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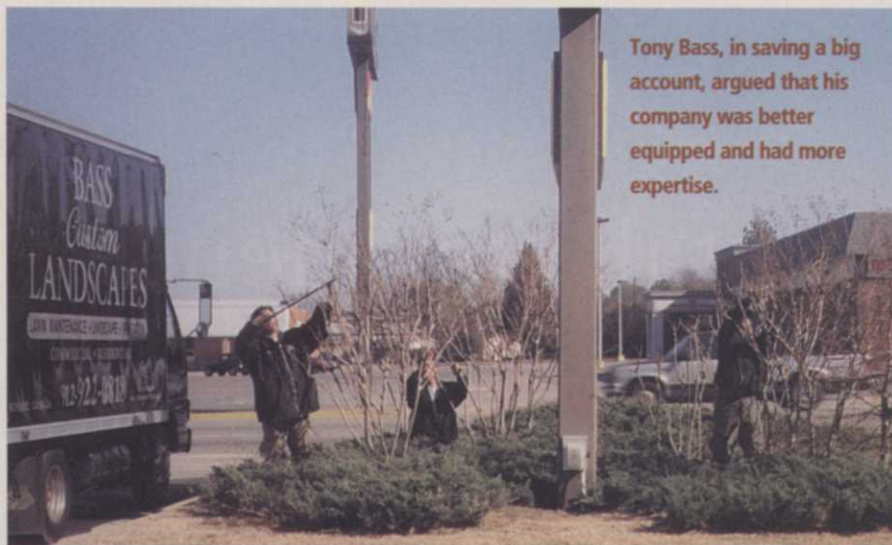
Circle No. 120

solutions center

OPERATIONS MANAGEMENT

The one that got away (almost)

This landscape company owner saved a big contract by crunching the numbers



Tony Bass, in saving a big account, argued that his company was better equipped and had more expertise.

BY JASON STAHL

There's lots of things that can cause a landscape or lawn care company owner to pull his or her hair out, but one of the most stressful has to be watching a big client cancel their contract with no explanation. That's what happened to Tony Bass, President of Bass Custom Landscapes, Bonaire, GA, last year.

The problem: big client cancels

Bass's client had experienced a tough year, and decided to cut the landscape operating budget. "It didn't make a lot of sense," Bass says. "They called and asked us to fax them a copy of their current contract, and two days later we get a fax from them saying

they were going to discontinue our services within 60 days."

Bass immediately called to find out what the client's goals were and to make sure his company hadn't done anything wrong. He was relieved to find out the problem wasn't his company, it was that the client wanted to save money. Still, Bass was perturbed.

"They said they estimated they could save money by bringing the work in-house," Bass says. "I reminded them that the reason they had hired my company was because it wasn't working out for them in-house. We were better equipment and had more expertise."

Still, Bass knew he had to do more than sweet-talk this client.

The solution: cost analysis

Bass decided to work up a detailed cost analysis with the client to figure out if the

client truly was going to save money by canceling the contract with him. Bass asked several questions, including:

- ▶ How many hours are allocated for maintenance each week?
- ▶ What is the average worker wage?
- ▶ What is the cost of your labor burden, specifically a benefits package?

"I told them how much it costs per hour to run a mower and an edger," Bass says. "As it turned out, there was only a \$5,000 difference between what I was getting paid and what the cost would be to them. Then I said, 'You haven't bought any flowers or mulch yet, and your savings are only \$5,000.'"

Then, Bass pointed out that the client still had a full-time person tractor mowing the large areas who had worked there a long time. "I told them that I knew they were loyal to him, but when we had sat down they had told me they wanted to save money," Bass says. "If that's your goal," I said, "then you need to give me the opportunity to price the whole property."

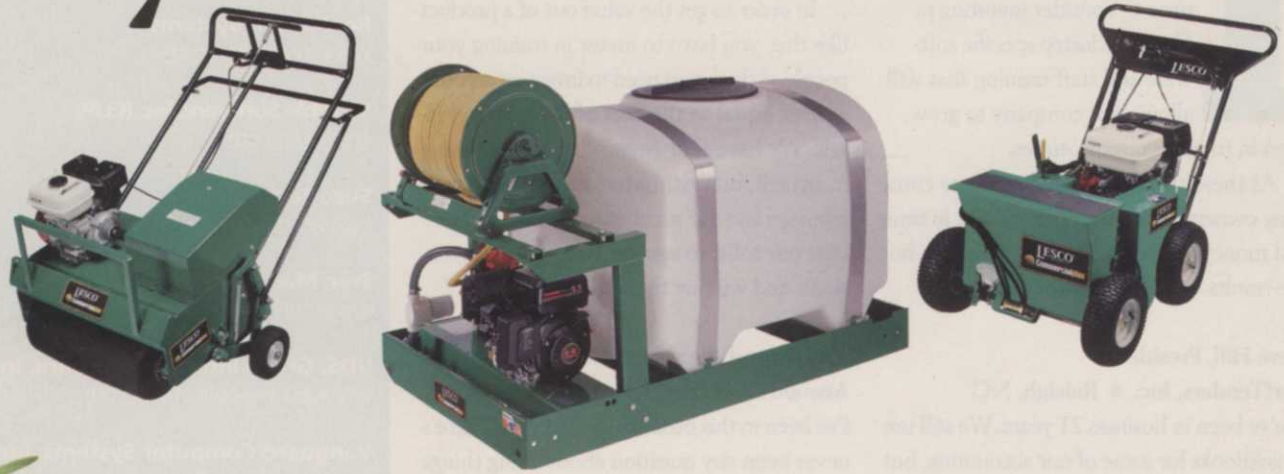
Bass concluded that it would only cost the client \$20,000 a year to add the other services. Two weeks later, the client signed a contract for an additional two years. The total savings to them was \$50,000.

"A simple conversation would have proved my case," says Bass, "but looking at the numbers in a clear, legible format helped."

Bass says he learned two lessons from his conversation with the client who almost walked: 1. Don't always think you can't salvage a contract, and 2. If people want to save money, figure out how to allow them to do it. **LJM**



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Get saved by software

Winter's a great time to upgrade your computer systems and train your staff to make those upgrades pay off

BY LYNNE BRAKEMAN /
ON-LINE CONTENT EDITOR

If your company hasn't upgraded its computer systems in the last five years, it may be time to consider investing in Green Industry-specific software and staff training that will allow your company to grow, even in tough economic times.

As these two landscape/lawn care company owners admit, the up-front cost in time and money will seem like a lot at first — but the results will speak for themselves.

Steve Hill, President

TurfTenders, Inc. ■ Raleigh, NC

We've been in business 21 years. We still use QuickBooks for some of our accounting, but we implemented the CLIP system years ago because it has some great functionality on industry-specific issues.

For example, we have an installation division and a maintenance division. On the maintenance side, CLIP allows us to capture the square footages so we can project the amounts of fertilizer and labor needed. And it allows us to schedule jobs once a year, once a month or once a week.

This is especially valuable for an annual job like irrigation winterization. For each job,

we can input notes about where the device is, what type of clock it has, etc. So, from year to year, you don't lose that knowledge when different personnel perform that task. Those notes also help us when a property changes hands.

In order to get the value out of a product like this, you have to invest in training your people. I think you need to invest an amount at least equal to the cost of the product itself. We have four front office people using it: myself, our estimator, the maintenance manager and our accounting assistant. We've sent our folks to several CLIP training sessions, and we buy the updates.

Tim Doppel, President, Owner

Atwood Lawncare ■ Sterling Heights, MI

I've been in this business for 32 years. There's never been any question about doing things the best we possibly could, so we've been computerized for almost 25 years.

I just crack up when I think back to what we used to use. We used to have Radio Shack Tandy machines with 5.25 in. floppy disks!

About 13 or 14 years ago, we went with the RealGreen system so we could have information at our fingertips that helps us make much better decisions on ordering products and scheduling labor.

We've just started using remote data capture. The technicians use a hand-held device

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Easy with the N

Why slow-release fertilizers can help you eliminate problems caused with turfgrass growth peaks

BY BOB STAIB

The American prairie was once lush in vegetation with no input from humans whatsoever. Intense microorganism activity and consistent turnover of plant and animal residue enabled prairie grasses to flourish. Undisturbed plants had extensive root systems that penetrated to depths of 30 feet or more. In total contrast, modern turfgrass culture is incompatible with the notion of perpetual and natural sustained plant growth.

Unlike prairie grasses, turfgrasses must be regularly groomed for their aesthetic appearance and as a cushioned surface for walking, running and playing. By focusing

attention on optimizing root growth and soil microbial activity, it's possible for turfgrass managers to maintain a healthy turf environment with a significant reduction of inputs.

Frequent mowing and irrigation, combined with nitrogen fertilization, result in growth cycles that interfere with the normal exchange of carbohydrates from shoots to roots, and vice versa. The art of turf management is the ability to maintain a consistent shoot-to-root ratio during the time of year when a particular variety enters its most rapid growth period. Left to their own accord, turfgrasses, like prairie grasses, grow massive root systems that sustain plants through seasons of extreme heat and cold. In cultured turf, root growth is often re-

stricted, resulting in inefficient carbohydrate utilization, translocation and storage.

Steady growth the key

Spurts of growth, or "growth peaks," are the most energy-consuming phenomena in the metabolic cycle of all life forms. Plants derive energy from the sun to manufacture carbohydrates in leaves through the process of photosynthesis. They then translocate the carbohydrates to the roots,

When top growth occurs in peaks and valleys, the demand for carbohydrates is so great that roots will actually lose mass.

where they're stored and drawn upon as needed. When top growth occurs in peaks and valleys, the demand for carbohydrates is so great that roots will actually lose mass. When root systems become unable to store and transport water and carbohydrates, turfgrasses decline. A shallow root system — the consequence of growth peaks — becomes even more vulnerable to rapid deterioration at soil temperatures above 80 F.

A Catch-22 situation

Mowed turfgrass requires a constant, steady supply of nitrogen during the growing season to minimize growth peaks and maintain a healthy root system. This is best accomplished with reserve soil nitrogen from a slow-release source. The shoot-to-root ratio — or the rate of shoot growth compared to that of root mass — should remain 2-to-1 or lower for optimum health and ability to recover from stress. For closely mowed grasses, such as golf greens, this ratio should be closer to 1.5 to 1. Growth

peaks precipitate root decline, and mowing more than 1/3 of top growth further shocks a root system struggling to survive.

Thatch is sloughed-off stem and crown

tissue that accumulates faster than microorganisms can break it down. Unlike leaf tissue that easily decomposes, these more

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TURFGRASS FERTILIZATION

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lignaceous parts of the plant create a barrier to air and water movement into the soil. To maintain color and growth, turf managers commonly use quickly available soluble nitrogen. But the long-term results get worse instead of better. Root growth becomes increasingly restricted and confined to the shallow, hotter layers of the soil profile.

Manage your N

Steady growth with good color and a shoot-to-root ratio of less than 2-to-1 can be accomplished by:

- “spoon feeding” light amounts of soluble nitrogen every 10 days to 2 weeks with no more than 1/4-lb. of N per 1,000 square feet, or

- applying slow-release or water-insoluble nitrogen (WIN) every two to four months. A variety of slow-release nitrogen fertilizer products exist in granular or coated-prill forms. They include sulfur-coated urea, polymer-coated urea, isobutylidene diurea, methyleneurea and ureaform.

Each of the slow-release nitrogen sources will supply a reserve of nitrogen in fertilizer form beyond the immediate

Balanced diet for southern turf

Turf managers striving for ideal conditioning in warm-season turfgrasses should focus on early spring and early summer fertilization. Good soil nutrition at that time of year will encourage a deep and vigorous root system going into the heat of summer. A strong root system is the best defense against stress, and will efficiently transport nutrients and water to leaf tissue to maintain color and rigidity.

The ideal strategy for optimum root growth is to approximate an annual NPK fertilizer program of a 3-1-2 or a 2-1-2

ratio of nitrogen (N), phosphorous (P2O5) and potassium (K2O). This principle applies equally to warm-season and cool-season grasses, regardless of geography. In golf and sports turfs, where clippings are removed, potassium levels equal to or exceeding annual rates of nitrogen will help build turf that's more resistant to wear and frequent mowing.

Soil health is vital

Soil teeming with microbial activity supports vigorous rooting and healthy plant growth. Shifting emphasis from turf nu-



Warm-season turfgrasses should be fertilized in early spring and early summer before high heat sets in.

trition to soil nutrition will ensure that turfgrasses have a healthy, sustained color and growth. A biologically active soil has an abundant population of decomposer microorganisms, including bacteria, fungi, actinomycetes and other less prominent species. As these organisms decompose organic matter — dead plant and animal

needs of the turf. But WIN from ureaform can supply enough residual nitrogen to the soil for release over an entire growing season. Ureaform and methyleneurea release nitrogen through microbial activity while contributing both nitrogen and carbon toward microorganisms' food and energy requirements. Unseen caretakers of the soil, microorganisms are the driving force of the nitrogen cycle.

Ureaform, also known as Nitroform, is used commercially to stimulate microbial degradation of petroleum-contaminated soils. Research at the University of Illinois

tissue — they release a smorgasbord of nutrients and enzymes beneficial to soil and all parts of living plants.

When roots do their thing

During early spring and early summer fertilizer applications to warm-season grasses, it's important to strike the correct fertility balance. Manage top growth for good color, but don't allow such rapid growth that there are excessive carbohydrate demands on the root system. Keep a narrow root-to-shoot ratio by applying slow-release nitrogen sources. A sound fertilizer program with proper watering will not only promote microbial activity but encourage roots to penetrate into the cooler depths of the soil before the severe heat of summer.

Warm-season grasses expend the greater part of their energy for root formation in early spring to mid-summer. Root formation also occurs in mid-fall, but to a lesser degree. Timing fertilizer applications to coincide with these periods promotes a more healthy, stress-resistant turf when other good nutritional and cultural practices are employed.

showed that Nitroform contributed to the least thatch build-up over all other N sources tested. The evidence suggests that well-nourished soil microbes accelerate

decomposition of resistant plant residues to humus.

Liquid nitrogen fertilizer can only be

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considered slow-release if it contains suspended water-insoluble nitrogen (WIN) particles. Liquid products that claim controlled-release nitrogen typically contain a third or more free urea nitrogen. The remainder is soluble monomethylol urea, a "prepolymer" compound formed in the urea-formaldehyde reaction, and methylenediurea, the only polymer formed in the UF reaction that will stay in solution. Attempts to produce and market more complex liquid UF polymers containing WIN have been unsuccessful to date.

Nitroform ureaform is marketed in a powdered form. Known as Powder Blue or powder gray, it contains 69% of nitrogen as WIN. Here are some application tips:

- Suspend 1 lb. of Powder Blue or gray in two gallons of water with good agitation.

- Or, suspend 1 lb. of either product in one gallon of water with strong agitation and a suspension agent such as Kelzan-S or Flozine.

- Use flood-tip nozzles or showerhead nozzles with holes a minimum of 9/37-in. diameter for good delivery of a ureaform suspension.

- Remove screen filters to help prevent a backup of solids during application.

Liquid application advantages

Though reacted-urea fertilizer solutions don't supply residual nitrogen, they do exhibit a greatly reduced burn potential over prilled urea or urea solution, which is the

principle advantage of their use. They work particularly well in fertigation systems. They require little additional water to effect an even distribution. Nitrogen is released rapidly, mostly by chemical hydrolysis, though there may be slight but rapid microbial conversion of methylene diurea to the ammonium (NH4+) form.

Liquid application disadvantages

Disadvantages include:

- Leaf tissue has a strong affinity for monomethylol urea and methylenediurea. Where clippings are removed, considerable nitrogen fertilizer could be removed with them. Rinse the treated area with clear water as soon as possible, and don't collect the clippings for at least two mowings.
- Larger, more expensive application equipment is required to carry and accurately apply liquid fertilizer. A good spinner applicator can cover the same area with granular products just as fast with minimal downtime due to wind.

- Applying 1 lb. of nitrogen per 1,000 sq. ft. from urea or reacted urea solutions will nearly always result in excessive growth for one to two weeks. The more soluble nitrogen available to the plant, the more water it takes to satisfy the demands of new growth. Applications of no more than 1 lb. of N from liquid nitrogen (all sources) per 1,000 sq. ft. at two-week intervals will avoid growth peaks that contribute to root mass decline.

Potential for leaching and volatility loss of nitrogen is significant when nitrogen is applied as a soluble liquid. Several research projects have shown that ureaform resists leaching and volatilization. In fact, N loss is nearly insignificant in sandy soil.

Summary

Peaks and valleys in turfgrass growth cycles contribute to root mass decline and thatch build-up. Slow, steady growth promotes a dense turf with a greater root mass in the

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