

When most of us walk through our lawns or play fetch with our dogs at a park, we don't give the grass under our feet a second thought. Each blade of grass, however, represents decades of research that public universities and private programs have spent to ensure that your lawn or park stays green and dense using the least amount of resources possible. Universities around the nation like Penn State, Rutgers, Texas A&M, and Washington State University work to improve turfgrass varieties for each region of the country. Some specialize in warm southern climate varieties and others develop cool northern climate types. Before any variety makes its way to our lawns and parks, they must be tested. These tests are often called "field trials" and they are conducted at both publicly and privately funded locations.

One organization that monitors and participates in these trials at a national level is the National Turfgrass Evaluation Program (NTEP). NTEP is one of the most widely-known turfgrass research programs in the world. Information such as turfgrass quality, color, density, resistance to diseases and insects, and tolerance to heat, cold, drought, and traffic is collected and summarized by NTEP annually. NTEP information is used by individuals and companies in thirty countries. Plant breeders, turfgrass researchers, and extension personnel use NTEP data to identify improved environmentally-sound turfgrasses. Local and state government entities, such as parks and highway departments, use NTEP for locating resource-efficient varieties. Most importantly, growers and consumers use NTEP extensively to purchase drought tolerant, pest resistant, attractive, and durable seed or sod. It is the acceptance by the consumer that has made NTEP the standard for turfgrass evaluation in the U.S.A. and many other countries worldwide.

We had a conversation with Kevin Morris, the Executive Director of NTEP to learn more about how his organization is improving lawns around the world and why homeowners should care.

WTSC: What does NTEP do and why should farmers care about the NTEP program?

Kevin: NTEP, Natural Turfgrass Evaluation Program. We evaluate turfgrasses for use on lawns, athletic fields, and all different kinds of uses you can think about. We do that across the United States and actually some in Canada, and mainly at land-grant university locations primarily. I think we have trials in 35 states right now, something like that. We test the warm season grasses like bermudas and the zoysias, all the way to the cool-season grasses you guys are familiar with, the ryegrasses, bluegrasses, tall fescues, and all the fine fescues.

Why should a grower care? Well, obviously better grasses, hopefully, people desire better grasses, improved grasses, and there's always making improvements. Those are the things that should get a premium price, at least somewhat of a premium price.

WTSC: How does the evaluation process work? Do you have checks that you compare the varieties to?

Kevin: We have a schedule. Right now we have a schedule that perennial ryegrass will be our next thing tested. We'll put it out in late summer next year, 2022. We have an advisory committee of research people and people from the seed industry that help us go through and determine the protocols, what we're going to test, how, what locations, all that kind of thing. Then we solicit entries from companies.

We get the entries in August for this ryegrass trial, let's say next year, and we divide them up quickly and make sure that every location gets the same material, a full set of everything. We do that carefully and send those out with instructions on what folks are to do as far as establishing them and collecting data.

We try to have standard entries that are consistent across the various trials. For instance, we've had Kentucky 31 tall fescue in our trials since the very beginning. You can go back and compare varieties to that all the way through. Then we have new standards based on performance in past trials or some particular disease that they're good for or bad for or something. We have those standards.

Once the trials are planted, and we have maintenance protocols and all that, then they start to collect data. There are a lot of different things they can collect. There are required data that we have listed in every trial. It varies a little bit, but things like turfgrass quality, genetic color, leaf texture, density, and then any diseases or whatever that come up. We have a group of trials we call standard trials, which collect that kind of information, just standard information known characterizing the variety.

Then we also have what we call ancillary trials, which are trials for some specific purpose, to test traffic tolerance or a specific disease, drought tolerance, etc. We have a group of those too. Those have become a lot more popular among the seed industry, because they give the industry a chance to develop something that's unique for some trait and then we test it. We can show whether that holds true or not, and then that gives them something unique to use to sell the variety.

We run these trials for multiple years. We produce an annual summary, and we post it on our website. Then we produce a final summary at the end of the five-year period. We have a database that is free to use for anyone wanting to look up the information from these trials.

Then we cycle these every six years, at least for something like ryegrass or tall fescue, we start a new trial and again, we have to schedule based on all that.

WTSC: When you say this year it's "perennial ryegrass" that's just because you've already got trials for other varieties already in the works. You're in year four of bluegrass or Bermuda or something else. Every year you just pick one and focus on that and the others are already in tandem further down the cycle.

Kevin: Right. We have about a dozen different trials or species out at any one time. We haven't even really announced this one yet, but we're going to be testing drought, water use and other things for fairway cool-season grasses. We just got some other funding to do that. The Washington Turfgrass Seed Commission helped fund the last cool-season grass trial drought, which was with Kentucky bluegrass and perennial ryegrass.

WTSC: What have been some "aha" moments, or "game-changers?" I'm sure in 39 years you've had at least a few where you just went, "Oh, that's awesome," or, "Oh boy, that didn't go nearly as well as we thought."

Kevin: I guess one example of that is some of the new turf-type tall fescue. When I first started on this program in 1982, turf-type tall fescue really wasn't a thing. That is when we had our first tall

fescue tests. think we tested 30 total tall fescues and several of those were forage-type tall fescues or Kentucky 31, those types.

To have grasses like Rebel and Falcon, those were probably two of the top names back then that were improved over Kentucky 31. Those were really a big deal. Those, I think, changed the game for people looking at what tall fescue could be as a home lawn. Now tall fescue use has just exploded across the United States.

Another thing I've witnessed over the years is Kentucky bluegrasses. Marion was the first improved Kentucky Bluegrass and it was in the marketplace for 35, 40 years but then it eventually went out. When I first started here we were testing Midnight Kentucky Bluegrass. It was not a named variety yet, but it was in the first trial that we ever did.

That grass is still sold and it's still pretty widely used and liked. I still get people asking me about it. It's a standard for color and a lot of things, making it through the summer, like here in the Mid-Atlantic. That grass, to me, that's been a real game-changer just because it's been so consistent. Normally, something will take the grass down or something else will come along that is so much better, but Midnight is still out there. It's amazing that it's done that well for so long.

WTSC: You've seen NTEP through the ups and downs. What do you see for the future of the turfgrass industry?

Kevin: Well, overall, I see that the future is bright. I think that as population growth continues, and more and more people live in urbanized settings, or even have a home, or their kids play soccer, we're going to need turf, but there's going to be challenges. They're out there now. Are we going to be able to use water? Are we going to be able to spray a pesticide? I think the tide has turned a little bit. You have a younger generation coming up that likes things that are natural and homemade. They're not into synthetic stuff. I think we've got a positive future, and we need to continue addressing these consumer questions.

The other thing is, we as an industry, have developed all kinds of great practices, great products, varieties, but we've got to work to get people to adopt them. That's the biggest challenge. How do we talk to each other and say what a great job we're doing, but how do we get folks who use these varieties, adopt these practices at the homeowner level, not just the professional.

Can we get these practices and ideas to the homeowner?

We're taking a person that oftentimes has no experience in agriculture or even growing a plant now. We're asking them to manage their property with a lawn. They actually grow plants and they don't have experience at that. That's an important thing that they do. Do they think about protecting the environment while managing that property? How do we help them to do that with their lack of experience, and maybe even interest? A lot of times they don't have any interest.

WTSC: Honestly, Kevin, that is the goal of what we're trying to do. How do we get homeowners to understand they basically have a mini landscaped lawn, farm, garden, whatever you want to call it. We want to show them that they can implement on their property what we're doing on the farm scale. We want them to learn from us as farmers, what to do and what not to do. Homeowners may not

know that their lawn is a living, breathing thing. You ask them to grow a tomato plant, and they look at it like, "Oh my gosh, I have to grow this tomato plant and try to produce a tomato." They don't look at their lawn the same way. The lawn is just the lawn. It's getting them to understand that, "The lawn is just like the tomato plant. You do have to care for it and spend time with it."

Kevin: Feed it, water it a little bit, care for it.

WTSC: What's your 60 second elevator pitch to average homeowners who probably don't even know that NTEP exists?

Kevin: You have many people working, plant breeders and researchers working to make improved products. Two-thirds of the market is the homeowner. These products should help them to have a better lawn, with less diseases, less problems, nicer appearance, all those things. The products are being developed for their use, they've just got to find the ones that are right for them. There is an effort to make it easier. In fact the University of Minnesota is developing a tool to do that, you plug in your zip code and it tells you what grasses are going to be best for you and that thing. Our next challenge is getting these specific varieties to the average homeowner.

WTSC: When they go to Home Depot, all they see on the label is 50% Bluegrass Oregon or 75% Bluegrass Washington. That doesn't help them with variety research, but overall the blends are going to continue to improve as the varieties improve. If you had 60 seconds with the average homeowner, what would you tell them?

Kevin: That's a good question. I would tell them that the basic things work. Put down some fertilizer at the right time, do a little weed control, mow properly, and water when needed. Those things work and it doesn't have to be that complicated. It's just doing things at the right time, going out there and doing them in a timely manner and then seeding. Seeding is always an environmentally responsible activity. In fact, in organic programs, that's one of the big things. Just go out there and seed every year or even seed a couple times a year. If you get a little bit, it doesn't cost that much to get a little bit of it started. You'll be better off.

We had some lawn care companies, one in particular, in our area for a long time, that's what they did. They seeded twice a year. That was what we always recommended down the mall in DC. They renovated the mall and just keep putting down seed, let the visitors come, they'll trample it in. It's just like an athletic field. When you get in between games, they throw seed down, let the athletes push it in. Same thing down there. Throwing seeds down, you can't go wrong with that. That would be some of the advice I give them.

To learn more about NTEP, visit <https://ntep.org/>.