



AGROMASTER®

Trial results

Carrots (*Daucus carota*)

Higher yields - by up to 8%

Steered by soil temperatures, nitrogen is released according to plant needs and improves yields by extra 6.7 mt

Higher NUE - by up to 50%

Agromaster is more efficient than conventional N-fertilizers due to its controlled release technology

Positive ROI - extra 3600 €/ha

Yield increase brings extra turnover per ha and makes Controlled Release Fertilizers (CRFs) a reliable solution to fertilize open field soil grown crops





When

Seeding:
May 24, 2023
Harvest:
October 18, 2023



Where

Rokitno, Poland



Crop

Carrots, Nerac F1



Soil type

Sandy clay
OM: 1%
pH = 6.3

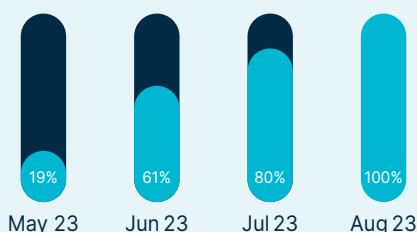


Measurements

- Total 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 benefits of Controlled Release Fertilizers can bring to carrot production when comparing to conventional nitrogen fertilizers. Agromaster consists of 60% coated nitrogen by using ICL's fully biodegradable release technology – **eqo.x**®.

Trial station and set-up

Fertico Sp. z o.o

Randomized block design with 4 repetitions

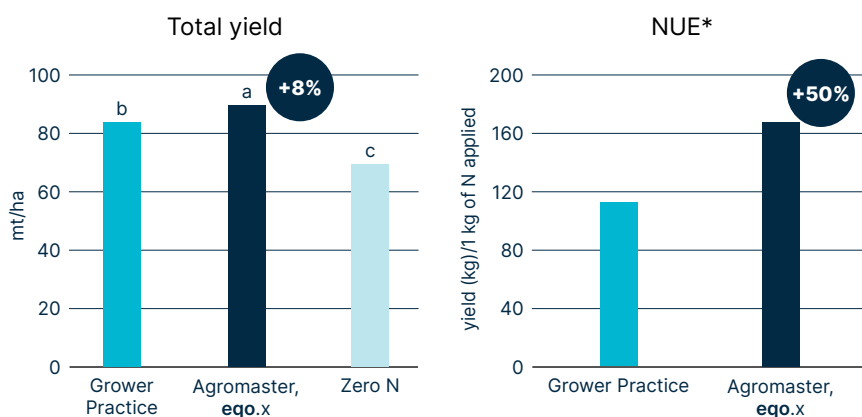
Treatments

Treatment	Product	N	P ₂ O ₅	K ₂ O	MgO
Grower Practice	Conventional NPK 12-11-18+2.7MgO+20SO ₃ Magnesium sulphate 0-0-0+25MgO+50SO ₃	120	110	180	60
Agromaster, eqo.x ®	Agromaster 11-11-18+6MgO+31SO ₃ 2-3M, 60% coated N	110	110	180	60
Zero N	Potassium magnesium sulphate 0-0-30+10MgO+42SO ₃ TSP, 0-46-0	0	110	180	60

All fertilizers were applied before seeding.

Results

Steered by soil temperatures, nitrogen is released according to plant needs and improved yields by additional 6.7 mt/ha.



Statistically significant differences, $P < 0.5$

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

Economical evaluation

Treatments	Yield (mt/ha)	Gross income minus fertilizers cost (€/ha)	Gross profit vs Grower Practice (€/ha)
Grower Practice	82.77	40,350	
Agromaster, eqo.x	89.5	43,978	3,607

Economical evaluation was done based on actual market price for fertilizers used and the whole-sale price of carrots.