throughout college, setting goals for myself, staying determined and focused, visualizing all game situations, reading and reacting to those moments over and over in my head, were going to help me if I were to get an opportunity to succeed.

The moment of truth came. I was called off the pine, and all the veterans were howling, "Rookie, rookie!" At this point, I already knew I was going to score. I had taken all the necessary steps to get to this level and succeed. My goals were becoming a reality. I was focused, and my focus silenced the raucous stadium. The Augusta goaltender and I were all who stood on the ice. One of us was going home as a hero, and the playoff season stood on the balance of one goal. I was off; my mind was blank and my movements were on autopilot. As a direct result of proper planning, practice and visualization of game situations, it was like I'd been there before. As my body moved on its own toward the net, I could see the goalie getting closer and closer, shifting his body to match my moves. In one split moment, I made my move, faking a quick shot, and moving rapidly from left to right. With only inches to go, I maneuvered the puck from forehand to backhand, delivering a blistering backhand shot accurate enough to kill a fly. Coasting behind the net, body fully extended from reaching outward, I see the threads in the upper-righthand corner

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After scoring the goal, recalls Maksymiu, "I hug the goaltender as the rest of the team celebrates our victory over the Augusta Lynx, sending us into playoff contention."

All the preparation throughout college, setting goals for myself, staying determined and focused, visualizing all game situations, reading and reacting to those moments over and over in my head, were going to help me if I were to get an opportunity to succeed.

of the net protruding outward. Then it hits me, I SCORED! The puck entered the net, just slipping over the goalie's glove hand. The red lights went off, and the small mobs of hardcore Stingray fans were on their toes screaming.

I achieved the goal of making a statement professionally as our team achieved playoff status, and I experienced the sweet taste of success. A week away from graduation I returned to school, leaving the team during the playoffs. I had other goals to obtain, and one was my college degree. After graduation I had the opportunity to play pro hockey for three more years in the ECHL, United Hockey League (UHL) and American Hockey League (AHL).

Planning, Communication and Determination: The Road to Success

Setting short-term and long-term goals requires asking yourself where you see yourself tomorrow, at the end of the week, next week, month's end, year's end and three to five years from now. The latter questions can be overwhelming, especially the more time you put into thinking about them. In adjusting from one career to another, from player to sprayer, I discovered that the road to success and achieving team or individual goals entails many identical steps. These steps include organized,

. . . the road to success and achieving team or individual goals entails organized, collective planning, continuous and resourceful communication, and determination . . .

As one of the Adirondack Ice Hawks (UHL), Maksymiu beats the defenseman for the Elmira Jackals to score a goal.

collective planning, continuous and resourceful communication, and the overall determination to carry out strategic objectives effectively and efficiently. Relay these steps and expectations down through the chain of governance: your management team, mechanics and technicians, and grounds crew. Take initiative and don't rely on others to develop goals for you.

The upkeep of a golf course or country club is not left solely up to just the superintendent. Ideally, the superintendent and assistant should form a team. Superintendents should be setting goals for themselves as well as team goals for their staff and facility. Assistant superintendents should develop their own short- and long-term goals, basing them on the team goals the superintendent has set forth. Encourage the mechanics, technicians and grounds crew to develop individual goals that dovetail with achieving the team goals. Goal-setting can be a collective effort entered into by the superintendent and his management team. A successfully goal-oriented superintendent will expect his management team and grounds crew to set their own objectives to achieve team goals. Documenting goals and objectives will assist in the evaluation and review process at year's end.

Make it a goal at the end of each season to sit down with your management team and develop a review process that evaluates the strengths and weaknesses of your grounds staff. A successful management team will evaluate itself as a collective and as individuals. An experienced assistant may be included in the evaluation of the mechanics, technicians and grounds crew. As a team, work off the same page and work for the same outcome. A successful crew will have a sense of team accomplishment. Conversely, focus on individual efforts will accomplish less, rendering more formidable the obstacles you face from behavior problems, course conditions and project-management issues.

After establishing a strategic plan and goals for the year, communicate these to your grounds team effectively. Communication can be the best problem-solver there is, but many of us don't know how to go about it. Effectively communicating the goals and objectives provides the direction you and your facility will be heading in that season. Communication to your supervisor, coworkers, friends and family is critical to success and the ability to improve on the conditions in which you live and work. Miscommunication can actually inhibit the progress towards goals. Make it a habit to set goals and communicate them well. For a hockey team, communication is crucial, both on and off the ice. Hockey is the fastest game on earth, and knowing where your teammates are at all times takes involvement from everyone. Communication is such an important habit to develop that it deserves a reputation as one of the primary steppingstones to success.

"Life is about dealing with other people: those above us (our boss), those around us (our colleagues and friends), and those who look up to us (our employees and children). The art of communication is about how to make contact with each of these groups so that they can help you achieve your goals, and you, in turn, can help them achieve theirs." Rick Pitino, NBA

Success Is a Journey

When implementing team strategies, how does a superintendent measure their success, and know if success is achieved? The superintendent and grounds team always strive to pro-

duce a good product. One sound method of measuring success is determining what sort of inputs you are receiving based on your outputs for the season. Measure success by the overall assessment received from your membership or customers. Is the mutual consensus one of success as communicated during your meetings with your general manager or greens committee chairman? Quantify progression. Have improvements accomplished by your team made a distinct impact on your facility? If the improvements have been considered positive, and have been accomplished in the projected timeframe, you are succeeding.

A successful individual will also project a positive self-image to others. In golf, we work for many business-oriented people. These people hold high standards for themselves and others, and have pursued and attained a lifestyle that allows them to play golf on a regular basis. Educate yourself on your clientele by relating to them and their interests. Read the *Wall Street Journal* or *Fortune*, or simply pay attention to headlines. Achieve a positive perception from your members and administration by maintaining visibility and availability to them on a daily basis. Mingle occasionally in the grill room. Allow time to play golf with regulars or involve yourself in other endeavors that concern the people you work for. Make your boss look as successful as possible, as this will reflect positively on you.

I've been fortunate enough to have enjoyed a career in the game of hockey. This enabled me to share many great experiences, see a lot of places and contribute toward many team successes, including at the elite collegiate and professional levels. I would not have been blessed with the experience of pro hockey without the ability to set goals. Expect your road to success to be challenged by setbacks, roadblocks and injury. Determination is necessary to stay focused on goals and objectives.

Remember that the road to success can be a minefield; it never comes sugar-coated or with guarantees of longevity. As one of our local superintendents put it, "Goals that are not achieved are simply dreams." The success of seasonal operations at a golf facility does not depend on the one "Super Golf Course Maintenance Man," but the involvement of the grounds staff, which is nurtured by the entire management team. The superintendent, who has set stringent goals for himself, crew and facility, is the leader of the management team. The assistant can be a powerful tandem player with the leader. It is the successful leader who creates a vision and motivates the team to complete objectives and achieve goals. "Success in life comes not from holding a good hand, but in playing a poor hand well." Denis Waitley and Rem L. Witt

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The author reflects: "Coming from a hockey family, as a little boy I dreamed of playing professional hockey. Every night my brothers and I would play hockey on the backyard ice rink 'til dark, then we'd go inside to watch hockey night in Canada with our father."

Tom Voigt *University of Illinois*
Dan Dinelli, CGCS *North Shore Country Club*

A Final Report: The NTEP Putting Green at North Shore Country Club

PHOTOS COURTESY TOM VOIGT

Editor's Note: This is the first part of a two-part article describing the results of the NTEP putting green research at North Shore Country Club in Glenview, IL. Part one, composed by Tom Voigt, outlines the study protocol and outcomes.

Selecting the best turfgrasses for new plantings or for upgrading existing settings is arguably the most important step in the planning-building-planting process. To achieve a desired quality in the finished product, new and improved cultivars are probably the most useful tools available to turf managers. When a grass is well-suited to a particular use, environment or management scheme, it often requires fewer labor and pesticide inputs than stressed types.

The grow-in phase of the NTEP putting green onsite trial at North Shore Country Club took place August through October, 1997. Above and below, scenes from the grow-in.

Identifying turfgrass cultivars and varieties suited to Illinois is one of the objectives of the turf research program at the University of Illinois, and most of these trials are part of the National Turfgrass Evaluation Program (NTEP). In Urbana, NTEP evaluations of fairway- and putting green-height bentgrasses, Kentucky bluegrasses and tall and fine-leaf fescues are currently ongoing in five different evaluations, each having the objective of identifying the best grasses for use in Illinois. Perennial ryegrass NTEP trials are slated for 2004 planting.

1997 Onsite Bentgrass Trial

While we conduct the majority of NTEP trials at U. S. and Canadian university research facilities, two onsite trials have been conducted on golf courses. In one such trial, warm-season turfs were overseeded at several southern U. S. courses to evaluate different overseeding turfs. Of more interest to Chicago superintendents are the 1997 onsite putting green trials cosponsored by NTEP, GCSAA and USGA that entailed plantings at 16 U. S. courses to evaluate cultivars of creeping bentgrass, Bermudagrass or both species. Locally, we conducted this evaluation of 18 creeping bentgrass cultivars at North Shore Country Club in Glenview.

At least two things made this study exciting. First and foremost, unlike our university-sited trials, this study was subjected to traffic and management rigors that actually take place on real golf courses. University scientists, turfgrass breeders and course superintendents all benefited from this real-world opportunity; it was exciting to be involved in a study that joins the forces of all of these turfgrass and golf course professionals. Second, the results of this study provide insights into the performance of 18 creeping bentgrasses in the Chicago area. This information should prove useful during future golf course construction and renovation projects.

Establishing and Evaluating the Onsite Study

On August 18 and 19, 1997, we seeded 18 creeping bentgrass cultivars (Table 1) into 5′ by 10′ plots at a rate of 25 grams per plot (approximately 1.1 pounds per 1,000 feet). Each plot was replicated three times; the seed bed was a 90:10 USGA-approved sand and Dakota reed sedge root zone amended with

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various naturally occurring organic fertilizers. We mixed the seed with green sand to achieve a uniform distribution, then spread it by hand. A lightweight poly-fiber green cover was placed over the plots and irrigation commenced on September 3.

On September 17, 1997, we evaluated the green for percent cover (Table 2). Because germination was slow due to cool temperatures, we implemented two corrective measures. First was the application of Milorganite to the entire study to darken the soil surface in an attempt to warm the root zone. Second was the determination that additional seeding should be done. This took place on September 24, spreading an additional 12 grams (approximately 0.52 pounds per 1,000 feet) of seed per plot combined with Milorganite to achieve uniform seed distribution. Prior to the second seeding, we undertook a second evaluation (Table 2) and the plots were mowed. We conducted a final evaluation on October 22 (Table 2). During the 1997-98 winter, the plots were covered.

Starting in 1998, the putting green was mowed at 1/8″ and fertilized as follows:

- 4 to 6 pounds N/1,000 ft²/year;
- 0.75 to 1.5 pounds P/1,000 ft²/year; and
- 5 to 6 pounds K/1,000 ft²/year.

We irrigated and topdressed the plots as necessary. The application of various organic and inorganic disease controls, soil conditioners and plant-growth regulators also took place (see *http://www.ntep.org*) over the course of the study.

North Shore C.C. assistant superintendent Dan Garling straightens a sign on the NTEP putting green.

Beginning in April 1998, we rated the plots monthly for turfgrass quality using a scale of 1 - 9 where 1 = dead turf, 5 = minimally acceptable turf quality and 9 = perfect turf. These growing-season evaluations continued through October 2002 for a total of 35 ratings over the five-year period. Monthly quality means and overall means appear in Table 3. Table 4 reveals the number of evaluations that each cultivar performance was above the mean for that monthly rating. This number can provide useful insights as far as how one grass compares to others in the study. We are inclined to recommend cultivars that steadily perform above average, rather than pick cultivars that really shine during some months (e.g., cooler spring and autumn months), but perform poorly in other months (e.g., hot summer months). Ball-roll distance measures (Stimpmeter readings) were made on a monthly basis in 1998, but were discontinued thereafter due to small plots with undulating surfaces. The green was open for play in June 1998.

Results of the Study

By October 22, 1997, this study had made a dramatic turnabout; some plots were approaching 100% cover by this date (Table 2). As quality ratings accumulated, several cultivars separated themselves from the rest of the pack, but it is important to

Table 1.
Creeping bentgrass cultivars and suppliers in 1997 NTEP onsite evaluation at North Shore Country Club.

Name	Sponsor	Name	Sponsor
Backspin	Turf Merchants, Inc.	Penn G-1	Tee-2-Green Corp.
Cato	Pickseed West, Inc.	Penn G-6	Tee-2-Green Corp.
Century	Burlingham Seeds, Inc.	Penncross	Standard entry
Crenshaw	Sunbelt Seeds, Inc.	Providence	Seed Research, Inc.
Grand Prix (LCB-103)	LESCO, Inc.	Putter	Jacklin Seed Co.
Imperial	Burlingham Seeds, Inc.	SR 1020	Seed Research, Inc.
L-93.	Loft's Seed, Inc.	SR 1119	Seed Research, Inc.
Penn A-1	Tee-2-Green Corp.	Trueline	Turf Merchants, Inc.
Penn A-4	Tee-2-Green Corp.	Viper	International Seeds, Inc.

remember that based on quality performance (Table 3), ALL of the cultivars had a five-year mean performance greater than 5, the minimally acceptable putting green quality rating. This is testimony to the genetics of the cultivars, as well as to the high-quality care provided by the North Shore Country Club staff.

Five cultivars really stood out in this study. First, all four of the Penn A- and G-series grasses performed in this top group. They were uniquely fine-textured with extremely high density, and at their best, they all produced outstanding putting surfaces. To differentiate between these four grasses, an examination of the data (Tables 3 and 4) reveals that Penn G1 was a slow starter—its performance in April was lower than the other three. Conversely, Penn A4 did not perform as well as the other three grasses in August or September (Table 4) due to brown patch (*Rhizoctonia* spp.) infestations. While none of these grasses was totally free of dollar spot, the infestations were far less severe than in other grasses in this study.

The final member of this top-five group was L-93 creeping bentgrass. L-93, while of higher density and finer texture than older types such as Penncross, was slightly more coarse-textured and less dense than the four Penn A and G types. It nonetheless produced a high-quality putting surface and was generally free of dollar spot. While slow to green in the spring, once L-93 did green up, its genetic color was similar to Penn A4, which was slightly darker green than Penn A1, Penn G1 or Penn G.

Among the other grasses in the study, Crenshaw and Century tended to be more prone to dollar spot infestations than other cultivars examined. Finally, even Penncross creeping bentgrass, while the lowest-rated grass in the study (Table 3) due to its horizontal growth habit and relatively coarse texture, produced putting

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Five cultivars really stood out in this study. First, all four of the Penn A- and G-series grasses performed in this top group. . . The final member of this top-five group was L-93 creeping bentgrass.

Table 2.
Evaluations in 1997
following seeding of creeping bentgrasses
at North Shore Country Club.[C]

Cultivar	Percent Cover 9/17/97[A]	Seedling Vigor 9/24/97[B]	Percent Cover 10/22/97[A]
L-93	18.3 c-e	5	85
Putter	23.3 e	5.7	78.3
Cato	8.3 ab	4	60
Crenshaw	18.3 c-e	5	78.3
Grand Prix (LCB-103)	8.3 ab	4	65
Penncross	20.0 de	5.3	81.7
Backspin	13.3 a-d	5	71.7
Trueline	15.0 a-e	4.7	73.3
Providence	15.0 a-e	4.3	75
SR 1020	6.7 a	3.7	68.3
SR 1119	6.7 a	3.7	63.3
Viper	8.3 ab	3.7	71.7
Century	11.7 a-d	4.7	71.7
Imperial	18.3 c-e	5	60
Penn A-1	10.0 a-c	4.7	73.3
Penn A-4	11.7 a-d	4.3	68.3
Penn G-6	6.7 a	3.7	66.7
Penn G-1	16.7 b-e	4.7	71.7
LSD 0.05	**8.5**	**NS**	**NS**

[A] *Percent cover is represented as mean of the three replications and is a visual estimate of the percent of the plot covered by living seedlings.*

[B] *Seedling vigor is represented as mean of the three replications and is also a visual estimate of the percent of the plot covered by living seedlings combined with plant height representing the relative speed to a mature sod. It is based on a scale of 1 - 9 where 1 = completely open ground and 9 = maximum plot coverage*

[C] *Results followed by different letters are statistically different at the 0.05 level.*

green turf that would have been acceptable in many other locations.

Based on this trial, we can recommend Penn A1, Penn A4, Penn G1, Penn G6 and L-93 for planting on USGA putting greens in the Chicago area. Before planting these grasses, however, check with other Chicago-area superintendents that have been managing these grasses at their courses.

The Future of Onsite NTEP Turfgrass Cultivar Evaluations

Turfgrass cultivar evaluations will continue to play a major role in University of Illinois turf research and outreach activities, and there is no doubt about the value of the onsite studies. Obviously, when seeking information about the performance of individual cultivars for a specific envi-

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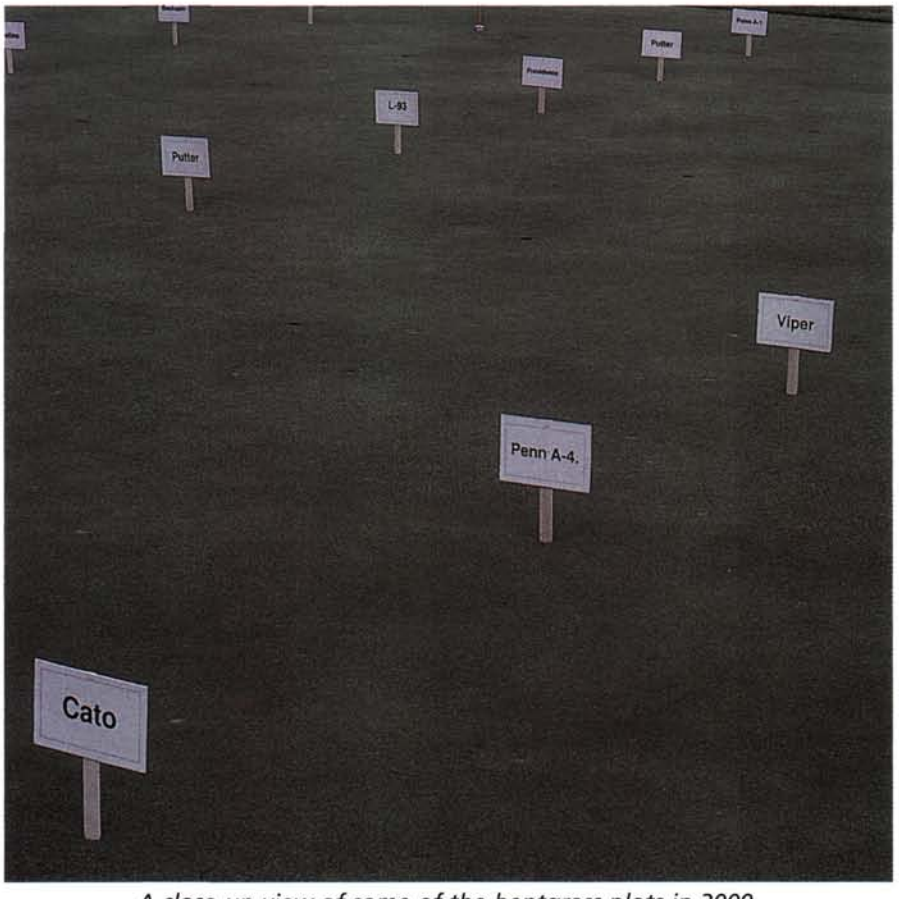
In 2000, North Shore C.C. superintendent Dan Dinelli hosted a regional research meeting at the club, giving attendees a look at the trials in progress.

Table 3.
1998-2002 quality means for NTEP onsite bentgrass trial at North Shore Country Club.[C]

Cultivar	April[D]	May	June	July	August	September	October	Five-Year Mean
Penn A-1	7.5 h	7.7 gh	8.1 h	7.6 g	7.0 e	7.3 c-e	7.9 g	7.6
Penn A-4	7.3 gh	8.0 h	7.9 gh	7.2 e-g	6.8 c-e	7.3 c-e	7.6 e-g	7.4
Penn G-6	7.2 f-h	7.5 f-h	7.7 f-h	7.3 fg	7.1 e	7.6 de	7.7 fg	7.4
Penn G-1	6.7 d-h	7.5 f-h	7.6 e-h	7.0 d-f	6.9 de	7.3 c-e	7.8 fg	7.3
L-93.	6.9 e-h	7.1 e-g	7.4 d-g	6.9 c-f	6.8 c-e	7.7 e	7.6 e-g	7.2
Backspin	6.5 c-g	7.1 e-g	7.0 c-e	6.7 b-e	6.7 b-e	7.0 b-e	7.3 d-g	6.9
Grand Prix (LCB-103)	6.3 b-e	7.3 fg	7.3 c-f	5.6 a	6.7 b-e	6.7 a-c	6.9 cd	6.9
Imperial	6.4 b-f	7.0 d-f	7.3 c-f	6.6 b-d	6.4 a-d	6.8 a-c	7.1 c-e	6.8
Providence	6.7 d-h	6.9 c-f	7.1 c-f	6.5 b-d	6.3 a-c	6.7 a-c	7.3 c-f	6.8
SR 1119	6.3 b-e	7.0 d-f	7.3 c-g	6.5 b-d	6.8 c-e	6.9 b-e	6.9 cd	6.8
SR 1020	6.3 b-e	7.2 e-g	6.9 cd	6.3 bc	6.3 a-c	6.9 a-d	6.9 cd	6.7
Trueline	6.3 b-e	6.5 b-e	6.9 cd	6.5 b-d	6.9 de	6.6 a-c	7.3 d-g	6.7
Putter	6.3 b-e	6.9 c-f	6.7 c	6.8 c-f	6.4 a-d	6.5 ab	6.7 b-d	6.6
Cato	5.7 ab	6.3 bc	6.9 cd	6.4 bc	6.3 a-c	6.9 a-d	7.3 c-f	6.5
Viper	5.7 a-c	6.1 b	6.7 c	6.1 ab	6.4 a-d	6.5 a-c	6.7 a-c	6.3
Century	5.4 a	6.3 b-d	6.9 cd	6.3 bc	6.2 ab	6.3 ab	6.2 ab	6.2
Crenshaw	5.4 a	6.1 b	6.5 b	6.5 b-d	6.4 a-d	6.5 ab	6.2 ab	6.2
Penncross	5.9 a-d	5.3 a	5.9 a	6.9 c-f	6.0 a	6.1 a	6.1 a	5.8
LSD	**0.05**	**0.8**	**0.7**	**0.6**	**0.6**	**0.6**	**0.8**	**0.6**
Monthly Mean	**6.4**	**6.9**	**7.1**	**6.7**	**6.6**	**6.9**	**7.1**	**6.8**

[C] *Monthly means followed by different letters are statistically different at the 0.05 level.*

[D] *Each cultivar monthly value represents the mean of three replications in each of five years. A 1- 9 scale used where 1 = dead turf, 5 = minimally acceptable turf quality and 9 = perfect turf.*



A close-up view of some of the bentgrass plots in 2000.

ronment and management regime, onsite studies can help us identify the best grasses for Illinois. Unfortunately, at present no additional NTEP onsite putting green evaluations are planned. Because of the expense involved in implementing these studies, support from more than one organization (e.g., NTEP, USGA, GCSAA, etc.) is usually required. If you're interested in seeing onsite studies continued, inform the research committees of these, and other appropriate groups, of your desires.

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Table 4.
Number of ratings in which cultivar quality mean surpassed the monthly mean.[E]

Cultivar	April	May	June	July	August	September	October	Five-Year Total
Penn A-1	5	5	5	5	4	4	4	32
Penn G-6	4	4	5	4	5	5	4	31
Penn G-1	3	5	5	5	4	4	4	30
L-93.	4	4	4	3	5	5	5	30
Penn A-4	4	5	5	5	3	3	4	29
Backspin	3	3	1	3	3	5	4	22
Grand Prix (LCB-103)	2	5	4	3	3	2	1	20
Imperial	3	3	3	4	2	2	3	20
SR 1119	2	4	4	1	4	3	1	19
Trueline	3	1	2	2	5	1	4	18
Providence	3	4	2	2	1	1	3	16
SR 1020	2	5	2	0	2	2	2	15
Putter	3	3	0	4	2	1	0	13
Century	1	2	1	3	2	1	1	11
Cato	0	1	1	2	1	2	3	10
Crenshaw	0	1	1	2	1	1	1	7
Penncross	1	0	0	1	1	1	0	4
Viper	0	0	1	0	1	1	0	3

[E] *Monthly ratings totaled 35, one each month April through October in each of five years (1998 through 2002). Thus, the highest rating a cultivar could achieve was 5 for any month and a five-year total of 35.*