



Biostimulants

Best Use Guide: Cereals

Although tempting to apply in a curative manner, biostimulants are most effective when used as plant health promoters, as part of a wider nutritional and plant protection programme.

To optimise efficacy, it is important to understand the active ingredients, what they each do, and when in the programme they will work.

Oligosaccharides

These concentrated complex sugars are extracted from seaweed and stimulate a plant to produce reductases that help with nutrient flow from the soil, and translocation through the plant. This results in improving the plant's ability to access nutrition, as well as its overall health, through a boosted root mass.

As the key rooting for a plant takes place in the autumn period, oligosaccharides are most beneficial in an early application, from **2-leaf onwards on winter cereals**. This helps a plant to survive the winter, and be ready to accelerate away in the spring using its enhanced rootzone to access nutrients. They can also prove valid in spring cereals, when growth is rapid due to a shortened life-cycle.

Optimising oligosaccharides

1. Use to promote root growth and tiller creation
2. Apply early from 2-leaf stage
3. Use in a planned nutritional & plant protection programme

Amino acids

Known as the 'building blocks of protein', amino acids provide stress relief, improve cell regulation and can maximise green area index. Because plants need a continuous supply of amino acids to be able to grow, providing ready-made amino acids will enable a plant to better utilise its resources and improve its energy usage.

Although amino acids are effective at overcoming pinch points of stress, they should still be used proactively not reactively, but in a **later position** than oligosaccharides.

Application is therefore recommended from **rapid stem extension through to grain fill**, when the plant has a high-energy demand, water and nutrient stress can become acute, and foliar disease pressure can reduce green area index.

Optimising amino acids

1. Use to maximise photosynthesis and reduce plant stress
2. Apply from rapid stem extension through to grain filling
3. Use in a planned nutritional & plant protection programme