Chlorinated Water and Biological Seed Treatments

What are biological seed treatments and how do they provide crop benefits?

The soil is teeming with microbes that, by nature, help plants get the nutrients they need. Biological seed treatments, also called bio-enhancers, contain living organisms such as bacteria and fungi. Bio-enhancers can be used for the commercial production of soybeans, corn, wheat, and other crops. Nutrient and moisture deficiencies can impair root growth, making it even harder for plants to get the nutrients and moisture they need. Bio-enhancers can help increase nutrient availability to plants, which helps maximize yield potential (Figure 1). While benefits vary by crop, these products can also help enhance functional root volume and increase nutrient uptake, protecting plants from moisture or nutrient stress. However, anything that can kill or injure these organisms can be detrimental to biological seed treatments.

What should I be aware of when preparing to use biological seed treatments?

To keep water safe for human consumption, municipalities treat their water supply with variable levels of chlorine to kill bacteria and fungi that might be within pipes and water storage facilities. If chlorinated water is used during the biological seed treating process, it can have an adverse affect on biological treatments. Therefore, the recommendation is to avoid using water directly from a municipal supply line in the preparation of biological seed treatments. The best water source is from a non-chlorinated source.

If chlorinated water is the only available water source, what steps should be taken?

- Install a chlorine filter in the water line to remove chlorine. In general, these filters are comprised of activated carbon.
- Allow chlorine to dissipate by leaving in an open container for 6 to 24 hours.
- Use dechlorination tablets.

These practices can help biological seed treatments deliver the full benefits to a crop.

For more information on bio-enhancer seed treatment products, please visit http://www.acceleronsas.com/Solutions/BioEnhancers/Pages/default.aspx and contact your retailer.

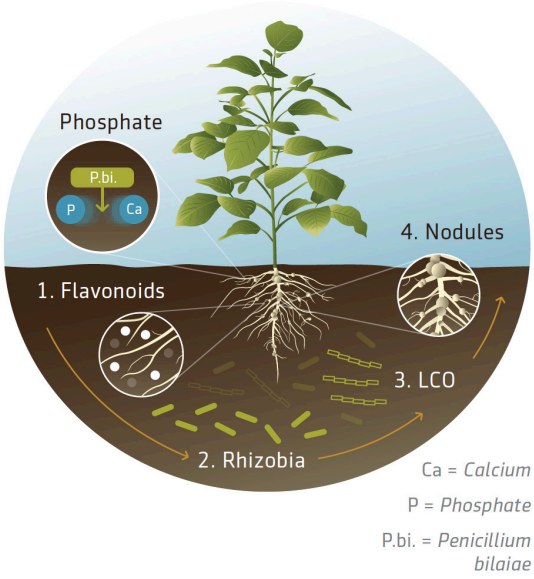

Figure 1. Bio-enhancers like Penicillium bilaiae can help release bound mineral forms of soil and fertilizer nutrients, making them more available for plants to use. The symbiotic relationship between flavonoids, LCO, and rhizobia can create nodules, which help fix atmospheric nitrogen.

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