AGROMASTER®
Trial results

Maize
(Zea mays)

Higher yields - up by 4%
Steered by soil temperature, nitrogen is released according to plant needs and improves yield by extra 530 kg/ha.

Higher NUE - up by 8%
Agromaster is more efficient than conventional N-fertilizers due to its controlled release technology.

Positive ROI - extra 80 €/ha
Yield increase brings extra profit to growers and makes Controlled Release Fertilizers (CRF) a reliable solution to fertilize open field soil grown crops.

eqo.X Release Technology | N COATED | 2-3

ICL

When

Seeding:
May 26, 2023
Harvest:
October 21, 2023

Where

Castetis,
South of France

Crop

Maize, P0217

Soil type

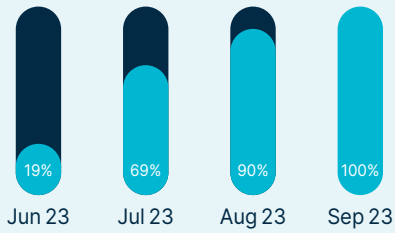
Sandy loam
Sand: 26.6%, Silt: 59.3,
Clay: 12.7, OM: 1.4%
pH = 6.8

Measurements

- Grain yield
- NUE

Cumulative monthly release of N during crop cycle

Controlled release of nitrogen reduces losses by leaching, volatilization and denitrification thereby increasing its effectiveness to plants.



ICL's app – CRF Timer simulates the release of nitrogen, based on local weather conditions.

Try it yourself!

www.icl-growingsolutions.com

Objective

To evaluate the possibility of reducing fertilizer rates in the production of maize grains by using Controlled Release Nitrogen fertilizers, like Agromaster. Agromaster consists of 30% coated nitrogen by using ICL's fully biodegradable release technology – **eqo**.x®.

Trial station and set-up

Astria, randomized block design with 4 repetitions

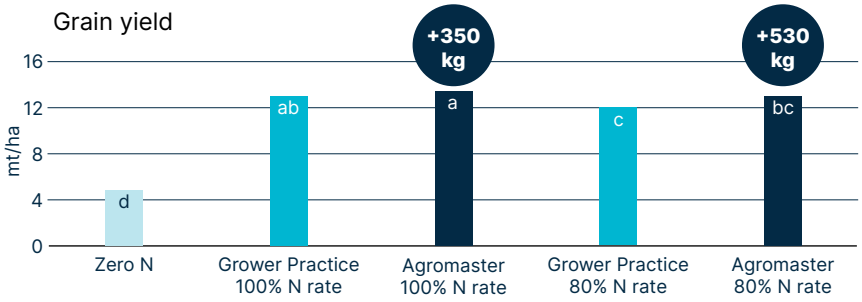
Treatments

Treatment	Product and application method	N rate, kg/ha	P rate, kg/ha	Timing
Zero N	GTSP, 0-46-0, localized	-	69	At seeding
Grower Practice 100% N rate	DAP, 18-46-0, localized Urea, 46-0-0, side-dressing Urea, 46-0-0, top-dressing	27 51 122	69	At seeding V3-V4 V8-V10
Grower Practice 80% N rate	DAP, 18-46-0, localized Urea, 46-0-0, side-dressing Urea, 46-0-0, top-dressing	27 51 82	69	At seeding V3-V4 V8-V10
Agromaster **eqo**.x 100% N rate	DAP, 18-46-0, localized Urea, 46-0-0, side-dressing Agromaster, 2-3M, 30% coated N	27 51 122	69	At seeding V3-V4 V8-V10
Agromaster **eqo**.x 80% N rate	DAP, 18-46-0, localized Urea, 46-0-0, side-dressing Agromaster, 2-3M, 30% coated N	27 51 82	69	At seeding V3-V4 V8-V10

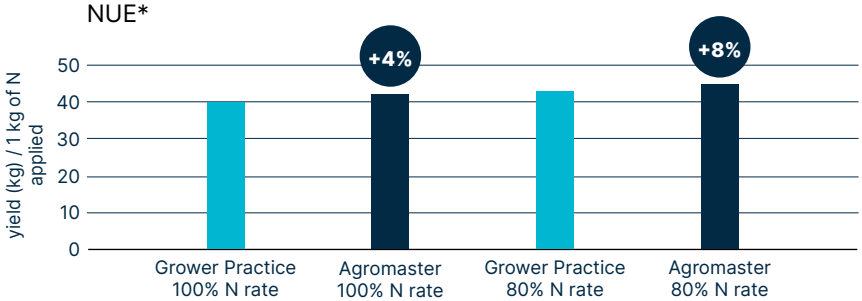
In all treatments, extra K was equally applied by using MOP.

Results

Overall,when reducing N rates by 20% the yield is decreasing. However, Agromaster increased both yield and NUE compared to conventional urea when applied at the same rate/ha. Statistically when reducing N rates by 20% and using Agromaster similar yields can be obtain as 100% N rate with conventional fertilizers.



Statistically significant differences, P < 0.5



**Nitrogen Use Efficiency (NUE), calculated as Agronomic Efficiency = (YF-Y0)/N applied, kg*