



# Agrocote<sup>®</sup> Max

## Trial results

### Spring onion (*Allium cepa*)

#### Higher yields - 8% increase in marketable yield

Steered by soil temperature, nitrogen is released according to plant needs and improves marketable yield by an extra 1.7 t/ha

#### Fewer applications – lower costs

A single application of Agrocote Max saves time and money, reducing the cost of labor and fuel, by around £15/ha per application

#### Higher Nitrogen Use Efficiency (NUE) – up by 50%

Agrocote Max is much more efficient than conventional N-fertilizers due to its controlled release technology. A 50% increase in NUE equals an extra 25kg of onions per kg of N applied

#### Positive ROI – extra £1474 / ha

Yield increase brings extra profit to growers and makes Controlled Release Fertilizers (CRF) a reliable solution to fertilize open field soil grown crops

N 44%

P 0% P<sub>2</sub>O<sub>5</sub>

K 0% K<sub>2</sub>O





### When

2022  
Planting: May  
Harvest: July



### Where

Worcestershire, UK



### Crop

Spring onion  
(var. *Tipika*)



### Soil type

Sandy silt loam

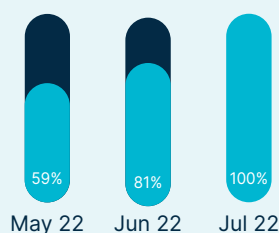


### Measurements

- Total and marketable yield
- Nitrogen Use Efficiency

## 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!



<http://icl-growingsolutions.com>

## Objective

To evaluate the benefits of a single application of our controlled release nitrogen, Agrocote Max, on Nitrogen Use Efficiency (NUE) and the yield of spring onion. This is compared to split applications of conventional nitrogen products which are frequently used as standard practice.

## Trial station and set-up

OAT Ltd.

Randomized block design with 4 repetitions

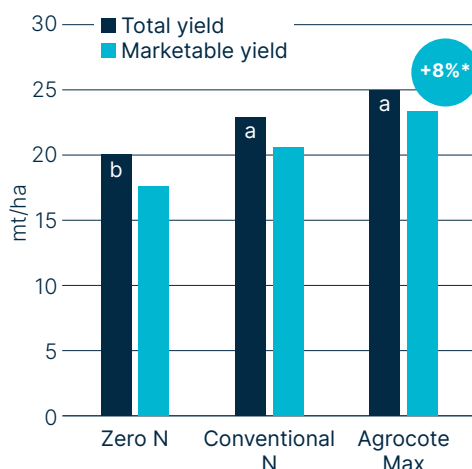
## Treatments

Treatment	Product	N rate, kg/ha	Timing, based on plant height
Zero N	Zero nitrogen	-	-
Conventional N	Ammonium nitrate 34.5-0-0	23	3 cm
		23	8 cm
		23	30 cm
Agrocote Max	Agrocote Max 44-0-0, 1-2M, 100% coated N	69	3 cm

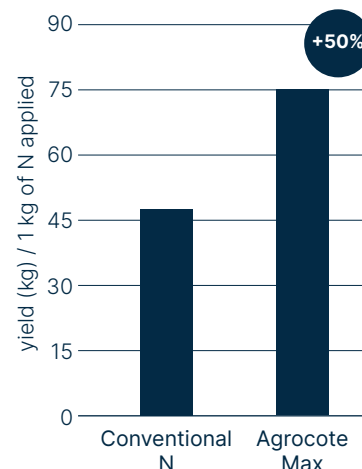
Based on soil analysis, all treatments received the same level of P and K before planting

## Results

### Yield



### Nitrogen Use Efficiency



Statistically significant differences at  $p=0.05$

\*Versus Ammonium nitrate

## Economical evaluation

Differences	Gross income, £/ha	Extra cost of fertilization, £/ha	Extra cost of fertilizer applications, £/ha	Gross profit, £/ha
Agrocote Max vs Conventional-N	1456	12	-30	1474

Gross profit was calculated based on Spring onion market price of 0.85 £/kg and subtracting both extra fertilization cost/ha and the cost of fertilizer applications, calculated at 15 £/ha/application.

(Sources: [ahdb.org.uk/GB-fertiliser-prices](http://ahdb.org.uk/GB-fertiliser-prices) | [fwi.co.uk/prices-trends/horticulture-prices](http://fwi.co.uk/prices-trends/horticulture-prices))  
Nitrogen Use Efficiency, calculated as Agronomic Efficiency based on economical yield,  $AE = (Y_F - Y_0) / F$ .