

A FRESH LOOK AT FERTIGATION

It's time for contractors to take another look at the economic and environmental benefits of supplying nutrients to living landscapes.

BY **RON HALL** EDITOR-AT-LARGE

FERTIGATION, THE PRACTICE of supplying nutrients to plants through irrigation, is going mainstream with landscape maintenance contractors. Economic, environmental and aesthetic considerations are converging to put it in the property maintenance spotlight.

The higher costs of labor, granular fertilizers and, in many regions of the country, irrigation water, are prompting contractors to investigate fertigation. They're following the path that many golf course superintendents and institutional grounds managers took a generation earlier, finding fertigation to be a more efficient way to create healthy, attractive landscapes.

"Until recently, landscape maintenance contractors hadn't recognized the huge potential of fertigation for their businesses," says Michael Chaplinsky, Turf Feeding Systems, Houston. "It's getting their attention now that everybody in the industry is looking to address landscape quality issues while reducing inputs — in particular fertilizers and pesticides. Contractors are looking for ways to increase efficiency, too. I'm getting more calls every day from large landscape maintenance companies and irrigators."

Labor saver

Chaplinsky, whose company has been supplying fertigation equipment worldwide for more than 20 years, says simple economics — the rise in the cost of dry fertilizer and the cost of labor

required to apply it — is one of several drivers for the newfound interest in the practice of delivering nutrients to turfgrass with irrigation water. Contractors maintaining sizable properties can save considerable expense and get better results by "fertigating" the common areas (a streetscape in an HOA, for example) and freeing up manpower for the smaller areas of a property that require more intensive maintenance.

"It's a huge labor saver for the

contractor, especially on large commercial properties," adds Darin A. Brasch, national sales manager for EZ Flo, a Sewickley, PA-based fertigation equipment supplier. "For example, it was taking a company in San Diego four days using seven employees to feed one commercial property. One employee can feed 20 properties in a single day with fertigation. Basically, he just travels to the sites and fills the tanks."

Better water

Another consideration is environmental as well as economic: the growing concern over the availability, quality and cost of fresh water. All three factors are addressed by fertigation, say proponents of the practice.



Bob Knapp and Nadja Galadram see the benefits of fertigation.

“Everybody is talking about water conservation, but I think the conversation should focus on water efficiency, on improving the efficiency of water,” says Chaplinsky.

He maintains that with fertigation, using tiny, regular doses of NPK fertilizer mixed with humates and other organic products in the irrigation water promotes healthier, more stress-resistant landscape plants, including turfgrass. Plants that grow in soils with beneficial microbes fostered by fertigation require less water and fewer chemical inputs to survive stresses and still remain attractive, he says.

Nadja Galadram, owner of Let's Grow Soil Lab, Yelm, WA, has seen the results, and agrees. Acting as an eco-consultant and working with grounds professional Bob Knapp at the State Farm DuPont (WA) Operations Center site, Galadram has seen steady improvement in the biological activity of the soil there since instituting a more holistic approach to maintenance several years ago. Her strategy includes using fertigation to supply plants with nutrients, microbial inoculants and organic substances that she has used to increase food crop health in eco-agriculture.

“This February I did eco-soil tests there,” says Galadram of the 13.5 acres of turfgrass at the site. “I took 6-in. soil samples under the turf and found about three earthworms in every spot. Using a variety of strategies, we’ve improved what was a dead soil, and we’ve seen its cation exchange capacity (CEC) go up, up, up over five years. Soil particles can now hold onto and use those nutrients that roots and soil microbes need the most.”

“Plants will only take in what they need, when they need it,” adds EZ Flo’s Brasch. “This is a very efficient way to fertilize plants, whether they’re trees, flowerbeds or turfgrass.”

A better way

Proponents agree that fertigation is an especially efficient way to get nutrients to plants and build plant root mass because the relatively tiny amounts of

BENEFITS OF FERTIGATION

► **Water conservation:** The U.S. Environmental Protection Agency (EPA) says that more than 50% of water used to irrigate landscapes is wasted, and provides no benefit whatsoever to landscapes. Micro-fertilization applied properly through fertigation, using micro amounts of fertilizer in combination with proven organic additives, promote root growth and strength. A deeper, denser root system uses water and nutrients more efficiently.

► **Reduced labor expenses:** Light feeding through fertigation will control plant growth rate, and the injection rate can be adjusted down to keep the growth rate to a minimum while maintaining rich plant color. This will allow mowing intervals to be set as far apart as possible, and prevent the necessity of hauling off excessive cuttings, which can be costly.

► **Improved turf quality:** Light and continual feeding improves the health and appearance of the landscape while avoiding surge growth. Why would anyone, especially a maintenance contractor, want the grass to grow so rapidly that they have to mow more than once a week, especially in the spring when it’s difficult to keep up with the work? In addition to labor cost, think of the extra clippings — not to mention the emissions from the maintenance equipment when over-fertilized lawns grow too fast.

► **Reduced pesticide use:** A healthy landscape is more resistant to disease, insects and weeds. This is possible through fertigation. The best way to force weeds out is by having thick, healthy turfgrass. Insects and disease attack plants that are succulent or stressed. Keeping plants healthy in their optimum growth with thick cell walls also minimizes sources of stress.

► **Reduced non-point-source pollution (NPSP):** Studies have shown that plants never get to use much of the granular fertilizer applied to landscapes, and this is especially true when consumers fertilize their own properties. Property owners often do not read fertilizer labels, and when they do, they tend to put down too much — reasoning that if a little bit is good, more is better. Some unused fertilizer leaches through the soil. Fertilizer that ends up on sidewalks or driveways is eventually washed from the property by rain and ends up in streams, ponds and lakes. Applying small — in some cases, micro — amounts of fertilizer with irrigation greatly reduces the likelihood of NPSP.

fertilizer and organic products applied with irrigation is absorbed by the plants’ leaves, stems and roots. Because so little is applied at a time, there’s little chance for build-up of nitrate salts in the soil or for fertilizer runoff and non-point-source pollution, adds Brasch.

Converting a sprinkler irrigation system into a fertigation system is relatively easy and fairly inexpensive. Experienced irrigators should have no problem retrofitting most systems, which entails installing liquid fertilizer tanks into the main irrigation lines, and an injector

pump into the irrigation control panel. A backflow check valve keeps nutrients out of the drinking water supply. The injector pump, which can be calibrated depending on the specific fertilizer used, monitors the rate of flow of irrigation water. Fertilizers can be applied separately or combined for a specific blend.

But, in the end, property owners aren’t as interested in technology as they are upon results, a beautiful property.

“Most people don’t want an irrigation system. All they really want are green plants,” says Chaplinsky. **LMM**

Fertigation cuts down on labor and water use.

