To say that the last few years have been tough in the seed business would be a drastic understatement. The turfgrass industry has been dealing with the oversupply caused by the AgriBioTech bankruptcy, the drop in golf course construction and the overall slowdown of the U.S. economy — a potentially disastrous triple whammy. So far companies are taking the low times in stride, and citing the cyclical nature of the business, predicting an upturn in the near future. While the business may move in cycles, research and development work must continue unabated for companies to remain competitive. No matter how depressed the market is today, companies must focus on the future to survive. This point was hammered home during June’s annual turf field days in Idaho and Oregon. Because it can take more than 10 years to bring a new turfgrass variety to market, research and development must be nearly constant. Jack Seed’s research director Doug Brede has been working on the company’s soon-to-be-released T-1 and T-2 bentgrass since 1994 (see article page 16). Turf-Seed’s Crystal Rose-Fricker started working on selecting resucees and bentgrass for natural Roundup resistance more than 10 years ago (GCGN July 2002). Turfgrass breeders continue to search for new varieties to prove not only appearance and convenience, but also to resist diseases and be easier to maintain. Selecting turfgrass plants for salt tolerance and drought, herbicide and disease resistance is not for the faint at heart. As Rose-Fricker pointed out on a tour around the company’s Pure Seed Testing facility, a lot of time and energy goes into trying to kill turfgrass. Plants are doused with salt water, sprayed with Roundup and injected with fungi. What survives this treatment makes it to the next level of testing and brings the industry one step closer to an improved variety.

Genetic modification, however, has the potential to speed up the process and change turfgrass as we know it. The big question is, will modified varieties be allowed to reach the market? At press time, the Scotts Co. and Monsanto were fighting to gain approval for the production field testing of its Roundup ready bentgrass in Oregon (see www.golfcoursenews.com for an update), while Turf-Seed works to prevent the testing as it develops male sterile varieties of Roundup resistant turfgrass. The development of Roundup ready bentgrass could slow the advancement of other genetic modification in turfgrass. While the size of the market for Roundup ready bentgrass may not be huge, the rest of the golf industry could benefit from turfgrass that was engineered specifically to prevent dollar spot or completely out-compete Poa annua.

What will we see in the next 10 years? While there are still numerous issues to be addressed, genetically modified turfgrass will eventually make it into the market as companies look to the future. The possibilities are seemingly endless.

**Golf cars should be an optional part of the game**

By **Dr. Michael Hurdzan**

I've heard at least a dozen different reasons for why golf cars are good for the game. I wonder what so many of you think golf cars are good for. I don't mean what you read in the papers or what you hear from golf types. I mean what you believe golf cars are good for. I've heard the following reasons: speed, personal convenience, and handicap inequalities. I've even heard that golf cars are good for the environment. But, I can't imagine why golf cars are good for the environment. If golf cars are fast enough, I can understand why they are good for the game. At least at our course they are. Most golfers use golf cars because they have never played on a course where there were golf cars. But, for those of you who play on courses where there are golf cars, how do you feel about having to walk? I have no problem walking, I believe that golf cars should be a dispensable, or at least optional, part of the game. I further believe that golf cars often help developers and operators male sterile varieties of bentgrass seed that could not be sold in Europe and Japan. As the debate rages on, industry insiders say holding back the development of Roundup ready bentgrass could slow the advancement of other genetic modification in turfgrass. While the size of the market for Roundup ready bentgrass may not be huge, the rest of the golf industry could benefit from turfgrass that was engineered specifically to prevent dollar spot or completely out-compete Poa annua. What will we see in the next 10 years? While there are still numerous issues to be addressed, genetically modified turfgrass will eventually make it into the market as companies look to the future. The possibilities are seemingly endless.

**Golf cars are a necessary part of the game**

By **Tom Fazio**

Over the last 30 years, the use of golf cars has had a major impact on modern-day golf courses. Though I can understand the arguments of those who believe that cars are a detriment to the game and a hindrance to quality golf, I believe that, if done well, they can be incorporated into the golf course without having a major negative impact.

There are many pieces of property where, without golf cars, golf course construction would be impossible. Often times, location, the accessibility of caddies and/or the drastic elevation changes require the mandatory use of golf cars. Out of the approximately 15,000 golf courses across the continental United States, as many as 30 percent are on land that is challenging in elevation and features difficult terrain. The golf car allows people to traverse these properties making them viable for golf. Therefore, some 4,000 to 5,000 courses depend on golf cars for operation.

The most challenging aspect of creating new golf courses is the layout of the course can be difficult. In the mid-1960s, a golf car was not necessarily considered in design. Paths were placed around some tees and some greens, but they were never a continuous path around a course. Path course path systems have become almost commonplace only over the last 20 to 30 years. I can remember visiting one potential client, and his first comment was, "We will not have any car paths on this golf course." After...
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In the design of car paths, I maintain certain criteria. Car paths should never be a dominant design factor of a golf hole. Golfers should not see the path from the tee or the middle of the fairway, nor should paths interfere with normal golf shots. Placement of paths in relation to traffic flow and hazard placement is also important. For example, when water exists on both sides of a golf hole path placement requires serious consideration. In these situations where you put the path becomes a difficult and important part of the design.

This brings us back to the original question: Do golf cars negatively impact the game of golf? I look at a course as both a fairway, nor should paths interfere with normal golf shots. Placement of paths in relation to traffic flow and hazard placement is also important. For example, when water exists on both sides of a golf hole path placement requires serious consideration. In these situations where you put the path becomes a difficult and important part of the design.

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