

PHYNUTRIC

Professional crop nutrition product range

Boron humate

Phosphorous
5
B
10.811

Plant demand, phased release polymer compound of granulated boron humate for optimum soil and plant health, and enhanced fertiliser efficiency

Plants need boron

Boron is essential for water metabolism, fruit formation and seed development. It primarily regulates the carbohydrate metabolism in plants, and is essential in protein synthesis, seed and cell wall formation and cell division, germination of pollen grains and growth of pollen tubes. Boron is also directly associated with the translocation of sugars. Boron requirements will vary greatly from crop to crop. The amount of boron required for responsive crops such as celery and sugar beets, if fully soluble could cause serious damage to cereals, beans, peas and cucumbers, as there is a narrow range between deficiency and toxicity levels of water-soluble boron in certain crop species and varieties. **PHYNUTRIC** boron humate granules are plant demand phased release to correct deficiency while avoiding the risk of toxicity.

Boron deficiency symptoms

Deficiencies are visible as slow death of plant tissue around growing points and the apex or centre of roots. This causes breakdown of growing tip tissue and a shortening of terminal growth. Cracks appear on affected fruits, while plant stems deteriorate and become hollow. On apples it appears as "external and internal cork" (hard and wrinkled tissue), and on peaches it can be seen as "Dieback" of terminal twigs, curled leaf edges and dead buds. While in citrus crops deficiency causes heavy fruit shedding, plus a yellowing of leaf veins. In celery Boron deficiency can be identified by "Crack Stem" (crosswise cracks of stalks). The first symptoms include brown mottling along the margins of the bud leaves and brittle stems with brown stripes along the ribs. Then crosswise cracks appear on the stems.

In tuber crops like carrots, potatoes, beet, turnips, etc, boron deficiency is identified as “Heart Rot”. Internal tissues of beets and turnips begin to breakdown and form corky scabs with dark discoloration. Boron deficiency shows up as a yellowish to orange discoloration of the upper leaves, short nodes and very few flowers.

Boron deficiency in cauliflowers shows up as a darkening of the head and is associated with hollow and darkened stems. Hollow stem can also be caused by adverse weather conditions. Boron deficiency usually appears in small spots and may spread until the entire head is discoloured.

In sugar beets, the first symptoms are white, netted chapping of upper leaf blade surfaces or wilting of tops. Later, as the deficiency becomes severe, crosswise cracking develops and the growing point dies while the heart of the root rots.

Boron deficiency in maize appears on the newly formed leaves as elongated, watery or transparent stripes. Later the leaves turn white and die. Growing points also die, and in severe cases, sterility is common. If ears develop, they may show corky brown bands at the bases of the kernels within the cobs.

Appearance	Black Brown granule
Size rate (2.0 – 4.0 mm)	Minimum 90 %
Solubility in 1 % NaOH solution (DM)	Minimum 50 %
Boron as B₂O₃ (DM)	10 %
Moisture	15 %
pH	8.0 – 9.5
Compressive strength	4 N

Recommended usage rates:

- For soil application – use 10 – 25 kg per hectare
- Blend with granular fertilisers at 5 % - 10 % inclusion

Packing and storage information:

- 25 kg bag
- Store sealed cool and dry