

Using The Border Row Rice Method As A Viable Alternative To Conventional Flood Rice

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Introduction

This applied research trial set forth to demonstrate that rice production using the border row rice method can be a worthwhile and profitable method for farmers to utilize. This method requires a precision leveled field that does not possess a cross slope. This field was divided by small levies or borders every 60-80ft. These borders are not required to be substantial as in traditional fields but provide just enough height to direct water down the field. Because this rice never goes into a traditional flood, water is flushed across the field to ensure adequate moisture. The field selected for this trial was a Crowley-Stuttgart loam which is excellent for flushing water across instead of holding a flood.



Row Rice Trials from Mississippi State

Field Prep

Prior to seeding, two burn-down herbicide applications were sprayed across a 27-acre field, giving us a clean field to start our demonstration. After the burn-down applications, border rows were pulled and spaced 60ft apart. No seed beds were pulled for this field. Instead, seeding was done via flat drill. The cultivar used for this trial was RiceTec FP 7321.



Field Growth

The field was scouted by Cooperative Extension Service agents weekly. Agents provided fertilizer timing recommendations based on growth stage, watering recommendations based on growth stage and soil moisture, and fungicide/insecticide applications based on weed/insect observations.

Results

At harvest, this border row rice field yielded 248.58 bu/ac and milled at 48/70. Of 16 field demos across Arkansas, which included traditional flooded and row rice fields, this field yielded the highest bu/ac harvest, had the lowest total cost per bushel of the demonstration fields and recorded the highest return above specified expenses at \$692.88 per acre. This created of profit of \$18,710.73 for this 27-acre field. This demonstration showcases that with proper conditions that the border row rice method can be a viable option to producers in the rice industry.

Receipts	Lonoke
Yield (bushels)	249
Price Received (\$/bushel)	5.76
Total Crop Revenue	1434.13
Operating Expenses	
Seed	167.67
Fertilizers & Nutrients	78.81
Chemicals	77.59
Custom Applications	59.00
Diesel Fuel	7.92
Repairs & Maintenance	20.54
Irrigation Energy Costs	39.52
Labor, Field Activities	46.89
Other Inputs & Fees, Pre-harvest	11.79
Post-harvest Expenses	150.27
Total Operating Expenses	660.01
Returns to Operating Expenses	774.12
Capital Recovery & Fixed Costs	
Capital Recovery & Fixed Costs	81.24
Total Specified Expenses ¹	741.25
Returns to Specified Expenses	692.88
Operating Expenses/Yield Unit	
Operating Expenses/Yield Unit	2.65
Total Expenses/Yield Unit	2.98

Economic Analysis of 2021 Rice Multiplier fields

Reference

Roach,Dan. “2018 Row Rice Trials Update” Mississippi Crop Situation, July 20 2018, <https://www.mississippi-crops.com/2018/07/20/2018-row-rice-trials-update/>

Hardke, Jarrod. “ECONOMIC ANALYSIS OF 2021 RICE MULTIPLIER FIELDS” University of Arkansas Cooperative Extension Service, February 02 2022.