

75 Years of Green Grass at Penn State

By Krista M. Weidner

In 1928 a determined group of turfgrass advocates paid a call to Ralph Hetzel, president of The Pennsylvania State College. Joseph Valentine, the golf course superintendent at Merion Golf Club, T.L. Gustin of Philadelphia Toro, and James Bolton, the superintendent of Reading Country Club, told Hetzel that they wanted the same kind of help for professional turf growers that Penn State was providing to farmers. Hetzel agreed readily and assigned H. Burton Musser, a young red-clover breeder in the department of agronomy, to work half-time on turfgrass.

This was the beginning of Penn State's Turfgrass Management Program — a program that has grown to become one of the finest of its kind in the country. Today nine faculty members from the departments of crop and soil sciences, plant pathology, and entomology, as well as numerous support staff and graduate students, are involved in turfgrass research and education at Penn State. In 2004 the turfgrass program celebrated its 75th anniversary.

It's been said that the sun never sets on a Penn State turfgrass variety. H. Burton Musser and Joseph M. Duich, pioneers in Penn State turfgrass breeding, developed varieties such as Penn-cross creeping bentgrass, Pennfine perennial ryegrass, Pennlawn creeping fine fescue and Pennstar bluegrass, which are found all over the world. Penn-cross, one of the best-known Penn State varieties, is used worldwide on putting greens and tennis courts. It serves as the standard against which all new bentgrasses are compared.

Penn State turfgrass research has contributed to many aspects of athletic field management, improving safety and playability on fields throughout the country. Research on turfgrass nutrition, runoff, weed control and growth regulators and disease and insect management also has played an integral part in the turfgrass program.

From its early days, the turfgrass management program has had a strong outreach com-



ponent. Research field days, initiated in the early 1930s and held every other year at Penn State, provide an opportunity for turfgrass managers from around the state to look at turf selections in evaluation plots and to learn about the results of new research. Penn State turfgrass specialists also participate in annual conferences and trade shows, conduct workshops and produce publications, covering topics such as selecting grass varieties, controlling weeds and diagnosing and managing turf diseases.

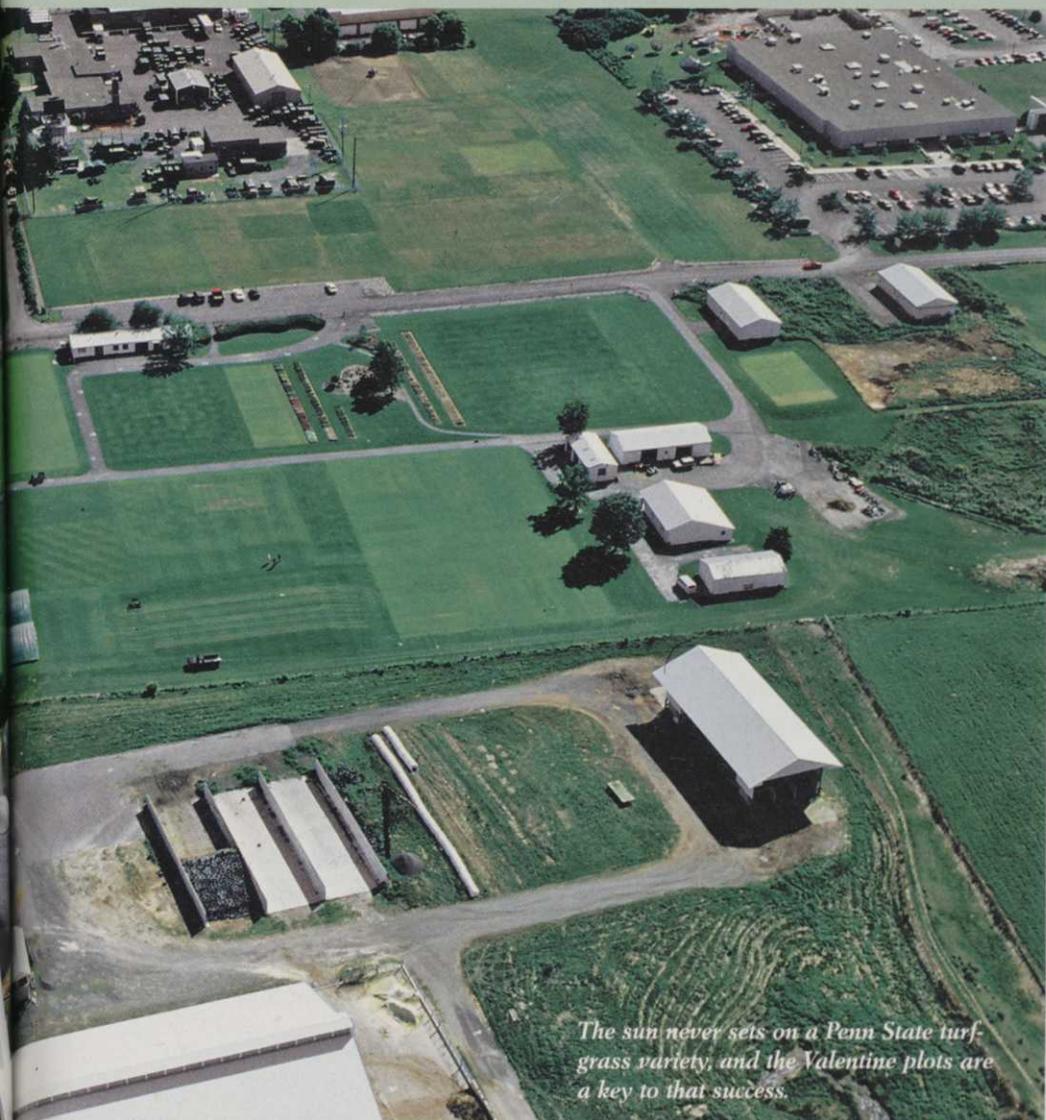
The industry component of Penn State's turfgrass program has been integral from the earliest years. In 1930 Joseph Valentine helped form the Turfgrass Research Advisory Committee, which Valentine chaired until 1955, when the present-day Pennsylvania Turfgrass Council was established.

The PTC is dedicated to the improvement of the turfgrass industry through education and research. Today its membership of more than



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"From its outset, Penn State's turfgrass program has been committed to research directed at finding solutions to problems encountered in the field."

— Al Turgeon

The sun never sets on a Penn State turfgrass variety, and the Valentine plots are a key to that success.

PHOTO BY HOWARD NUERNBERGER, PENN STATE

1,100 represents superintendents, owners/operators of lawncare services, nursery workers, sod growers, athletic field managers and industry representatives. PTC has contributed more than \$2 million to turfgrass research at Penn State and, in turn, professionals in all areas of the turfgrass industry have benefited from the results of Penn State turfgrass research.

Joseph Valentine, known for his early work with the PTC, is also known at Penn State for the unusual relationship he developed with Ralph Hetzel. Every year Valentine would travel to Penn State, and if Hetzel was available they'd have lunch or dinner together. Valentine would tell him about the problems superintendents were facing and the progress they were making. At every turf conference held at Penn State, Valentine gave a report on activities of the Turfgrass Research Advisory Committee.

Others from the turfgrass industry have enriched Penn State's turfgrass program as well.

Tom Mascaro, a mushroom farmer from Philadelphia, took some correspondence courses through Penn State in the 1930s. He also formed an acquaintance with H.B. Musser, Penn State's first faculty member in turfgrass research. In the 1950s Mascaro often accompanied Penn State turfgrass faculty members on travels throughout the country to field days and conferences.

Mascaro, well known as an inventor, formed a lifelong friendship with Eb Steiniger, who was the superintendent at the Pine Valley Country Club in New Jersey. The pair formed a unique relationship, in which Mascaro would create an invention and present it to Steiniger to try out at Pine Valley. "The two of them traveled around together," says Mascaro's son, John. "When my dad had an idea, he'd take it by Eb's course at Pine Valley and show him the equipment. Eb would give him feedback, and from what I understand, he was a pretty good critic."

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In a 1993 interview, Steiniger talked about his collaboration with Mascaro: "Tom was always hanging around our place, bringing some new equipment to try out at Pine Valley. Some of it was really good. We got the whole place aerified, and it didn't cost me a thing because I didn't buy his machine! Tom was very generous with us."

Many versions of Mascaro's inventions are still in use today, including the Aerifier (patented in 1946), the Verticutter (developed in 1952 for removing thatch), and the Vertigroove (designed to remove soil layers on greens and improve drainage). One story goes that when faculty member Joseph Duich asked Mascaro to give a talk to his students in the two-year technical program, Mascaro replied, "Under one condition: For every invention I talk about that worked, I have to talk about two that didn't work." Mascaro, a strong believer in Penn State's education program, provided an Aerifier to James Watson Jr., a graduate student researching soil compaction. In 1950 Watson received the first Ph.D. in turfgrass science at Penn State.

Penn State offers several educational programs in turfgrass. The four-year bachelor's degree program in turfgrass science prepares students for a wide variety of careers in the turfgrass industry, and master's and Ph.D. programs offer opportunities for advanced studies. The two-year Golf Course Turfgrass Management Program, established in 1957, is for those interested in becoming superintendents.

Penn State's online World Campus is another option for students who want to earn credits through distance learning. These programs have graduated thousands of turf managers who can be found in the industry throughout the world.

The highly competitive two-year program is well-known for turning out quality superintendents. From 1992 until 2004, the two-year program ran under the direction of George Hamilton, who passed away in July 2004 after battling cancer. Hamilton also taught courses in cultural turfgrass management and golf course specifications, construction and renovation. He conducted research in turfgrass management and developed and evaluated new technologies for the turf industry.

Most notable among Hamilton's research accomplishments is the invention of PennMulch, a commercially successful mulch made from recycled newspaper that retains moisture and warmth in the soil. Hamilton contributed much to the program and is sorely missed, both in the college and in the turfgrass industry.

"From its outset, Penn State's turfgrass program has been committed to research directed at finding solutions to problems encountered in the field, and to educational efforts to share knowledge with students and constituents in the industry," says Al Turgeon, professor of turfgrass management.

"Today this commitment is as strong as ever and the

program is among the most respected and successful of its type in the world," he concludes.

Krista M. Weidner is a State College, Pa.-based freelance writer and editor. She received her B.A. in English from Penn State in 1985 and worked for several years as a writer for Penn State's Agricultural Information Services. She recently completed a book on the Penn State turfgrass program, titled "The Grass Keeps Getting Greener: 75 Years of Turfgrass Research and Extension at Penn State." She can be reached at krista88@adelphia.net.

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