

agrotechnology




boron



new
formulation



Agro-B
4-0-0 with 10% B
FOLIAR NUTRIENT

Ensuring boron input with **Agro-B.**

Using an enrichment product is justified by both its agronomic and economic benefits. Since boron is essential to plant development, it is important to ensure its availability in order to prevent deficiencies. That is why **the new Agro-B formulation** represents an excellent investment for the growth of your business.

Signs of deficiency are more frequent in today's crops. Symptoms are characterized by growth retardation, small roots, twisted young leaves stopping all terminal growth, many unpollinated flowers that dry up, stems that are crushed and thickened, small fruits, and grains covered in bumps, etc.

► **Boron:** an essential element

Boron plays a major role in many of the plant's metabolic processes: cellular multiplication, formation of cell walls, fructification and grain formation, synthesis and transport of sugars to storage organs (fruits, tubers, grains). Boron improves assimilation and mobility of nutritional elements in the plant, especially calcium. If boron concentration is low, problems caused by calcic imbalance, such as bitter pit and hollow heart, may appear. Indirectly, boron plays an important role in tissue firmness, a factor in quality and resistance to diseases. Regarding micronutrients, soil richness

“To quickly remedy boron deficiency or to prevent it, foliar nutrients containing this element are required.”

does not come into account. Rather, it is availability that is decisive. Boron deficiency can result from factors such as pH level, temperature, and humidity. The deficiency manifests itself in highly alkaline soils (pH > 7.5) or highly acidic (pH < 5.5), light, irrigated, dry and low in organic matter. Since boron is passively absorbed by the plant through soil water, soil dryness reduces the mobility of available boron, which explains why dry periods may accelerate the appearance of deficiency symptoms. To quickly remedy boron deficiency or to prevent it, foliar nutrients containing this element are required.

turn over to see results >

Feel free to contact us to discuss your needs: we are confident that we will find productive solutions to them.

FOR MORE INFORMATION
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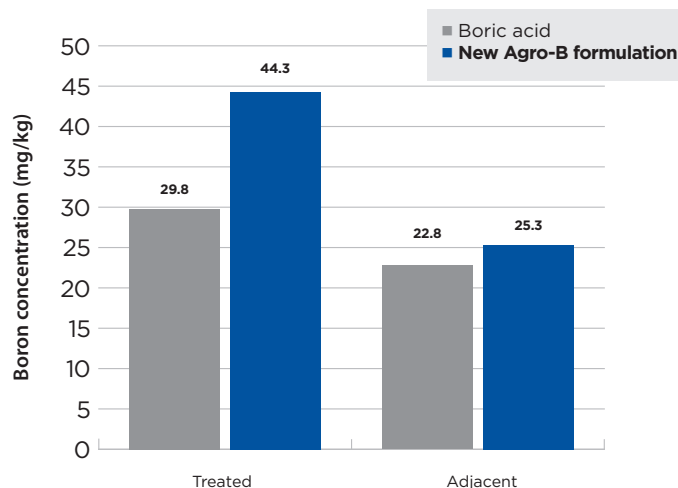
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Boron mobility inside the plant is a key factor in boron foliar application effectiveness. Boron is considered a fixed element inside the plant; but that is not exactly true since recent studies have revealed a specificity between plant species. Indeed, some plants synthesize molecules capable of forming boron complexes which can then be used as a vehicle inside the plant.

Agro-B is our new liquid formulation containing 10% boron and 4% nitrogen in which boron is linked to two organic molecules (amine and polyol). This complex allows fast boron absorption and provides an important vehicular action inside the plant. In greenhouse trials with broccoli, this new Agro-B formulation has produced an increased in boron concentration of 48% on the treated leaf and of 11% on the adjacent leaf compared to boric acid (see chart). This composition also provides a stimulating effect. In fact, the two organic molecules linked to the boron are part of the plant's metabolism. They are metabolizable and take part in the plant's physiology. These two molecules also help in developing resistance to hydric and thermic stresses.

Be vigilant. Symptoms show up late in relation to deficiency onset. Thus, it is important to anticipate and plan ahead for a well thought-out fertilization program because an intervention on symptoms is, at any rate, a belated intervention.

Boron concentration in two (2) treated and adjacent leaves of broccoli after two (2) weeks in a greenhouse



References

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- WILL, S. *et al.* (s.d.). "Absorption and mobility of foliar-applied boron in soybean as affected by plant boron status and application as a polyol complex", *Plant and Soil*, 344: 283-293.

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