

KREOTEC

Trial in Wheat, Italy: Reduced Nitrogen Application

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STUDY DETAILS

Crop:	Durum Wheat
Country:	Italy
Year:	2020
Product(s):	Kreotec
Trial Type:	Replicated Plot Trial (2 Rep)

TREATMENTS

Treatments:	160kg N/ha only
	104kg N/ha only
	160kg N/ha + 200g/ha Kreotec + Amino Acids
	104kg N/ha + 200g/ha Kreotec + Amino Acids
	200kg/ha Kreotec + Amino Acids
	Nil Treatment

STUDY AIMS

To determine if the application of Kreotec can substitute for 35% of applied nitrogen fertiliser

SPECIFICS

Specific Location:	ASSAM – testing center –Location Osimo–(AN) Marche region
Specific Trial Dates:	2nd December 2019 – 22nd June 2020
Trial Manager:	Marco Ciarimboli
Distributor:	N/A
Irrigation:	no
Previous Crop:	Sunflower
Pre-Sowing Fertiliser:	Nil
Kreotec Application Date:	January 28th 2020
Application Growth Stage:	6 leaf
Application Method:	Spray boom
Kreotec Application Rate:	200g/ha
Water Rate:	250 l/ha
Crop Variety:	Marakas

RESULTS

Harvest Date:	28th June 2020
Harvest Method:	Combine Harvester

Figure 1: Grain Yield (t/ha) (13% Moisture)

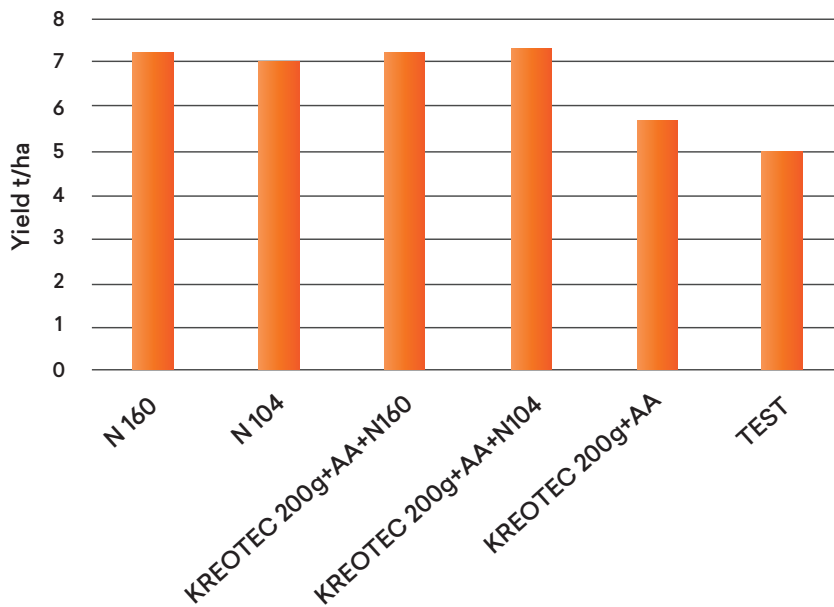
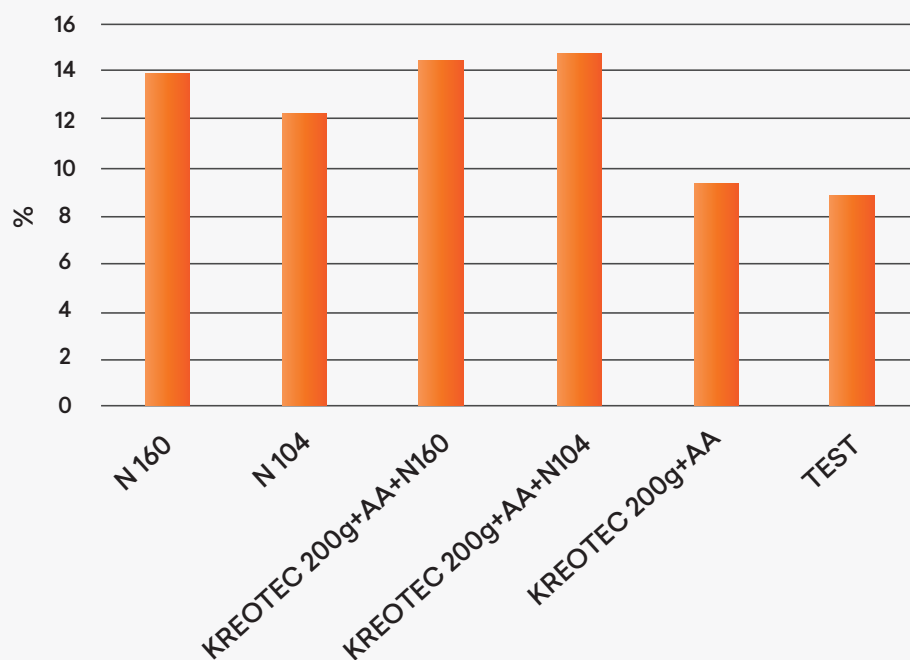


Figure 2: Protein Content



KEY FINDINGS

- Differences in grain yield were not observed in any of the applied nitrogen treatments. The data however clearly shows that when nitrogen was applied yields were significantly higher than when no nitrogen was applied. This indicates that there was not sufficient soil nitrogen to meet the crops nitrogen requirements.
- The quality of Durum wheat is greatly affected by grain protein levels. In order to achieve high protein levels, sufficient nitrogen is required in the late stages of crop development. In this trial it appears that when 160kg/ha of N was applied sufficient N levels were present to produce grain with 14% protein. When the applied N level was reduced by 35% to 104kg/ha grain yield was not impacted but a 2% reduction in grain protein levels occurred. Applying Kreotec to the 104kg/ha applied N treatments ensured protein levels remained at 14%. This suggests that the application of Kreotec when N levels have been reduced by 35%, not only produces equivalent yield, but also supplies sufficient N late in crop development to maintain high grain protein levels.

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

Thinkbio would like to acknowledge the work undertaken by ASSAM & Marco Ciarimboli