AgNOVA TECHNOLOGIES

An American Vanguard Company

AgNote

Agronutrition

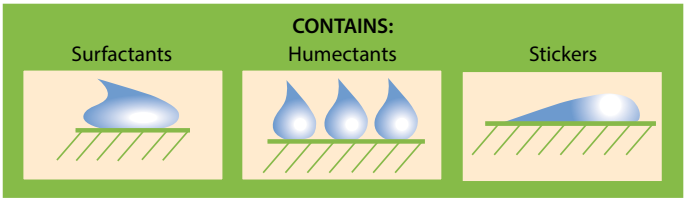
BORONIA Mo

Prevents and corrects boron and molybdenum deficiencies in a wide range of crops

Boronia Mo™ is a foliar fertiliser with boron and molybdenum, in balanced proportions. It can be applied to foliage or soil.

ACTIVE CONSTITUENTS	TOTAL PRODUCT BASIS % W/V
Nitrogen (N)	6
Boron (B)	12
Molybdenum (Mo)	0.6
Manganese (Mn)	0.12

Boronia Mo Improves Yield and Quality in Targeted Crops



Boronia Mo uses superior lignosulphonate technology to deliver nutrients more efficiently to the crop. The unique formulation provides:

- Highly effective foliar uptake.
- Better dispersion of spray droplets, with an in-built surfactant which increases contact area with the leaf surface.
- A humectant or moistening effect by maintaining solubility of the nutrients on the leaf surface. The humectants prevent the nutrients re-crystallising, giving more efficient uptake.
- Increased adhesion of the product to leaves through the inclusion of a bonding agent. This reduces losses to rainfall or irrigation.
- Performance: Boronia Mo is a 100% soluble foliar fertiliser, that is ready to use.
- Efficiency: Boron and molybdenum delivered by foliar application is more efficient than applications via the soil, especially on alkaline or light soils.
- Flexible and economical: Tank mixes with a wide range of crop protection products → saving time of an additional spray application.
- Multi use: For prevention and treatment of deficiencies on various crops; trees, vines, vegetables, broadacre and horticultural.

When is Boron Limiting?

- When soils are above pH 6.5, the availability of boron decreases.
- Liming may immediately reduce the availability of boron to crops. In light soils and areas of high rainfall, boron is easily leached through the soil profile.
- In spring and summer, moisture stress can limit the diffusion of boron through the soil solution.

Why Boron is Important for Plant Growth

- Boron is essential to the growth of roots, foliage, tuber preservation and the plant's reproductive development. After calcium and magnesium, it is the most important anion of the cellular membrane. It acts like cement between pectins, ensuring the cohesive strength of the vegetative tissues. It is an essential element in the construction of cellular membranes, affects the metabolism of water and influences aspects of produce quality.
- Boron deficiency causes a disturbance of the phytohormone balance and is expressed as necrosis of the growth points, deformation and death of the youngest shoots, a general growth reduction, thicker stems, splits in the stems and smaller leaf surfaces.

Why Apply Foliar Boron?

Boron requirements change as the plant develops.
Foliar spraying boron is the best way of ensuring plants have enough boron available at key stages of development.

Boron is an extremely mobile element in the soil

- Boron can be leached through the soil to depths where plants have difficulty utilising it.
- On dry soil surfaces, boron is not available to plants, as it needs to be in solution with water to facilitate root uptake.

Boron Deficiency in Canola

Symptoms

- Thickening of taproot and neck, and breakdown of the pith.
- Regression and disappearance of terminal buds; bush-like appearance.
- Longitudinal splits on actively growing stems, often called 'razor slits'.
- Pinching out of the stem under the floral buds of the main flowering stems, resulting in fewer, or even empty, seed capsules.

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When is Molybdenum Limiting?

- Light and acid soils.
- Soils rich in organic matter.
- Cold, wet springs.

Symptoms

- Molybdenum is essential to two enzymes necessary for the assimilation of nitrogen by plants. It also aids nitrogen fixation by legume nodules, as well as the transformation of nitrates inside the plant's tissues. Therefore it is directly involved in the process of plant protein synthesis.

Why Apply Foliar Molybdenum?

- It is the only trace element whose uptake in the plant increases with the pH.
- Deficiencies generally appear in acid soils and on sensitive plants, such as cauliflower, melons, lucerne, canola, sunflower, lettuce, spinach and many vegetable crops.
- The absorption of molybdenum is limited by phosphorus and disadvantaged by sulphur. High sulphate levels can limit assimilation of molybdenum.
- Antagonism exists between copper and molybdenum and between manganese and molybdenum: an excess of manganese can lead to a molybdenum deficiency.
- Molybdenum deficiency regularly leads to significant yield reduction.

Molybdenum Deficiency in Canola

Symptoms

- Leaves turn pale with the appearance of yellowish-green mottling.
- Plantlets have a rosette aspect. The leaves show distortions: stems with non-uniform growth, end splitting, whiptail of leaves, as well as death of the apical bud from the start of new flowering stems.
- Less flowers and flowers held by particularly elongated shoots.

Directions for Use Table

Shake contents well before use.
Suitable for application by foliar and fertigation.

SITUATION	RATE / HA	MINIMUM DILUTION	COMMENTS
Avocados, Mangoes, Olives, Almonds	1–1.5 L	1 : 300	Apply to new fruit growth flush prior to flowering and as required through fruit development. Post-harvest application may also be required
Bananas	0.5–2 L	1 : 150	Apply as required but at least 7–14 days pre-flowering
Canola, Wheat	2–2.5 L	1 : 50	1–2 applications from 2–3 leaves as required prior to flowering
Citrus	0.5–2.5 L	1 : 300	In deficient situations, regular applications may be necessary prior to flowering
Cotton	1.5–2 L	1 : 50	Split application required: – 1st: at 6 leaf – 2nd: at flowering/boll set
Lucerne	2 L	1 : 50	Apply when sufficient leaf cover pre-flowering
Paw Paws	2.5 L	1 : 150	Apply 7–14 days pre-flowering
Pea	2–2.5 L	1 : 150	1–2 applications from 5–6 leaves as required prior to flowering
Pineapples	1–1.5 L	1 : 150	Apply pre-flowering to ensure adequate boron levels for pollination
Pome & Stone Fruit	1 L	1 : 1000	3 applications required: – 1st: at early spur burst – 2nd: at complete petal fall – 3rd: at post-harvest @ 2.5 L/ha
Poppies	1–2 L	1 : 150	Apply as regular applications prior to flowering
Sorghum, Soybean	1.5–2 L	1 : 50	Apply 3 to 4 weeks after emergence
Strawberries	1–2 L	1 : 150	2 applications required: – 1st: at initial flowering – 2nd: 14 days later
Sunflower	1–2.5 L	1 : 100	Apply at 5–8 pairs of leaves. 2 applications may be required at 2 weeks between sprays
Turf	2–4 L/ha or 20–40 mL/100 m^2	1 : 150	Apply to correct deficiencies. Use lower rate for bent grass
Vegetables	1.5–3 L	1 : 150	Apply at 4–6 true leaf stage (well-developed foliage) or before and after flowering
Vines: Table and Wine Grapes; Foliar	1.5 L or 150 mL/100 L	1 : 300	3 applications required: – 1st: at clusters visible – 2nd: at flower buds separated – 3rd: at fruit set
Soil Applications: All Crops	5–8 L	1 : 100	Before sowing or planting

NOTE: The suggested rates of application are designed for typical Australian conditions and, as such, should be used as a guide only. Application should be avoided under extreme weather conditions, such as temperatures over 28°C, high humidity, frost, rain etc. Due to the wide range of formulations of agricultural chemicals and fertilisers that are available, users should conduct a small scale compatibility test before mixing commercial quantities in a spray tank. If applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to treating commercial-sized areas.

For more information scan the QR code or contact your local Area Sales Manager

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