



# Foliar Fertilizers Increase Vegetable Growers' Options

*Sometimes, they provide best way to meet nutritional needs of a crop.*

by Donna Harter Raab

“**T**he nutritional needs of a particular crop, in a specific growing season, can change almost as quickly as the weather. In fact, many of these changes can be linked to the weather. That’s one reason crop advisors at Chemical Dynamics in Plant City are educating growers about the optional and flexible uses of foliar-applied nutrients.

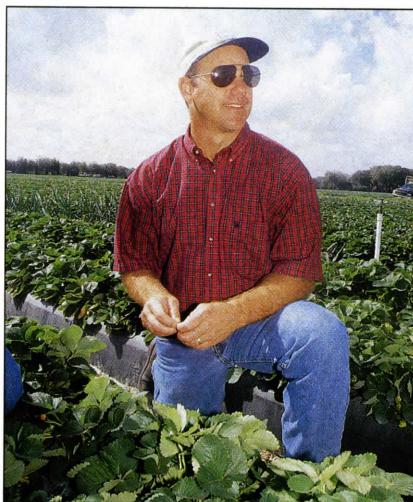
Kenneth Parker, certified crop advisor for Chemical Dynamics, says many vegetable crops can benefit from foliar-applied nutrients, whether for replacement or supplemental needs.

“During times of heavy rainfall, dry preplant nutrients are often washed or leached away,” he said. “No matter how many pounds of fertilizer you put on prior to planting, it won’t do any good if the roots can’t get at it. In situations such as these, a foliar application may be best.”

## Remains On Plant

One product Parker often recommends to help replace or supplement necessary nitrogen is liquid DynaZone® N28. DynaZone contains a patented combination of urea-triazone developed by Tessenderlo Kerley, Inc. This unique triazone molecule is designed to be broken down slowly by bacteria and enzyme action.

“If you’re going to spray a nitrogen source, you need to spray one that is going to stay on the tissue. Urea-triazone-based nitrogen was designed specifically for foliar application,” explained Parker. “The slow-release activation enhances absorption and allows more fertilizer to be utilized where and when it’s needed, without danger of leaf burn. Other sources are available, but I haven’t seen one as effective. The urea-triazone in DynaZone doesn’t dissipate into the atmosphere, and every crop



**Kenneth Parker, certified crop advisor for Chemical Dynamics works with growers in the field to help them with plant nutrition.**

you spray is going to get the full benefit of added nitrogen.”

This makes economic sense, but Parker said it is also environmentally friendly. “We try to use and recommend best management practices as established by the major universities,” he said. “As part of that, it always makes sense to limit ground-applied nitrogen whenever possible to help avoid ground-water contamination.”

## Jump-Start Vegetables

Parker recommends replacement or supplemental foliar nutrients be added only if tissue samples warrant it. Examples of crops and situations that can benefit from well-timed foliar applications of urea-triazone nitrogen solutions include beans, cucumbers, melons, young peppers, and tomatoes.

“We see dramatic results when used on young pepper plants,” said Parker. “In general, we put on about a gallon of DynaZone N28 per hundred gallons of spray solution. This concentration is easy on the plants,

and it works well when used around transplanting time. We use it on 4-acre fields and in 400-acre operations.” He added that this liquid product is compatible with most fungicides and insecticides, and can be easily added to the first few cover sprays after transplanting.

Darryl Williams of D&K Farms, about 30 miles east of Tampa, said foliar fertilizers serve numerous functions on his vegetable farm. “A lot of my ground isn’t irrigated, so I have to keep a close check on my spring and fall beans,” he said. “I put down dry fertilizer, but if the beans don’t appear vigorous, I apply N28 to the foliage to help give them a jump-start. Afterwards, they seem to develop a root system faster and take off better. When they’re lush and beautiful, I know I have the right amount of nitrogen.”

Williams said foliar applications of N28 also help when double-cropping on plastic mulch. After harvest, he mows off the spring pepper crop, and uses the same plastic to plant cantaloupe. “When you’ve had plastic lying there for so long, it’s tough to make a second crop. In past years, my cantaloupe would just sit there and turn yellow. I finally started spraying with N28 to jump-start it. They greened up and started developing a root system capable of searching for other sources of moisture and nutrients. I keep a close watch on the crop, and if I see any discoloration or lack of growth, I just give them another shot of liquid fertilizer.”

Williams normally uses drip irrigation to feed and protect his cantaloupe. But after continual rain, this system can actually harm the crop. “After heavy rains, my fields sometimes turn to soup, and all my protective chemicals are washed away,” said Williams. “I’ve found I can mix DynaZone N28 with fungicides and



insecticides, and spray it directly onto the foliage. This saves me time and money.”

## Add Potassium And Sulfur

Foliar feeding is not limited to nitrogen. Chemical Dynamics also offers liquid potassium thiosulfate (KTS®, 0-0-25-17S) for growers needing a convenient way to add potassium (K) and sulfur (S) to their developing crops. Parker frequently recommends various blends containing DynaZone N28 and KTS. He said foliar applications of these specialized blends help tomatoes, pickles, cucumbers, squash, melons, and other Florida vegetable crops.

“KTS is one of the highest, clear solutions of potassium and sulfur you can find. It carries a very low salt level and is safe for plants,” Parker said. “Blends containing DynaZone N28 and KTS not only provide a convenient way to apply three important nutrients in one spray ... they are also effective.” He said this is particularly helpful for farmers in double-crop situations who can’t always apply a preplant broadcast.

“Sulfur is very leachable in our soils,” he explained. “When you’re following up strawberries with cucumbers, you’re going to need extra sulfur. As soon as enough plant tissue is available to receive the spray, you can apply KTS to the foliage without worrying about negative or phytotoxic effects.”

## Practice good management

Foliar-applied fertilizers do give vegetables growers options for certain crops or growing conditions. But, as with any product or method, it takes good management skills to determine when and if they can be effective for a particular situation.

“There is no doubt that nitrogen is one of the most important nutrients for vegetable yield and quality,” said Dr. George Hochmuth, extension vegetable specialist, University of Florida. “Vegetable crops in general are very responsive to nitrogen, but that is particularly true here in Florida because of our sandy soils.”

Hochmuth recommends regular

plant leaf or petiole sap testing to determine nitrogen levels, but he said the method of application is best defined by the circumstances and previous test results.

“There may be specialized situations where foliar fertilizers, especially micronutrients, may be of benefit. For example, in a wet field

where side-dressing is not possible, or on certain leafy crops. However, I think growers should first test these products and methods on a small scale and measure resulting crop yield and quality. That’s the only way to accurately determine if foliar nitrogen and/or other foliar products can benefit their bottom line.” **FG**

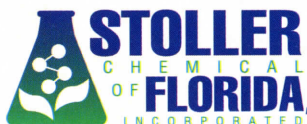
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