

## OBJECTIVE

To compare the yield response using NutriRhize at a 100% recommended rate as a potassium source for pre-plant fertilizer application against muriate of potash (MOP).

**Site Location:**  
Portageville, MO

**Researcher:**  
David Dunn, Ph.D.  
University of Missouri

## TIMAC AGRO PRODUCT



## KEY FINDINGS

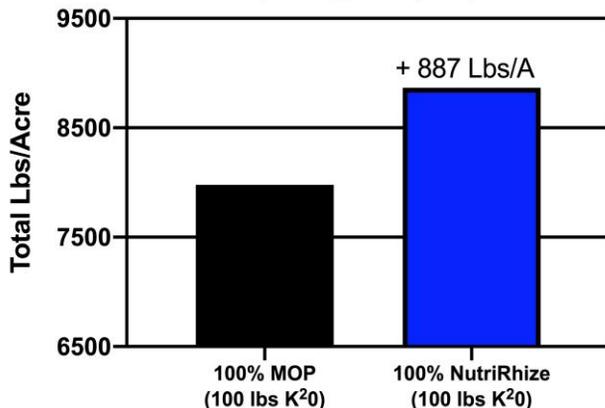
**+887 lbs/ac**

For Main Crop with NutriRhize as K source over MOP

**\$37.92/ac**

Return for Main Crop with NutriRhize as K source over MOP

**Effect of Potassium Source on Rice Yield (Portageville, MO)**



**Graph:** NutriRhize at 100% of recommended K source improved yield over muriate of potash (MOP) by improved yield 887 lbs for main crop. The Gross Revenue above was calculated at \$12.50/cwt for rice with NutriRhize retail cost of \$745/ton and standard muriate of potash (MOP) at \$400/ton.

## APPLICATION

Treatment	Application Rate
Muriate of Potash (MOP)	166 lbs, (100 lbs K <sub>2</sub> O)
NutriRhize	286 lbs, (100 lbs K <sub>2</sub> O)

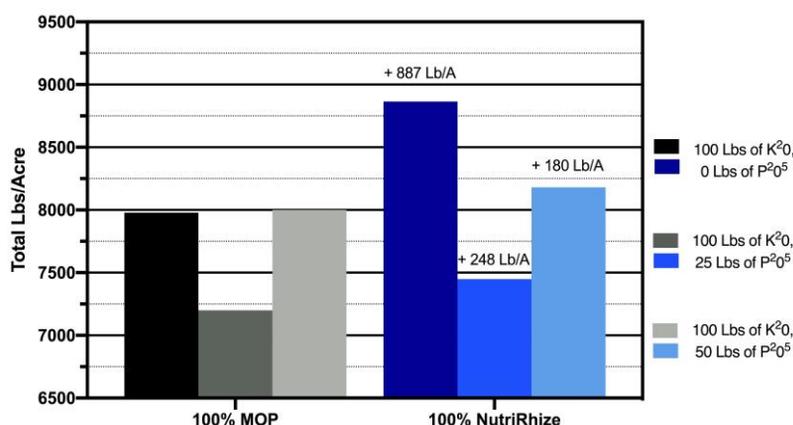
## MATERIALS AND METHODS

The location of this study was at the Delta Research Farm near Portageville, MO. A soil test indicated that pH was above 6.6 and soil nutrients were classified as either good or very good. University of Missouri potassium fertilizer application rates and timings were followed for all treatments. The experimental design was a randomized complete block with four replications. Plots were 20 ft long by 13 ft wide. The study was completed in conjunction with various rates of phosphate (DAP) fertilizer to analyze yield at various rates with a 100% recommended rate of potassium. Plots were harvested, and total weight of grain was used to calculate yield and test weight.

## RESULTS AND CONCLUSIONS

NutriRhize at 100% of recommended K source improved yield over muriate of potash (MOP) by improved yield 887 lbs for main crop. The Gross Revenue above was calculated at \$12.50/cwt for rice with NutriRhize retail cost of \$745/ton and standard muriate of potash (MOP) at \$400/ton. Also of note, the use of NutriRhize as a K source numerically improved yield at all rates of P within the study with the greatest impact on yields with no additional phosphate fertilizer.

Effect of Potassium Source in Blends with Various Rates of Phosphate on Rice Yield (Portageville, MO)



## RETURN ON INVESTMENT

Treatment	Main Crop Yield (lbs/ac)	Gross Revenue @ \$12.50/cwt	Fertilizer Costs/ac	Gross minus Fertilizer \$	Return Over 100% K from MOP/A
Muriate of Potash (166 lbs) 100 lbs K <sub>2</sub> O, No P source	7978	\$997.25	\$33.20	\$964.05	-
<b>NutriRhize (285 lbs) 100 lbs K<sub>2</sub>O, No P Source</b>	<b>8865</b>	<b>\$1,108.13</b>	<b>\$106.16</b>	<b>\$1,001.97</b>	<b>\$37.92</b>

### Author:

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