded for second crop. Stink bugs reached numbers deemed treatable and methyl parathion was applied.

The second crop produced 1927 pounds per acre (11.9 bbl/A or 43 bu/A) for a total of 8282 pounds per acre (51.1 bbl/A or 184 bu/A).

Throughout the year this was one of the most routine fields in the program. Problems were not out of the ordinary and grower cooperation was excellent. AgCenter personnel feel yields could have been better if an additional broadleaf herbicide application had been made to control red stem in the top paddies of the field and if slightly more nitrogen fertilizer had been applied especially in the ratoon crop.

St. Landry Parish

Cooperator: Danny Koch

Agent: Keith Normand

Field Size: 40.6

Cultural Practices

Variety: Cocodrie

Seeding Rate: 140

Method Water Plant

Date of March 16

Water Pinpoint Flood

Date of March 31

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	May 9	May 7
PD	May 21	May 19
50% Heading	June 10	June 14
Drain for Harvest	July 3	-----
Harvest	July 18	July 19

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	63.55	68.5 / 72.1	363.43	4.388	67.234
2nd Crop	19.27	62.1 / 71.6			

Average Parish Yield (1st & 2nd crop): N/A

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$5.20/cwt.

Fertilization

St. Landry Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
150 # 46-0-0	April 9	300 # 0-23-30	Fall	LSU
130 # 46-0-0	May 5			
130 # 46-0-0	July 20 (Second Crop)			

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Curley Dock, Barnyard, Broadleaf Signalgrass	April 17	20 lbs. Ordram
Ducksalad, Alligator, Jointvetch	April 19	1 oz. Londax + 1 % Crop Oil
Jointvetch	May 14	2, 4-D

- 2, 4-D was applied to the levees only using a 4- wheeler.

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
Sheath Blight and Stem Rot	June 11	10 oz. Quadris

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	Seed Treatment	ICON
Rice Stink Bugs	June 18	0.25 lbs. Penncap M
Rice Stink Bugs (Second Crop)	September 3	0.5 pt. Methyl

Vermilion Parish

The Vermilion parish verification field demonstrated that sometimes water management can be more difficult in small fields than larger ones. The field encompassed only 33 acres, but was divided into 4 paddies one of which was very uneven. That fact later came back to haunt us.

Immediately after dragging the field 225 pounds of 0-18-36 fertilizer was flown into the field. The soil was allowed to settle out for about eight days prior to planting. Untreated, presprouted Cocodrie seed were sown by air at the rate of 120 pounds per acre. The field was completely drained within 48 hours of planting. As soon as the field was drained two and three leaf red rice plants were found already established.

About 75 pounds of nitrogen was applied during the brief drain interval following planting and before permanent flood establishment. Zinc deficiency was observed then corrected with an application of zinc chelate as a foliar spray.

Very heavy *Sagittaria* sp. pressure as well as other weeds necessitated an application of 1.5 ounces of Londax followed by 20 pounds of Ordram herbicide.

About 10 days prior to internode elongation (green ring) water weevil pressure necessitated draining the field. The grower had not used any insecticide because of nearby crawfish ponds and the intention of crawfish production in this field following the rice crop. After sufficient drying of the soil 60 pounds of nitrogen was applied and the flood established.

Disease pressure never reached treatable levels, however stink bugs required two applications of malathion insecticide just to keep the numbers down. Insecticide options were limited to malathion because of the intention to produce crawfish following the rice crop.

A surprising 6047 pounds per acre (37.3 bbl/A or 134 bu/A) dry was harvested from the first crop. The paddy mentioned earlier had a major impact on yield because deep water areas had very little rice and high spots (in the same paddy) had heavy weed pressure. The combination of the two clearly impacted yield (estimated losses of 30 to 50%) in that paddy which occupied about 5 acres of the 33 acre field.

Immediately after the first crop harvest 70 pounds of nitrogen was applied and the field flooded. Stink bug numbers reached treatable levels in the second crop, but the grower did not want to apply insecticide and since there are no published threshold values for ratoon crop rice the AgCenter personnel acquiesced.

The second crop produced 2446 pounds per acre (15.1 bbl/A or 54 bu/A) for a total of 8493 pounds per acre (52.4 bbl/A or 189 bu/A) for the season. Yields clearly were impacted by the single 5 acre paddy mentioned earlier and could have been even better than the very good yields obtained.

Vermilion Parish

Cooperator: Dane Hebert

Agent: Howard Cormier

Field Size: 33.3

Cultural Practices

Variety: Cocodrie

Seeding Rate: 120

Method Water Plant

Date of March 16

Water Pinpoint Flood

Date of March 31

Growth and Development

Stage	Observation Date	DD50 Date
Green Ring	May 11	May 7
PD	May 23	May 19
50% Heading	June 18	June 14
Drain for Harvest	July 1	-----
Harvest	July 23	July 19

Yield, Milling and Economic Data

	Yield @ 12% Moisture (cwt./acre)	Milling Yield (% whole / % total)	Variable Costs (\$/acre) ¹	Cost of Production (\$/cwt.) ¹	Return on Variable Costs (\$/acre) ^{1,2}
1st Crop	60.47	69.0 / 72.0	301.44	3.549	140.196
2nd Crop	24.46	66.4 / 70.3			

Average Parish Yield (1st & 2nd crop): N/A

¹ Costs captured are from land preparation to getting the crop to the truck. They do not include land rent, transportation, drying, storage, or fixed costs.

² This value was obtained using a selling price of \$5.20/cwt.

Fertilization

Vermilion Parish

N Rate	N Timing	P & K Rate	P & K Timing	Soil Test Used?
160 # 46-0-0	April 2	228 # 0-18-36	Fall	A & L
1 gal. Zinc	April 11			
130 # 46-0-0	May 9			
150 # 46-0-0	July 24 (Second Crop)			

- Zinc was applied due to the rice stretching.

Weed Management

Weeds Present	Date of Treatment Decision	Recommendation
Red Rice, Bull Tongue, Sagittaria, Spikerush, Ducksalad, Alligator, Sedges	April 16	1.5 oz. Londax + 1 % Crop Oil
Managrass, Barnyard, Broadleaf Signalgrass	April 21	20 lbs. Ordram

Disease Management

Diseases Present	Date of Treatment Decision	Recommendation
None	-----	-----

Insect Management

Insects Present	Date of Treatment Decision	Recommendation
Rice Water Weevil	May 3	Drain Field
Rice Stink Bugs	June 14	1 pt. Malathion
Rice Stink Bugs	June 26	1 pt. Malathion
Rice Stink Bugs (Second Crop)	August 25	1 pt. Malathion

