Piedmont TURF
MAIDEN, NC

Newsletter

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Spring 2000

FROM DAVE'S DESK:

We have all reached the new century, survived another winter, and today, are gearing up for another growing season. We wish you much success in your business endeavors.

Last February, Sherri and I attended the Turf Producers International (TPI) winter conference in San Antonio. Everyone there was talking about water or lack of same. Many parts of the country are facing water shortages and North Carolina is not exempt. Some areas of our state are affected more than others, and water shortages could pose even more of a problem for us in the future than they have to date.

With this in mind, Piedmont Turf is starting to grow more warm season grasses. This family of grasses (Bermuda, centipede, St. Augustine, zoysia, etc.) generally require much less water to establish and maintain. Bermuda and zoysia do especially well in our climate. We can already supply your Tifway 419 Bermudagrass needs. Last summer we planted two newer varieties of zoysia (Empress and Empire) which should be ready for harvest in late summer or early fall provided we have good growing weather. This year we are planning to plant 15 acres of Tifblair, a new cold tolerant variety of centipede grass. In our summer *Newsletter* I will provide more details on growth habits and maintenance of these varieties.

One other note is related to the high cost of diesel fuel. You may have noticed on recent invoices that we have added a surcharge to cover our higher delivery costs. This surcharge will be adjusted up or down as the current pump prices dictate. We hope it will soon be lower and thank you for your understanding in this matter.

Watering Turfgrass: Uses and Abuses

"We have met the enemy, and he is us."

In the semi-arid regions of the U.S. plains states, grasses are the dominate vegetation; trees and shrubs grow best in higher rainfall areas. "The point is," says Ecologist Dr. James Beard "many turfgrasses, both natural and naturalized, are quite low water users."

Having reviewed what he calls "worst-case water-shortage" scenarios conducted by university research teams, Dr. Beard reports that many turfgrasses display exceptional drought resistance qualities.

Dr. Beard's conclusion: "these and other studies show it's man's decisions and watering methods that create a high water use rate in certain turfgrass species, not the plant itself."

In the words of Pogo: "We have met the enemy, and he is us."[1]

[1] *Walter Kelly's comic character, Pogo, said this in an illustration on the 1971 Earth Day poster.*

WATER SHORTAGES: What About the Green Industry?

Population growth brings a demand for increased water supply. Equitable solutions seem particularly difficult to identify when water supplies are not great enough to meet the need. Is it possible to make equitable agreements between water-rich and water-poor areas for water storage and delivery infrastructure that are not prohibitive in cost, or that satisfy environmentalists?

People used to think that the demand for an increased water supply was one typically found in the western United States, not here in the Southeast. Even global water supplies are being impacted by increased demand for water and by weather patterns. In recent years, more people have become acutely aware that it can happen here. In North Carolina, we have experienced reduced rainfall in the last few years due to La Nina, and predictions for the year 2000 call for reduced precipitation once again.

Many water conservation efforts have been attempted including water rationing, water use ordinances, mandatory watering/no-watering days, and landscape restrictions. Locally, restrictions have been instituted in Concord, Raleigh, Greensboro, among others. None of these efforts have produced long-term water efficiency. Rather, these efforts usually create a significant hardship on the green industry, inequity among water-users, and increased government regulation and public expense.

When Roanoke, Virginia experienced drought during the last three years, I am aware of one nursery and landscape business which closed up shop in December 1999 because watering regulations denied the customer the needed resource to keep plants alive. Now that's hitting pretty close to home!

Water resources are becoming a critical issue today and other options need to be explored, options that make water distribution more equitable to all. Another article in this *Newsletter* presents one possible solution for your consideration.

TURF PRODUCERS AND THE *WATER RIGHT* CAMPAIGN

It didn't take the Water Policy Committee of Turf Producers International long to assess how widespread and serious water shortage problems are today. It didn't take the International Turf Producers' Foundation long to agree to raise and supervise the expenditures of a half a million dollars to support water-related research and education for a *Water Right* campaign to be conducted over three years.

Areas of research have been identified and include improved water application techniques for farms and landscapes; water-use rate determinations for grasses and landscape plants; establishment of minimal water requirements for grasses, and the inter-relationships between agronomics and maintenance practices on water. This year alone four water-related research projects will focus on water-use rates, comparative drought resistance, minimum irrigation requirements and rooting characteristics.

Educational materials are being prepared for presentation for public officials and water agency personnel that focus on the positive environmental and economic benefits of turf-water use. Additionally, handbooks on water conservation in the landscape, and turf-friendly landscape ordinances, etc. will be prepared for wide distribution.

We are proud of our trade association. In these days of change, and as one of our speakers said, we see our organization as a *fixer,* not a *finger-pointer.* Combined with this support we can provide solutions, not just products, to help all of the green industry.

IMPORTANT NUMBERS TO REMEMBER

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WATER EFFICIENCY: One Option to Water Shortages

Communities have attempted many water conservation measures but none of these efforts have produced long-term water use efficiency without significant hardship to the green industry, inequity among water users, and increased government regulation or a public policy expense. A model exists that has proven cost-effective, business friendly, and scientifically sound. It is based on the theory that price is the only universal motivator to use water efficiently.

At a recent TPI conference and trade show, Tom Ash[1], a Horticulturist and consultant to water agencies spoke about this very issue. He says that increasing the water supply to areas in short supply can be done by building water storage and delivery infrastructure. Yet, this usually involves great cost to the public and creates numerous legal obstacles from the environmental community. According to Ash, the best solution is *Water Efficiency*, a method that can benefit the green industry business, and satisfy public and environmental needs. He offers seven basic reasons to support his thesis:

- *Water Efficiency* is the lowest cost ***new*** water supply option.
- *Water Efficiency* does not require ***new*** public infrastructure.
- *Water Efficiency* is environmentally sensitive.
- *Water Efficiency* can be measured.
- *Water Efficiency* can be equitable, spread across all water users.
- *Water Efficiency* produces healthier landscapes.
- *Water Efficiency* drives ***new*** green industry business.

He pointed out that a model of water efficiency does exist in the Irvine Ranch Water District (IRWD) in Orange County, California. He reports that this option proved to be cost-effective, business friendly, and scientifically sound. The approach to gaining long-term water use efficiency has been a major benefit to green industry businesses there. The IRWD system is now a model for California water agencies and is being studied in Utah and Colorado for community adoption.

Each water customer has a water budget that allocates water to fit his specific needs. Demand factors are determined, such as the number of people, the square footage of landscape area multiplied by the actual daily weather or evapotranspiration rate (ET), and/or, the water needs of the business process. Existing research for plant water needs, together with scientific weather systems/networks can be used to scientifically derive the ET data (computed daily) to insure credibility, accuracy, and eventual success.

The incentive to use water efficiently is the pricing structure that motivates the water user to stay within his water budget. This system is based on the theory that:

- Price is the only universal motivator to use water efficiently.
- People need accurate water use target/budgets to shoot for.
- People need consistent feedback on performance supplied by the water bill.
- Only water wasters pay high water penalties.
- Efficient water users are rewarded with low water bills.

Those customers who are low volume users and use only 0–40% of their allocation are charged ¾ of the base rate; those who use 41–100% of their allocation are charged the full base rate. Penalties for using 101–110% of the user's allocation are 2x the base rate; 111–120% are 4x the base rate; and, 121% and more are 8x the base rate.

Ash reports on the results of the Incentive Pricing on Commercial Landscapes in Irvine:

- There is a 54% reduction in commercial landscape water use.
- Customer costs, with no need to import water, saved $22 million.
- Public agency rebate program for landscape upgrades were awarded $10 million over 5 years.
- Landscape health and appearance increased.
- Increased maintenance improved industry standards.
- Decreased water run-off resulted in less water pollution and erosion.
- Green industry business opportunity increased.
- Adequate water supplies at a low price allowed for continued growth.

Ash concluded his presentation by admonishing the green industry to become part of the solution to water supply/use problems and not one of its victims.

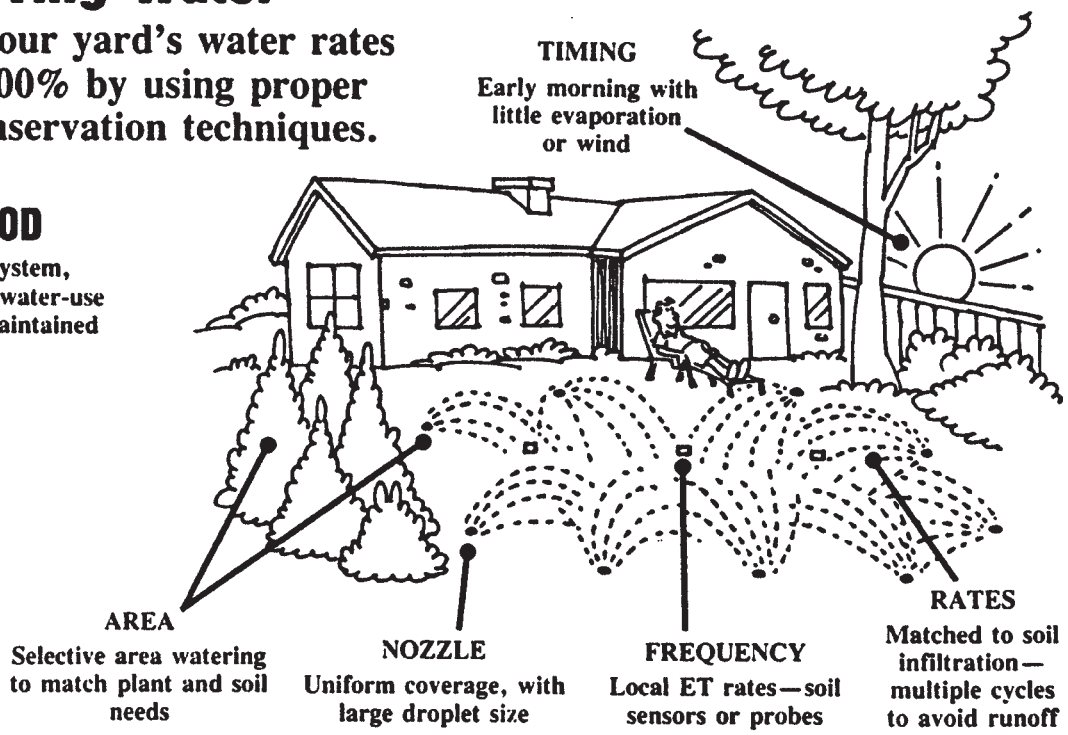
[1]Tom Ash is a Horticulturist for the CTSI Corporation (Consultant to Water Agencies) in Tustin, California. His presentation is reported in TURF NEWS, March/April 2000, page 25.

Conserving Water

Reduce your yard's water rates 50% to 200% by using proper water conservation techniques.

METHOD

Sprinkler system, engineered to water-use zones, well maintained



Wasting Water

METHOD

Hand-held hose