Excelis Maxx with Pre-Flood Urea

Rice

OBJECTIVE

To assess the yield response of adding Excelis Maxx nitrogen stabilizer (1 quart/ton) to 260 lbs of urea (120 lbs N) fertilizer application in rice 10 days before flood.

Site Location:
Crowley, LA

Researcher:
H. Rouse Caffey Rice Research Station
Louisiana State University

STUDY INFORMATION

Planting Date	23-Mar-2016
Harvest Date	4-Aug-2016
Variety	CL 111
Population	33 seeds/ft^2

KEY FINDINGS

+1,691 lbs/ac
when Urea treated with Excelis Maxx

ROI: $203.57/ac

- 41.4 %
Reduction in Nitrogen (NH^3)
Lost through volatilization

TIMAC AGRO PRODUCT

EXCELIS MAXX
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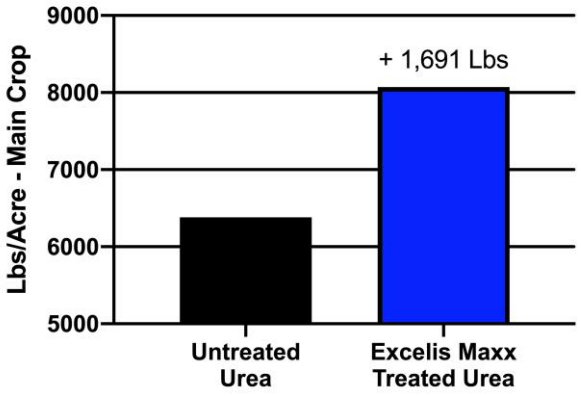
Rice Yield Response from Treating Pre-Flood Urea with Excelis Maxx (Crowley, LA)



Graph: Excelis Maxx treated urea improved yield 1,691 lbs for main crop. The Gross Revenue above was calculated at $12.50/cwt for rice with Excelis Maxx retail cost of $240/gallon.

RETURN ON INVESTMENT

Treatment	Main Crop Yield (lbs/ac)	Gross Revenue @ $12.50/cwt	Change from Control	Added Costs/ac	ROI
Urea (No Stabilizer)	6381	$797.63	-	$0.00	-
Urea treated w/ Excelis Maxx (1 Qt/Ton)	**8072**	**$1,009.00**	**$211.37**	**$7.80**	**$203.57**

Timac AGRO USA | R&D

Trial ID: RT-16-DL-RIC-EM

MATERIALS AND METHODS

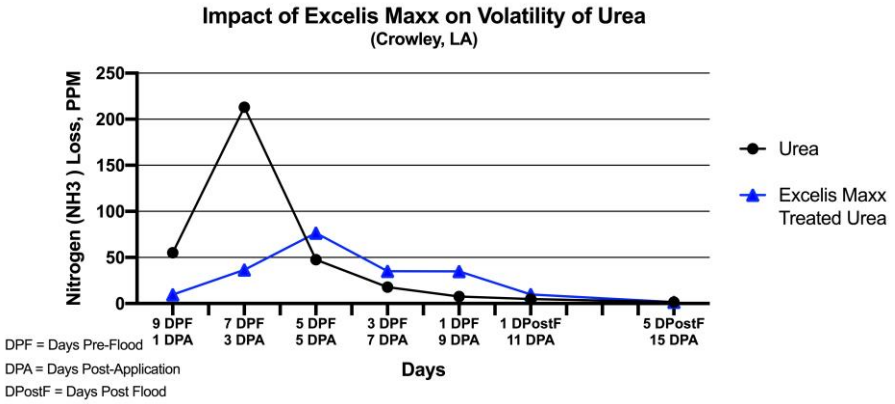
This study was conducted in a grower field with conventional tillage practices on a Crowley silt loam soil type. Recommended amounts of P & K fertilizer were applied at planting to address soil nutrient levels. The experimental design was a randomized complete block with 4 replications. Plots consisted of four 4.67 x 16 ft blocks, with row width at 8" and rows per plot at 7". Seeding population was 33 seeds/sq ft, and CL 111 was planted on March 23. Uniform seed treatments and IPM measures were used across both treatments. Water was managed with flush on April 11, flood on May 6 and drained on July 20. Plots were allowed to mature and harvested on August 4. Whole plots were harvested to calculate the lbs/acre on the main crop. For this trial, ratoon crop was not harvested.

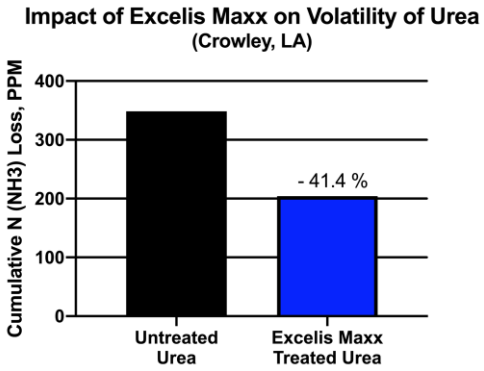
RESULTS AND CONCLUSIONS

Pre-flood urea treated with Excelis Maxx improved rice yield at 260 lbs of urea (120 lbs N) over untreated urea at same rate without a nitrogen stabilizer by 1,691 lbs/acre. This resulted in a ROI of $203.57/acre.

VOLATILIZATION STUDY

Nitrogen (N) volatilization loss was monitored at 7 sampling times from the urea and treated urea using semi-open volatilization chambers in a rice production system. This part of the study was conducted at the LSU AgCenter Rice Research Station with plots done in conjunction with the yield portion of the study. Environmental conditions were closely monitored (air temperature, relative humidity, soil moisture and soil temperature) as well as daily sampling times were recorded to ensure consistency throughout this portion of the trial. Findings regarding sampling times and cumulative nitrogen (NH3) loss are illustrated on the graphs below.





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