BlueN™ Nutrient Efficiency Biostimulant in Legumes

CORTEVA™ agriscience biologicals

BlueN™ provides your legume crop with a unique way to capture nitrogen throughout the season, helping plants reach their yield potential.

Why use BlueN nutrient efficiency biostimulant?

- Maximises crop potential through optimised nitrogen management, especially during critical growing periods.
- BlueN enhances plant growth by improving the nitrogen availability in the plant throughout the growing season.
- BlueN meets changing market expectations by providing a sustainable, supplemental source of nitrogen, which is not affected by unfavourable weather conditions, leaching or volatilisation.

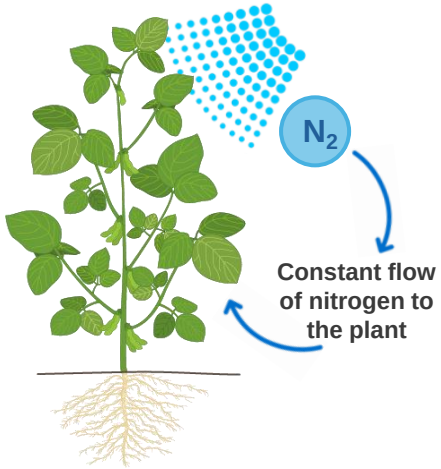
What is BlueN?

BlueN is a novel nutrient efficiency biostimulant for use in a broad range of crops. BlueN contains *Methylobacterium symbioticum*, a bacteria found in nature that fixes atmospheric nitrogen for use by the plant. BlueN provides a sustainable, supplemental and alternative source of nitrogen that reduces the dependency of nitrogen uptake from the soil and ensures the plant has access to nitrogen all season long.

How BlueN Works

- BlueN enters the plant through the stomata from where it can colonise the leaves and then quickly redistributes to surrounding leaves, stems and roots.
- BlueN converts atmospheric N_2 into ammonium which can be used by the plant.
- Once BlueN has colonised the plant, on average it can deliver the equivalent of ~2-3 kg/ha of supplemental nitrogen to the crop per week.

Plants generate methanol during normal growth which is used as a food source by BlueN ensuring reliable colonisation.



Supplies nitrogen throughout the crop's life in an effective and controlled way.

Application Information	
Pack Size	3 kg
Recommended Rate	333 g/ha
Rainfastness	1 hour
Number of Applications	1 application per crop
Application Timing	Apply between 4 and 8-leaf stage (GS14-18) Optimum timing GS 18
Application conditions – Key for effective colonisation of *Methylobacterium symbioticum*	• Apply to actively growing plants unaffected by stress. • Apply when most stomata are open, i.e., morning, late afternoon or evening. • Try to apply when day temperatures begin to reach at least 10°C up to 25°C (maximum 30°C) and night temperatures over 5°C (refer to Arable App for specific timing information). • Use water with a pH between 5 and 8.

BlueN is verified for use in organic systems, for more information contact the Corteva Hotline.

CORTEVA™ agriscience

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March 2025 – this version supersedes all previous editions

Winter beans trial, 2023

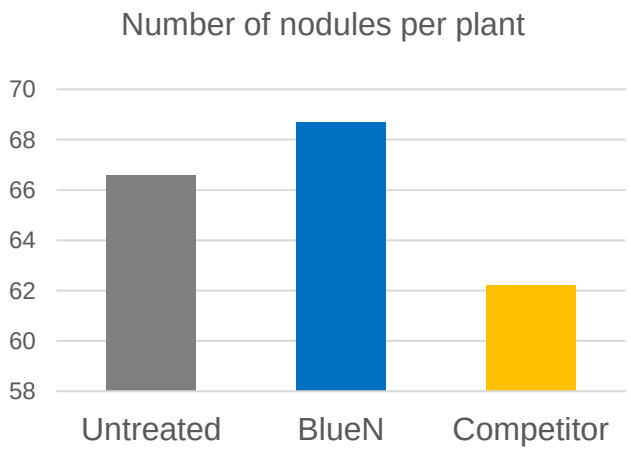
Leaf tissue analysis

Element	Untreated	BlueN
N	4.42%	4.77%
P	0.453%	0.537%
K	1.18%	1.49%
S	0.15%	0.18%
Mg	0.128%	0.138%
Copper	12.3 mg/kg	14.5 mg/kg
Zn	33.1 mg/kg	42.5 mg/kg
Mn	10.8 mg/kg	12.9 mg/kg

In this winter beans split field trial from 2023, BlueN increased yield by 33% compared to the untreated

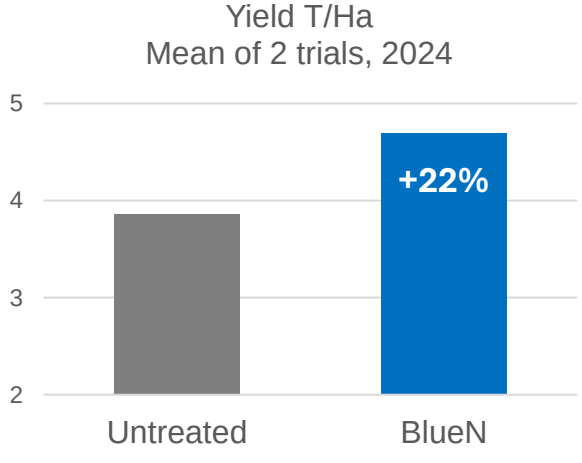
- Untreated yield – 3.91 t/ha vs. BlueN yield 5.19 t/ha.
- Leaf tissue analysis from the trial also showed nutritional increases.

Winter beans trial, 2024



	Leaf Tissue N
Untreated	4.6%
BlueN	4.87%
Competitor	4.76%

Combining peas trials, 2024



Field trials carried out in 2024 showed a mean yield increase from 2 trial sites of 0.83T/ha (22%) compared to untreated.

growing together