

# KREOTEC

## Trial in Rice, Spain: Reduced Nitrogen Application

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### STUDY DETAILS

Crop:	Rice
Country:	Spain
Year:	2018
Product(s):	Kreotec
Trial Type:	Demonstration



### STUDY AIMS

Evaluate if Kreotec could successfully replace 40% of the of a rice crop's nitrogen requirement.

### SPECIFICS

Specific Location:	Sueca, Albufera de Valencia
Specific Trial Dates:	15 May 2018 – 3 October 2018
Trial Manager:	Antonio José Bernabé García
Distributor:	Symborg
Irrigation:	Yes
Previous Crop:	Unspecified
Basal Fertiliser:	See Treatments
Kreotec Application Date:	6 July 2018
Application Growth Stage:	21-23 BBCH
Application Method:	Sulfation
Kreotec Application Rate:	450g/ha (2.2x10 <sup>6</sup> cfu/gr)
Water Rate:	250-350 litres/ha
Crop Variety:	Argila
Previous Treatments	Unspecified

## TREATMENTS

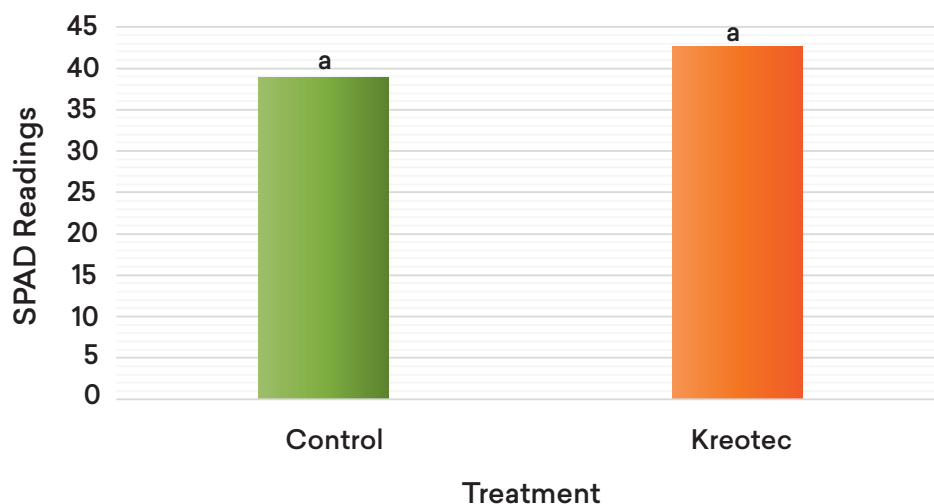
Treatment	<p><b>Control:</b> Basal: 378kg/ha (NPK 39-11-0) = 147kg N/ha          Top Dress: 162kg/ha Urea (NPK 39-11-0) = 63kg N/ha  <b>Total applied N = 210kg/ha</b></p>
	<p><b>Kreotec:</b> Basal: 216kg/ha (NPK 39-11-0) = 84kg N/ha          Top Dress: 108kg ha Urea (NPK 39-11-0) = 42kg N/ha + Kreotec  <b>Total applied N = 126kg/ha</b></p> <p><b>Total N Reduction = 40%</b></p>

## RESULTS

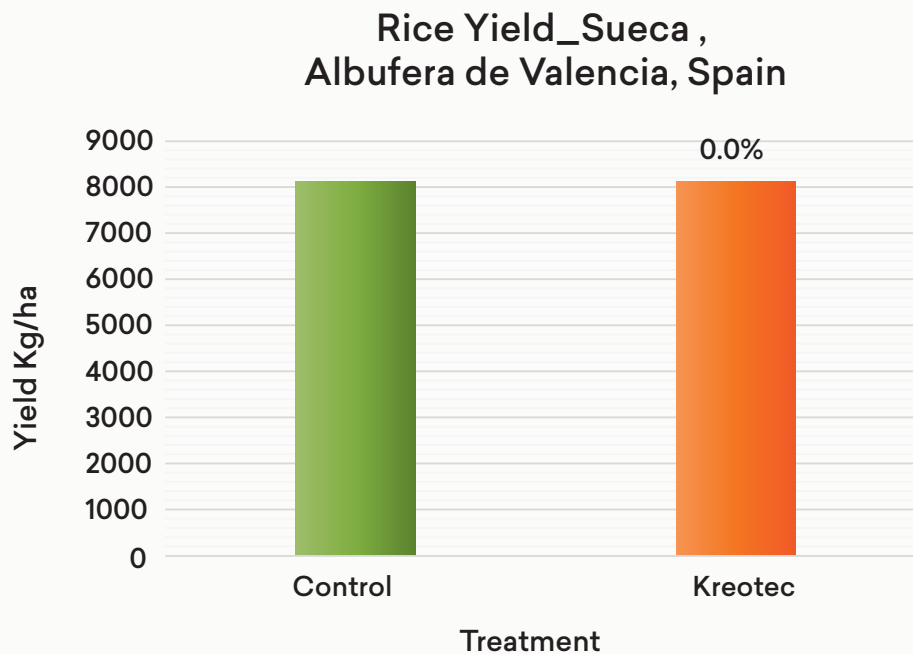
Harvest Date:	3 October 2018
Harvest Method:	Combine Harvester

**Figure 1: SPAD measurements**

**SPAD - Leaf Chlorophyll Levels**  
 (indicating plant nutritional status),  
 1 month post application



**Figure 2: Yield**



## KEY FINDINGS

- Kreotec successfully inoculated the plant with the microbes which persisted throughout the growing period. Kreotec maintained a level of SPAD (Chlorophyll), plant health and plant canopy density equal to the control (conventional fertilization).
- **Harvested yields between treatments were similar, however Kreotec saved 40% of total applied nitrogen, to achieve the same yield.**

Additional information in relation to this trial is available by contacting Thinkbio

Thinkbio would like to acknowledge the work undertaken by Antonio José Bernabé García