BlueNTM Nutrient Efficiency Biostimulant in Cereals



BlueN™ provides a crop with an additional 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 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, alternative source of nitrogen that reduces 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 translocate to surrounding leaves, stems and roots.
- BlueN converts atmospheric N₂ 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 applied 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.

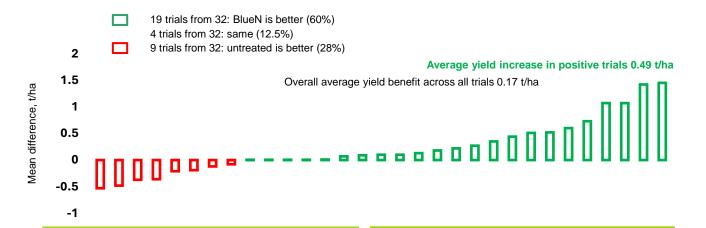
Application Information	
Pack Size	3 kg
Recommended Rate	333 g/ha
Rainfastness	1 hour
Number of Applications	1 application per crop
Application Timing	Winter cereals GS25-61 (5 tillers to the beginning of anthesis), Optimum timing is GS25-32 Spring cereals GS25-32
Application conditions – Key for effective 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.





UK meta-analysis in winter wheat, 2023 On top strategy (applying BlueN on top of planned fertiliser programme).

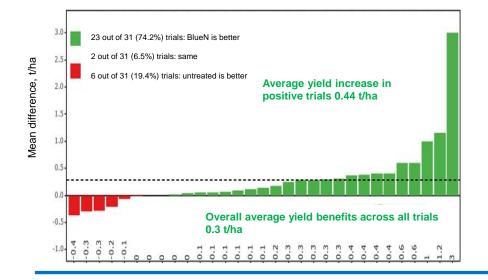


On top strategy (BlueN plus normal fertiliser programme):

- For all fertiliser programmes.
- BlueN investment: £30/ha
- Yield benefit: +0.49 t/ha = +£122.50/ha*
- *Winter wheat £250/t

- In 60% of trials, the yield increase of treated vs. untreated was over +0.49 t/ha
- Across all the trials an average yield benefit was +0.17 t/ha, still delivering a yield benefit of £42.5/ha

Meta-analysis in winter barley, 2023 On top strategy (applying BlueN on top of planned fertiliser programme).



On top strategy:

- BlueN investment: £30/ha
- Yield benefit: +0.44 t/ha
- = + £70.4 ha*

*Barley £160/t

- The best strategy is to use BlueN on top of existing fertiliser programmes.
- In 74% of cases this strategy brings a yield increase over the untreated on average +0.44 t/ha
- Across all the trials an average yield benefit is +0.3 t/ha

