written out so that you can refer to it," Pichan says.

Also, Pichan makes it a point to remember that people want to know how long you're going to be working with them. Then, find someone who knows how to do training, and expect to dedicate six months to a year to getting them to the next level. Generally, Pichan says the trainer-trainee process involves four steps:

1. I do it, you watch me do it, and I tell you what I'm doing.
2. I do it, and you tell me the steps I'm taking.
3. You do it, you tell me what you're doing.
4. You go out on your own, but I stay in contact with you so I can see how you're making it because I want you to be successful. "Each new responsibility requires training," Pichan says. "The number one problem in every company is the desire to give away responsibility without giving training to get people to the point where they can really do the task."

Training, as Pichan says, is an investment, not a cost. — Daryl Pichan

---

**Fertilize Through Your Sprinkler System with ...**

**the FertiGator**

**Automatic Lawncare Systems** For Precise Fertilization by Zone

- Beautiful, healthy lawns and gardens
- Inexpensive
- Easy to install
- Uses any liquid fertilizer
- Designed to be safe with any backflow preventer

The FertiGator brings the benefits of fertigation to all types and sizes of residential, commercial, municipal and sports turf properties.

SIGN UP for our Contractor Success Program and receive free marketing and technical support. Call Rick Bradley at 1-877-337-8442 ext 9 or visit our website for more details.

www.fertigator.com

Circle 127
WE STARTED INVENTING IN THE 19TH CENTURY.

Admittedly, we're obsessed. For 165 years, we've scratched our heads over how to improve plows and tractors.

And if computers had existed back in the 19th century, we certainly would have considered harnessing the semi-conductor sooner.

But now, here they are: The first compacts available with electronic transmissions and controls. The 4000 TEN Series.

eHydro™ electronically activated pedals are up to 70 percent easier to push than before.

A LoadMatch™ power management system makes stalls almost impossible. Cruise control is speed-sensing (plus has accelerate/decelerate and resume features — just like your car).

New SpeedMatch™ and MotionMatch™ systems allow functions never before possible on a tractor this size.

In fact, there's so many new features, you honestly need a test drive to appreciate them all.

Your John Deere dealer would love to show you (or provide an onsite demonstration) what's next in tractors.

No ad can do them justice.

We've never forgotten the lessons learned over more than a century and a half: That there's no substitute for real-world tests, for rugged components and customer feedback.

The TEN Series survived three years of intensive customer evaluations and rigorous field tests.

THE WORLD'S FIRST 4000 TEN Series ROPS meet new SAE, ASAE and OSHA standards.

The optional iMatch™ hitch. Try it once and you'll be hooked. Simply back tractor up, and slide on PTO shaft.

Nine Tractors. Three chassis sizes. Four years in development. Over 120 improvements to the previous-generation 4000 Series models.
LABOR-SAVING DEVICES AND HAVEN'T STOPPED.

COMPACTS WITH ELECTRONIC TRANSMISSIONS.

New low-effort electronic controls are located right at your fingertips, and grouped in a convenient console.

After initial installation, Quik-Park™ Loaders (and Backhoes) can be attached and detached in four minutes or less.

New LoadMatch™ hydrostatic transmission: Torque is always maximized. Response is instant. And stalling? Almost a thing of the past. The transmission automatically adjusts to engine output, maximizing productivity.

New Frontier™ implements fill out an already comprehensive line-up of landscaping tools. Include landscape rakes, core aerators, pulverizers and more.
The battle to secure and keep lawn care customers never stops. For a contractor, there’s nothing worse than spending money and time to land a new customer, only to lose others because of employee and/or service problems.

Fertigation systems are the perfect employees. They show up every day and always follow your instructions to the letter. You simply supply the fertilizer and other products you want to deliver. This not only saves you labor on each lawn, it also reduces your labor headaches and the risk of losing customers to poor performance.

Fertigation is the process of delivering small amounts of fertilizer each time you water, creating a consistently nutrient-rich root zone. The water carries the nutrients into the ground. It offers several advantages over the traditional practice of applying significant amounts of liquid or granular fertilizer several times a year, the biggest being that it produces healthier plants that are less likely to be stressed by diseases, insects or drought.

Fertigation was developed for agriculture in the 1960s and began finding widespread use on golf courses in the 1980s. The nursery industry embraced the technology early in its development, and now almost any operation of any significance uses it. More recently, fertigation has been gaining increased favor in providing improved turf quality on athletic fields.

Feeding turfgrass and landscape plants with in-ground sprinkler systems offers hard-to-ignore benefits

Lawn care professionals, whose livelihood depends on caring for residential and smaller commercial properties, have until recently never had an effective and affordable fertigation product available to them. Several manufacturers are now designing products that can provide reliable fertigation to residential properties. They’re addressing some of the problems that have slowed the growth of fertigation of residential properties, including:

   Residential properties are complex in design, especially higher-end properties likely to be interested in fertigation that may have grass, gardens, shrubs and occasionally plants like roses that require special treatment. Gardens require different amounts and, sometimes, different types of fertilizer than turf. Grass frequently has a hard time getting established on hillsides. Roses require low flow-rate drip systems.

Water is occasionally diverted from the sprinkler system to serve misting systems or water features, like ponds or waterfalls. One doesn’t want fertilizer in misting systems or waterscapes.

Properties are usually undulating, with creative hills, slopes, valleys and landscaping. They also have large front yards, small side yards and large backyards, shady and sunny areas, sidewalks, driveways, houses, trees and the like that make them different from 40 acres of corn, a golf course or football stadium. Each of these areas has to be cared for properly and, in most cases, differently from the others.

Three types

There are essentially three types of fertiga-
Installation and maintenance of residential fertigation systems is relatively simple.

Hillsides, shady areas, newly seeded areas, front yards and backyards. It is excellent for drip systems required for a rose garden, and various versions can even allow different products to be delivered to different

continued on page 26

The thing practically crawls up walls.

This may very well be the most versatile tractor line on the globe. To be versatile, you've got to do two things: be agile and be user-friendly. Lots of old guard tractors are so big and clunky that they're hard to maneuver. Yes, they're durable, but difficult. Options can cost you.

Carraro tractors offer a unique array of ergonomic and operational functions built in, and are engineered for simplicity, comfort and increased return on investment.

A patented system called 'Actio' in all Carraro tractors lets the chassis articulate to all terrain types and each wheel independently grips the ground for superior balance and stability. The center of gravity is so low that it virtually hugs the turf. Each wheel being the same size means you get equal ground pressure on all 4 wheels, all the time.

Other neat features include a completely reversible seat and control system that changes direction in seconds, loads of attachments that mount from, back and even on top, as well as powerful, yet fuel minimizing, engines that help keep operations costs down.

Recently, Carraro was honored in the "Best of Specialized" category in the international Tractor of the Year competition. So you know quality and engineering are high priorities at Carraro as well as value pricing.

Call us for our free video and more details.

Redexim Charterhouse
Redexim Charterhouse Inc. 950 Sathers Drive Pittston Township, PA 18640 1-800-597-5664 Tel: 570-602-3058 Fax: 570-602-3060 www.redexim.com
areas. It can also skip a zone to miss a misting system or other water feature. It is versatile enough to use any liquid fertilizer, although the company sells organically-based fertilizers that work well.

Selling fertigation

For homeowners who have already bought into the concept of automatic watering, the leap to automatic fertilization is an easy one. There are several benefits of fertigation that justify it to the property owner.

A fertigation system delivers healthy plants that resist disease, weeds, insects and other problems naturally. Grass is one of the most aggressive plants in the yard. If the grass is healthy, weeds will not be able to get established. No fluctuations, no burning or streaking, no flush of green that results in hay fields; just nice, consistent, green growth. Leave those clippings to make the grass even healthier.

Fertigation decreases water use, according to an article in Irrigation Business and Technology magazine (January/February 2001 issue, “Using Every Last Drop”). Deeper root systems reach water throughout the root zone rather than only that which remains in the top couple of inches. As a result, less water is required.

Every homeowner that considers a fertilizer injection system has bought into the idea that it’s more convenient and productive to automatically water his or her grass. Thus, it’s easy to go to the next step of convincing them to automatically feed their lawn.

Today, everything is automated, from the garage door to the television to the dishwasher. Fertigation is the next logical step after irrigation. L.M.

— The author is Professor of Irrigation Management, Lake City College, Lake City, FL.
Wipe out mites for up to 28 days with a single application of Floramite® miticide. Floramite gives you quick knockdown and unparalleled control of a variety of destructive mites in all life stages - including tough two-spotted spider mites. And because Floramite features a unique mode of action and highly selective activity, it's easy on predacious mites and beneficial insects. Economical and user friendly, Floramite is safe on all kinds of ornamental plants, and has a short 4-hour REI. Get control no other miticide can match - up to 28 days/all life stages - with Floramite. Now registered in all states.
Chicago Central Medians
2001 PGMS Grand Award Winner for Public Works Sites

What started as a way to provide work experiences for the homeless has turned into a $3.5 million venture for the non-profit Christian social agency, Chicago Christian Industrial League (CCIL). It all started in 1993 with a three-year, $350,000 contract with the City of Chicago for landscape care. With the addition of many new roadway medians to Chicago in 1996, CCIL expanded its maintenance operations on several high visibility areas located within the city.

The Central Business District contains 16 major roadway medians with more than 17 miles of plantings, 167,000 sq. ft. of planting beds and 865 trees. Harsh winters, hot summers and pollution take their toll on these plants, and many locations have specific needs and require constant maintenance.

Because most of the maintenance work is done on highway medians, workers must observe strict safety rules and wear orange work vests.

Since all of these locations are high traffic areas, safety is a huge challenge. All median work requires lighted arrow boards, orange work vests and safety cones. The heavy traffic also provides plenty of trash for the crew to pick up, and makes sweeping and power washing all hard surfaces a must.

Editors' note: Landscape Management is the exclusive sponsor of the Green Star Professional Grounds Management Awards for outstanding management of residential, commercial and institutional landscapes. The 2002 winners will be named at the annual meeting of the Professional Grounds Management Society in November. For more information on the 2001 Awards, contact PGMS at:

720 Light St. • Baltimore, MD 21230 • Phone: 410/223-2861. Web-site: www.pgms.org
What started in 1993 as a $350,000 venture to provide work experiences for the homeless has grown to a $3.5 million operation directed by the non-profit Chicago Christian Industrial League. Workers maintain 17 miles of plantings and 865 trees on highway medians and other high visibility areas in the City of Chicago.
Irrigation’s changing face

The trends that will determine how you will soon irrigate your customers’ properties

BY BRIAN E. VINCHESEI

Water conservation is a huge issue in the irrigation industry. Providing products and systems that do more with less water is increasingly becoming the focus of irrigation equipment manufacturers.

Look for equipment manufacturers to accelerate development of technologies such as smart systems, moisture sensors, interactive sensing, remote control and pressure regulation. These types of products will become standard in most irrigation systems.

Smarter moisture sensors

Soil moisture sensors have been around for years but the technology hasn’t changed much. The sensors have required maintenance, removal for winter and calibration for accuracy. This will change. Reliable moisture sensors requiring less maintenance will be developed. Precise watering to match the needs of the plant will be mandated.

Moisture sensors are usually installed in pairs over an area and for each different type of hydrozone. Any irrigation system can potentially have a large number of sensors, increasing the installation costs but saving water. Many of today’s moisture sensors are used to avoid over-watering and function like a rain sensor by “telling” the irrigation system not to water. Tomorrow’s sensors will not only keep the system from coming on but will also tell the system if it needs to come on and when to shut off.

In recent years, irrigation controllers, especially high-end commercial ones, have featured two to

continued on page 32