

# Seeds *of* Wisdom

How does one come to an informed, intelligent seed-buying decision?

Research . . . and more research **BY SKIP LYNCH**



TIM TEEBKEN, ARTVILLE

**S**o you've decided to sow seed to establish turfgrass on your golf course. Good decision. Seeding is a reliable and affordable method. But keep in mind that selecting the correct seed for your course is not as simple as it appears. A poorly planned seed purchase based on weak advice, low bids or indifference can lead to unnecessary expenditures, delays or worse.

So how does one come to an informed, intelligent seed-buying decision? By researching before purchasing. Make sure to read labels, seed test results and grassing specifications.

*Continued on page 54*



# Seeds of Wisdom

*Continued from page 52*

## Buying on price

Basing a seed purchase solely on price is like ordering the filet mignon at the local truck stop. It's the same cut of beef, but how good do you think it's going to taste for \$4.95?

The adage "you get what you pay for" pertains to buying seed. The price is based on supply and, most importantly, quality. Seed substantially below the market price is either old crop, of lower germination or purity, or infested by weeds.

You must realize quality seed is not expensive when it comes to building a new course. The average price for seeding 90 to 150 acres of a new \$5 million championship golf course with quality seed will cost about \$50,000. In other words, the most important part of getting a course opened for play — the turf — costs the new construction project less than 1 percent of the total price tag.

Established courses, which require interseeding, follow the same economics. Adding new seed to existing turf provides new genetic material to reduce disease, increase density and replace lost or damaged turf. A typical interseeding program will use between \$10,000 and \$20,000 of seed a year for a 6,000-yard course with a \$700,000 annual maintenance budget. A \$20,000 expense (using an admittedly high figure) is less than 3 percent of the total annual budget.

## Don't overlook tags

Being an informed buyer is easy when you read tags. Perhaps the most overlooked part of a seed purchase is the white tag. Germination rates, purity, harvest year, weeds, inert matter and origin are found on the white tag affixed to each bag.

Germination rates and purity should be high. Weeds (noxious or otherwise), crop seed and inert matter should be low. But remember that each state has different definitions for crop seed and noxious weeds. For instance, Maryland and Pennsylvania list *Poa annua* as a "Restricted Noxious Weed," whereas California and Arizona do not list *Poa annua* at all.

So if you're in a state that doesn't list annual bluegrass as a noxious weed, how do you know if the seed you're buying is *Poa annua*-free? Ask for the test results, which are available.

A note about reading test results: check the sample size. Often, seed tests are run on minimum sampling sizes. If you need to be sure that the seed is clean, additional testing can be done using larger sampling sizes. But additional testing costs seed companies money, and the price will be reflected in your cost.

## Keep digging

Ever notice that varieties appearing in the Mean Turfgrass Quality Ratings are rarely available? Or that the differences between No. 1 and No. 12 are so close?

*Continued on page 57*

## TIPS FOR SELECTING, BUYING SEED

- Look for seed with less than 0.5 percent crop seed, less than 0.3 percent weed seed, and less than 4 percent inert ingredients, such as straw, chaff and sand, says Tom Koske, extension horticulturist at Louisiana State University. Most species of seed should have a germination rate greater than 85 percent.

- In a perfect world, superintendents would only pay for living seed, Koske adds. "Unfortunately, you won't be able to find the 'pure-live seed' listed on any seed label," he says.

To calculate pure-live seed percentage, use the following formula: Multiply the purity percentage by the germination percentage, then divide that result by 100 to get the percentage of pure-live seed.

- Know your state's seed-testing regulations, says Galen Troyer, sales manager for Ampac Seed Co. Kentucky may classify *Poa annua* as a noxious weed, while California doesn't consider it a noxious weed.

- To calculate the best seed buy, base price comparisons on the cost of pure-live seed, not just cost per pound of seed, Koske says. First, calculate the pure-live seed for each lot. Then calculate the cost per pound of pure-live seed to determine the best buy.

"The lowest-priced seed is not always the best buy," Koske says.

- When gathering seed for testing, obtain samples from each corner and at different depths of your bin, wagon or bags. For most samples, submit a minimum of four cups of seed in a well-sealed bag or envelope. When sampling with a seed probe, put all withdrawn seed into a bucket and mix thoroughly.





# Seeds of Wisdom

*Continued from page 54*

Perhaps you wondered why one variety did so well in one location and not in another.

If you dig into the data a little more, it will become clear. The best way to read the National Turfgrass Evaluation Program progress report is to take a first look at the page titled, "Locations, Site Descriptions and Management Practices." Many of your most basic questions will get answered — and more will arise.

Say you live in Cleveland, and you're willing to accept NTEP trial results from University Park, Pa., or Guelph, Ontario. Perhaps you might even consider the data from East Lansing, Mich. But look closer. Guelph has its trials on loamy sand soil, and your trials are on silty clay. East Lansing is mowing its trials

at 2.1 inches to 2.5 inches, and you're mowing at 1 inch. And University Park has a soil pH of 6.6 to 7.0, while yours is 7.5. There isn't much in that progress report that matches your climate, soils and management practices.

But keep going. There's more information to consider. Check out the pages titled, "Locations and Data Collected." Across the top of these pages is a list of different evaluation criteria. Each X under those column headings is how often each site reported evaluations for those specific criteria. Not all sites report the same data. If you're

interested in anything more than simple monthly Quality Ratings, you may find that the particular sites you're interested in are not reporting the data you need.

Whether you're reading the NTEP data or a report from a local university's field day, always look at the bottom of each set of data. The last two rows should contain a set of numbers: One set will be the least significant difference and the other the coefficient of variation. The LSD is the statistical differences among entries. To determine the difference between two varieties in the data, subtract one entry's mean from another entry's mean. Statistical differences occur when this value is larger than the corresponding LSD value.

The coefficient of variation is another gauge of the quality of the data. The c.v. tells the reader whether there were differences from one end of the trial to another. Since varieties are replicated throughout the trials, some varieties will end up in wet spots, on the edge of the plots or perhaps in shaded areas. The c.v. is a statement of the uniformity of the trial. A c.v. of less than 10 percent is good in most turf quality trials. In disease trials, a good c.v. is less than 20 percent.

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## Varieties and breeding

Not all grasses are the same, and genetics play a huge role in the performance of each variety. Some grasses are bred for dark green color, others for disease resistance and still others for high seed yields.

Much breeding is taking place in the turfgrass industry to maximize performance. In the creeping bentgrass market, varieties like SR 1020 and Crenshaw were developed for the highest performance in hot, dry climates. Varieties like SR 1119, Providence, Putter and L-93 have strong disease resistance. Still others have been developed for ultra-fine leaf texture.

It's hard to decide which varieties are the best fits for each site. Beyond the best work of turfgrass breeders, the ultimate success or failure of any variety depends upon how well it adapts to your specific climatic conditions, tolerates the amount of play on your course and fits into your management style.

## The tricky part

Writing specifications that put the right grass on your site is not easy. Single species plantings on greens are the norm in North America. With the exception of velvet bentgrass in the Pacific Northwest and New England, creeping bentgrass is the right choice.

Fairways, tees and roughs are not so easily generalized. Fescues, bluegrass and ryegrass play roles outside of the greens. Each has specific management requirements and climatic adaptations.

The most important axiom to remember is simply, "The lower you mow, the more money you'll need to spend." In other words, the lower you mow, the more fertilizer, water, mowing equipment, pesticides and labor you're going to use.

Knowing in advance how the course is to play goes a long way towards writing appropriate seeding specification. If the course is designed to be a target golf course, a tight surface like bentgrass is less appropriate than Kentucky bluegrass. But if the course is set up to play link-style, a faster, drier surface like a fine fescue/colonial bentgrass mix is best.

Lower handicap golfers who like to pinch the ball at impact to impart a lot of backspin will prefer creeping bentgrass. Higher handicappers who tend to sweep the ball and hit more fairway woods will appreciate the higher mowing heights of Kentucky bluegrass or perennial ryegrass.

The bottom line when buying seed: Don't rush the project, and do your homework to make an informed purchasing decision. ■

*Skip Lynch is a technical agronomist for Corvallis, Ore.-based Seed Research of Oregon.*