



THE ANDERSONS, INC | TECHNICAL BULLETIN 04

FOLIAR FERTILIZERS BOOST CROP POTENTIAL

The convenience of mixing PureGrade® and MicroSolutions® foliar liquid fertilizers with Roundup® and other chemicals has created a lot of interest in foliar feeding, especially on soybeans. Growers realize that ‘piggybacking’ foliar liquid fertilizer with spray-applied chemicals is more efficient and more profitable. Below are some common questions asked about foliar-applied liquid fertilizer.

THE AGRONOMICS OF FOLIAR

Q: How does foliar feeding work? I thought plants only absorbed nutrients through the roots.

A: Roots take up the bulk of the nutrients, but small amounts of nutrients can enter through the leaves and stems. This was proven at Michigan State University through the use of radioisotopes nearly 50 years ago. The efficiency of uptake through the leaf is high compared to the root, but the actual quantity taken in is small in comparison.

Q: How does foliar feeding help increase yields?

A: When foliar liquid fertilizer is sprayed on the leaves it causes the plant's metabolism to speed up. This causes the plant to “demand” more water and nutrients from the root system. It is this increase in water and nutrients sent by the roots that provides the potential for higher yield. Often the increase in yield removes more nutrients than were contained in the foliar application. The yield increase comes from soil-supplied nutrients, but it's the foliar fertilizer that causes it to happen.

Q: Do soil test levels make a difference?

A: Yes. Results from foliar fertilizers are better when soil test levels are in the medium or high range. An ample supply of soil nutrients is necessary to get the maximum return. Foliar-applied nutrients do not substitute for soil-applied nutrients.

Q: Does foliar-applied liquid fertilizer cost a lot?

A: No. At a minimal soybean application rate, it will take a yield increase of only about one bushel per acre to pay for the fertilizer.

Q: What crops respond to foliar feeding?

A: Most crops respond positively to foliar fertilizers under the right conditions. Most growers in the corn belt concentrate their efforts on soybeans and alfalfa. Fruit and vegetable crops, including edible beans, respond well to foliar liquid fertilizers.

FOLIAR APPLICATION

Q: Does foliar feeding require an extra trip?

A: No. In most applications foliar fertilizer replaces part of the water carrier in the chemical spray solution.

Q: How much should I use on soybeans?

A: Recommendations vary. Always consult product labels for appropriate rates and timing.

Q: Can I dump everything into the spray tank and go?

A: The Andersons recommends a compatibility test (jar test). Generally, PureGrade and MicroSolutions products are compatible with the majority of spray materials. Compatibility agents are available that are specially designed for use with phosphate fertilizers like PureGrade. Use them when needed.

PUREGRADE PRODUCTS

Q: What type of liquid fertilizer should I use for foliar feeding?

A: Using a liquid fertilizer that has a low salt index will minimize leaf burn. All PureGrade low-salt foliar fertilizer products have a low salt index and are safe for most foliar applications.

Q: Can PureGrade products be mixed with Roundup on Roundup Ready® soybeans?

A: Yes. Monsanto recommends that NPK fertilizers being mixed with Roundup® should contain at least 10% P_2O_5 and 8% K_2O and they should contain no more than 0.01% aluminum, calcium, chloride, iron, magnesium, manganese and zinc combined. PureGrade Diamond products meet these requirements.



FOR MORE INFORMATION

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