NoroTec™ Winter Crop

Macro / Micro-nutrient fertiliser for growth promotion applied on seed

Content per litre: 100g phosphorus, 65g potassium, 20g magnesium, 36g sulphur, 18g manganese, 5g zinc, 55g nitrogen +/- 10%.

Content is complex bound with organic and amino acids

HIGHLIGHTS

- **Increased seedling growth- establishment.**
- **Increased plant height.**
- **Increased root length.**
- **NoroTec™ Winter Crop formulation is a true liquid.**
- **NoroTec™ Winter Crop formulation can be used in co-application with other seed treatment products in the NoroGard AB range of seed treatment machines.**

Crop	Dosage rate / litre per tonnes of seed
Barley	3
Rape seed	3
Wheat	3

Plant nutrient requirements

Plants require nutrients in order to grow, develop and complete their maturity. The supply of nutrients to the plants should be balanced in order to reach the efficiency of the individual nutrients so that these meet the needs of the particular crop and soil type.
Nitrogen is an essential component of amino acids, nucleic acids, enzymes and green, light harvesting chlorophyll. It is also the nutrient which normally produces the great response in crop plants.
Phosphorus is an essential part of the enzymes which help the crop to produce energy. It forms an integral part of the nucleic acids, the carriers of genetic information and is important in stimulating root growth.
Potassium is involved in processes which ensure carbon assimilation and transportation of photosynthates throughout the plant for growth and of sugars and proteins. The potassium is also important for water uptake. Furthermore, the presence of potassium in sufficient amounts ensures resistance to frost, drought and certain diseases

In addition to nitrogen, phosphorus an potassium, there are other nutrients which are essential for plant growth. Commonly known as secondary nutrients are:

Magnesium
Sulphur
Calcium
Sodium
Chlorine (not always essential)

Magnesium occurs in chlorophyll and is also an activator of enzymes.
Sulphur forms part of two essential amino acids which are among the building blocks of protein.

There are also several micro nutrients which are essential for plant growth:

Boron
Copper
Iron
Manganese
Molybdenum
Zinc

Boron is related to cell wall formation, sugar transportation, flower retention, pollen formation and germination is also affected by boron.
Copper is very important for plants in fruit setting and has a huge influence on lignin storage. Thus, it will be in copper deficiency, in addition to a poor fruit set also a higher risk for lodging.
Iron is involved in the production of chlorophyll.
Manganese is by providing a better over-wintering of crucial importance for the autumn crop. Manganese is included in several physiological reactions e.g. photosynthesis, chlorophyll formation also exhibit plants with manganese deficiency more often a higher infestation by stem-base diseases.
Molybdenum is involved in enzyme systems relating to nitrogen fixation by bacteria growing symbiotically with legumes. Nitrogen metabolism, protein synthesis and sulphur metabolism are also affected by molybdenum. Molybdenum has significant effect on pollen formation, so fruit and grain formation are affected in molybdenum deficient plants.
Zinc gives good cell wall structure (roots especially), photosynthetic activity (carbonic anhydrase-CO_2 transport) and is an essential part of many enzymes e.g. auxin synthesis.