



Newsletter

Fall 2002

FROM DAVE'S DESK

Turf has had many problems during the 2002 growing season. Not only have we had to deal with drought and disease, now we are fighting grubs and fall armyworms. I have been asked many questions about both this year. White grubs can be a problem in turf, but just because you have seen a few does not mean that you have a problem. June beetle grubs are very large and easily controlled with an application of Sevin. Japanese beetle grubs are small and much more difficult to control. The damage threshold for grubs is 6 to 7 per square foot. We do spray for grubs at the farm but the Environmental Protection Agency (EPA) has eliminated all of the chemicals that give good control. Sevin and Dylox are the contact control chemicals left for us to use and neither of these is very effective at controlling Japanese beetle grubs.

On the other hand, fall armyworms are easy to kill. Sevin does a good job on them. Their lifecycle presents an almost never ending problem. Moths lay eggs on the grass blades and the

worms hatch in 2–3 days. The worms then start eating the grass blades and within 7–10 days the worms are big enough to do major damage if the population is large enough. After reaching this stage the worms go underground to pupate. Moths then emerge from the soil and the process starts all over again. The thing that makes armyworms hard to control is that this lifecycle is a continuous process and the eggs are not affected by insecticide applications. Moths are laying eggs every night and so in order to gain control of the situation a spray must be applied at least once a week.

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Questions I Am Often Asked

Question: What are the benefits of using genetic engineering to modify turfgrass?

Answer: Traditional plant breeding is the mechanism that was used to develop the true turfgrasses of today from the original forage grasses. Conventional breeding gave us turfgrasses that did not grow as tall, were more dense, had improved mowing quality and a darker green color, improved traffic tolerance, disease resistance with a tolerance to low rates of some herbicides, to name a few of these benefits.

Genetically engineered grasses (GMG) are those with interesting and novel genes from plant material that were not likely available to the conventional breeder. This is DNA based biotechnology that can put traits or genes into grasses to improve them beyond that which the traditional breeding program is able to do. Today it is possible to find, isolate and use a gene for drought tolerance from a plant that is already adapted to grow with less water. Breeders today

have more tools available for their use and so are able to produce transgenic plants that can survive in a modern turf environment. Grasses today might have a higher level of salt tolerance, herbicide resistance, insect resistance, drought tolerance, resistance to diseases, reduced growth and even color variations, to name a few.

Today, plant breeding is like a genetic treasure hunt in the world of germplasm. Breeders try to scour the world for plants surviving under many different stresses and then incorporate, via crossing, desired traits into turfgrasses. By utilizing biotechnology we simply take the hunt to a molecular level to make the treasure — a plant with a unique trait.

Before we leave this topic we should hasten to add that no GMG's have been developed and approved for market to date. That latter procedure is bound to be an intricate and involved step to assure the public that no new problems are being created through the release of GMG's.

What is Certified Sod?

Why should you insist on *Certified Sod*? Sod certification is not new; Many states have had certification programs for years. Recently, the North Carolina Crop Improvement Association (NCCIA) started a program in North Carolina. Note the enclosed flyer on certified sod from NCCIA.

For sod to be certified, the grower must meet certain requirements established and enforced by the NCCIA:

1. The first of these is a documented planting source.

There are four classes of vegetative and seed planting stock. These are *breeder*, *foundation*, *registered*, and *certified*. Each time a grass or seed is harvested and then planted it drops one class.

- The breeder seed for a new fescue variety is first developed by a commercial seed company or university. It harvests the seed from the *breeder* plots.
- This seed, once harvested, is known as *foundation* seed and is sold to farmers to grow larger amounts of seed which is destined for resale to other farmers.
- The seed harvested from foundation fields is known as *registered* seed. It is harvested and cleaned and shipped to commercial production farmers.

- Seed harvested from their fields is sold to the end user as *certified* seed. If someone harvests seed from a certified planting, that seed would have to be sold as non-certified and the seed bag could not have a certified tag.

The same process is followed when working with warm-season grasses.

2. The second step consists of field inspections conducted by the NCCIA.

The first inspection occurs prior to planting to ensure that there are no hard-to-control perennial grasses, i.e., common Bermuda grass, in that field. If the field is not clean, it cannot be used to produce certified sod. After planting, the fields are inspected twice each year to check for off-type grasses and noxious weeds. If any are found, they are flagged and the field must be treated for that specific problem. In the case of broadleaf weeds, a general spraying of the field will usually control the problem. In the case of off-type varieties of other grasses, several spot sprayings with Glyphosate (Roundup) is required.

In addition to the NCCIA inspections, Piedmont Turf Farm conducts its own inspections to maintain the purity of our fields, and harvesting crews must wash all equipment when a harvester is moved from one field with one variety of grass to another field with yet another variety of grass.

NORTH CAROLINA CERTIFIED GRASS	
<p>CERTIFIED GRASS <small>CERTIFICATION WARRANTY DISCLAIMER</small>  <small>The grass this certificate represents was produced in accordance with regulations of the North Carolina Crop Improvement Association, Inc. This agency makes no warranty of any kind, expressed or implied, including MERCHANTABILITY, or FITNESS FOR PURPOSE OR SUITABILITY, and hereby disclaims any and all liability in connection with the sale of the grass for any purpose or use other than that for which it is intended. The grower or vendor retains all other rights and responsibilities for the information here on and for the proper use of this certificate.</small></p> <p>Kind: _____ Variety: _____ Lot Number: _____ Sprigs: _____ bundles Sod: _____ sq. ft. Bill of Lading/Invoice # _____ Shipper: _____ Field # _____ Harvest Date _____ Grower Name & Address: PIEDMONT TURF FARM, INC 1890 HW FARM ROAD MAIDEN NC 28650</p>	<p>NORTH CAROLINA CROP IMPROVEMENT ASSOCIATION, INC. 3709 Hillsborough St. Raleigh, NC 27607 Phone 919-515-2851 FAX 919-515-7981</p> <p>CERTIFICATE NUMBER 2426</p> <p>The grass this certificate represents has been field inspected and meets certification standards for:</p> <ol style="list-style-type: none"> 1. Varietal Purity 2. Freedom from Noxious weeds 3. Limitation of Generations <p>I certify the information provided is true and meets the North Carolina Crop Improvement Association, Inc. standards for vegetatively propagated grass Certification.</p> <p>Authorized Representative: _____</p> <p>Copies: Original to Purchaser (with each delivery) Pink to NCCIA Office (upon shipment) Yellow retained by Grower</p> <p>MEMBER OF ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES</p>

When you purchase *Certified Sod* it will come with a Blue tag certificate. To ensure you are getting what you pay for insist on *Certified Sod*.

WE Thought YOU'D want to know:

Sometimes there is a time to toot your own horn. We believe this might be the time. Let me tell you about the honors and awards that have been bestowed on David McCart and Piedmont Turf Farm.

In November 2001, David was recognized as the "Outstanding Contributor to Agriculture in Catawba County" by the Hickory Kiwanis Club. "The purpose of the award is to recognize farmers and other agribusiness men who have been successful in their agricultural endeavors while being good stewards of the natural resources they utilize to produce their product."

The citation accompanying the award stated

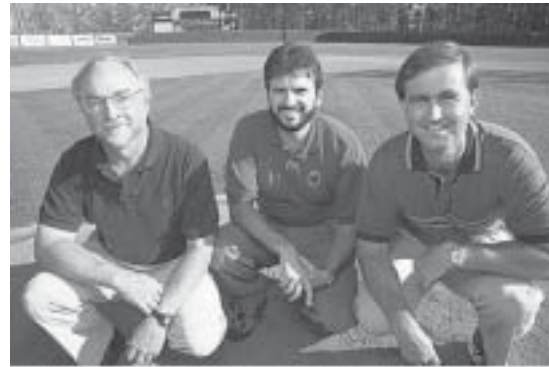
that, "in addition to being a successful grower and businessman, McCart plays an active role in his community and industry." For example, David assumed the office of president in January, 2002 of the North Carolina Sod Producers Association, a trade association whose purpose is to enhance the sod producing industry through education, research, and advocacy. He is currently serving also, as a member of the Catawba County Extension Advisory Council. He is called upon many times to assist with local educational programs on turf production and the optimum maintenance program for grasses.

The Center for Turfgrass Environmental Research and Education

Are you aware that turfgrass is cultivated on 2.2 million acres in North Carolina, much more than any other commodity? Soybeans, occupying 1.3 million acres, is the most widely grown agricultural crop and cotton is next at 800,000 acres. Clearly, turfgrass is significant to the state's economy.

The Center for Turfgrass Environmental Research and Education has been established in the College of Agriculture and Life Sciences, NC State University, to make sure that the turfgrass industry remains strong and to develop turfgrass management strategies that enhance the environment. Environmental research and educational programs related to turfgrass will be funded from taxes on the sale of fertilizer and seed. People other than farmers, who had previously been exempt from the tax, will now be paying this tax.

Dr. Rick Brandenburg, professor of entomology; Dr. Tom Rufty, professor of crop science; and Dr. Fred Yelverton, associate professor of crop science are the new Center's directors. Brandenburg and Yelverton are specialists also with the Cooperative Extension Service. They



*NC State's Dock Baseball Field is just one grassy place that could benefit from the work of Rufty, Yelverton, Brandenburg (left to right) and others at the new research and education center.
(Photo by Herman Lanford)*

will be working with others in a number of other disciplines such as economics, plant pathology, and soil science, etc., to consider the environmental effects of different turfgrass management strategies with the ultimate goal of enhancing the environment.

It is important to keep turfgrass and related industries healthy in North Carolina where they are estimated to be worth more than \$3.8 billion a year. Golf courses, athletic fields, sod farms, lawn-care companies, garden centers and equipment suppliers all depend on turfgrass.

When turf species that are grown are not native to an area, they can be overtaken by natural vegetation if they are not managed intensively. Dr. Yelverton says, "We need alternative strategies for managing turfgrass systems in ways that enhance the environment, and that's what the Center's work is all about."



**Piedmont Turf Farm accepts
VISA and MASTER-CARD**

Are You a Good Water Steward?

The Green Industry needs to become a cohesive group addressing the current water issues.

- 1) Do you know of some places that are attempting to impose some kind of water rationing system (read that conserving!)?
- 2) Do you know of a jurisdiction that is trying to buy water from a water-rich area?
- 3) Compile factual information about water boards and the distribution systems in our own Piedmont area. Prepare yourself and become knowledgeable about your local situation to take part in a larger study of the issue.
- 4) Find out about your local water board, when it meets and where, and plan to observe the Board on Action. Take notes. Introduce yourself to the members and let them know that you are educating yourself about their current problems of water supply, water sources, and the distribution system.

You will be able to contribute a great deal to an understanding of the issue if you understand what happens in your own local jurisdiction and be able to share it with others.

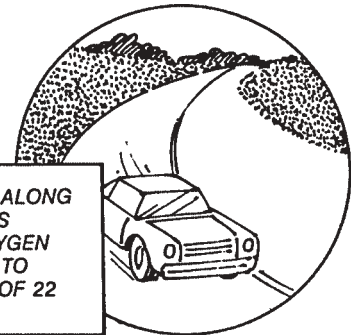
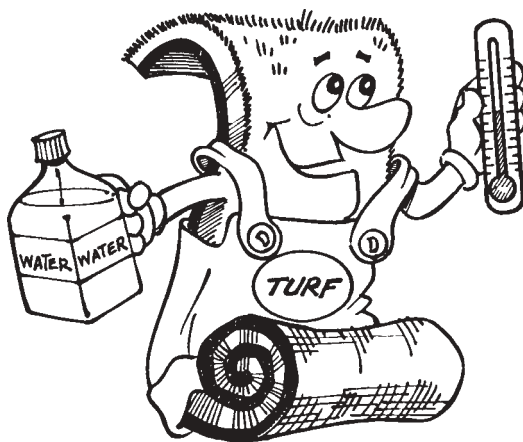
Turf Producers International (TPI) conducted an extensive study on water and produced a book on the findings titled *Water Right: Conserving our Water. Preserving Our Environment*. These books are still available and if you

wish to contact David, he can make arrangements for you to secure one. The kinds of things that have been pointed out in the book are so timely for many, many regions in North Carolina. It probably will not be possible to advocate a new system of distribution during this crisis but we do need to educate ourselves and other citizens about the current problem and the modus operandi of water boards and how they determine the distribution of our water resource. Advocacy of a public policy which is fairer to all



will be needed to fix the problem in the future: Education is what is needed now, education to arm ourselves with the facts about our current problem.

In a mailing in the New Year we plan to send you some Global Fact Sheets containing information gleaned from that book. We suggest that you have a three-ring notebook on hand in which to file these Water Facts for easy reference.



GRASS AND SHRUBS ALONG INTERSTATE HIGHWAYS RELEASE ENOUGH OXYGEN VIA PHOTOSYNTHESIS TO SUPPORT THE NEEDS OF 22 MILLION PEOPLE.