



Leaf Feeding Vs Foliar Feeding

Why Foliar Feed

Studies have shown that foliar feeding is an efficient way to apply nutrients. Foliar feedings high efficiency comes from the fact that nutrients are absorbed by leaves and above ground plant parts. This is an additional way of providing nutrients, and help overcome any stress problems associated with root nutrient uptake.

Foliar feeding solves many “internal stress” problems. Internal or physiologically induced stress occurs at critical growth periods when nutritional supplements are needed to optimize production. Examples of internal stress can best be seen during the reproductive cycle when the presence or absence of nutrients, can make a significant difference in a crop’s level of success.

During bud formation, and maturation, plants exhibit a high demand for certain nutrients. The roots often have difficulty supplying the full amount all nutrients necessary for optimal set and development of the crop. Foliar applications of the appropriated nutrients in proper ratios and form at these critical times can help maximize crop yield and quality.

Leaf Feeding vs Foliar Feeding

When I talk about “Leaf Feeding” Vs “Foliar Feeding” I am referring to two very different applications of foliar fertilization.

“Leaf Feeding” is the use of foliar fertilizer to enhance the overall nutrient level in the plant and increase sugar production during times of stress.

This form of foliar nutrition does not address any specific nutrient deficiency but supplies a small amount of all nutrients to keep leaf growth lush. I use this feeding during time of stress (ie drought) or to stimulate new root growth on small transplants. This feeding program is not designed to correct deficiencies and is done by using inexpensive products such as 20-20-20.

“Foliar Feeding” on the other hand uses products with higher specific analysis and is designed to address specific deficiencies that have been identified. For example if our soil analysis suggests that Manganese is low or deficient an early pro-active application of Manganese will supplement Manganese levels not obtainable from the soil or soil fertility program.

In any case foliar fertilization is more beneficial if used before plants exhibit the deficiency as a pro-active application based on analysis and history of the field and crop. They are also more beneficial if targeted prior to the nutrient demand time before the nutrient drops into an actual low level.

If foliar fertilizers are used in a pro-active manner they will provide a good source of the element to the plant before the nutrient stress causes yield or quality problems.

Foliar Product Performance

Tank water pH and the pH of the material you are spraying will also have an effect on the efficiency of these foliar products. A pH of a material that is < than 2 means that it will have a faster leaf uptake and move into the leaf quickly for rapid nutrient response. However these materials can be a little more toxic in severe conditions (ie times of stress or during bloom etc.). As pH of the tank water of material increases the rate of uptake by the plant is reduced but they are also less phyto-toxic to the plant.

Materials with low pH will buffer down a spray tank in most cases and when applying some fungicides and insecticides that are pH sensitive they become an effective way to reduce the tank

water pH along with supplying a necessary foliar nutrient.

The Use of Additives

Additives such as Stickers, Wetting Agents, Absorption aids and Suspending agents are usually already in most formulated products and you may not need to apply more so read the label. These products are designed to help the uptake of foliar products and each will perform a specific function.

Stickers – To enable the product to hold on the leaf during rainfall.

Wetting Agents – To enable the product to spread over the leaf area more efficiently.

Absorption Aids – For more efficient leaf uptake

Suspending Agents – For consistent distribution of elemental particles.

