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## NO “FUN” IN FUNDING

John Kaminski explores the rigors of securing research dollars for turf.

**W**hen I discuss research programs with most people outside of academia, it is clear that many don't really understand the full concept of research funding; both in terms of where the funds come from and how they're used. With funding streams to turfgrass programs around the country dwindling, it's time to shed some light on this process and address some potential implications to our industry.

### WHERE DOES THE MONEY COME FROM?

That's the million-dollar question. Funding for turf programs – particularly those of an applied nature that can actually benefit those of you reading this article – is dramatically down across the country. It doesn't matter if we are referencing large granting organizations like the USDA and National Science Foundation, national associations like the GCSAA and USGA, companies that pay to evaluate their products, or your local golf associations and turf councils.

### LARGE GRANTING OPPORTUNITIES.

From a university perspective, the importance of applying for (and hopefully landing) large-scale competitive grants is heavily stressed. Unfortunately, these grants are few and far between even for those doing the most fundamental science. Put the word “turfgrass” into the grant and it gets even harder to successfully get a grant funded. Make the proposal applied in nature and you can basically kiss your chances goodbye.

While the percentage of turfgrass academics receiving these large grants is minuscule, pressure is still placed on researchers – especially

young, tenure-track faculty – to spend countless hours writing and applying for them. Perhaps it's for the prestige it brings to the university and the program, the large sums of funding relative to traditional turfgrass funding opportunities, or the large portion of these grants that goes directly to the university in the form of the “in directs.”

**NATIONAL ASSOCIATIONS.** This is a tricky one to write about. You never want to bite the hand that feeds you, but the reality of the situation is that organizations like the GCSAA and USGA provide very little in the way of funding for turfgrass research.

these moves, the bottom line is the funding is simply not there.

**LOCAL TURF ASSOCIATIONS.** This is an interesting one. These groups are usually run by a handful of select and dedicated volunteers whose sole purpose is to make sure the turf programs in their regions are supported. I am thankful that during my career I have been fortunate to have my research supported by local groups like the Pennsylvania Turfgrass Council, Tri-State Turfgrass Association, the New England Regional Turfgrass Foundation and various local turfgrass chapters.

While their support helps offset the

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The GCSAA has come under fire from academics in recent years due to the drop off in funding to support research benefitting its members, as well as the loss of select personnel that helped connect academics with the association.

Although some of these issues have more than ruffled a few feathers, these organizations – like many – simply don't have the resources to put back into research and/or have decided to put those resources into other programs. I can't begin to fully understand the decisions being made and have to assume they are doing what's best for their organization.

Regardless of the reasoning behind

exorbitant cost of research, they obviously can't always fund large-scale projects involving multiple graduate students, technicians, and expensive equipment and research protocols. Having said that, they are a tremendous resource.

**INDUSTRY SUPPORT.** While not everyone involved in research is supported by R&D dollars from large companies, there is no doubt these funds play a large role in funding many programs. The funds made available for the evaluation of pest control products, discovery of novel technology, and the performance testing of new turfgrass species is critical to keep many

programs viable. These funds are often used to support additional basic research projects where competitive funding could not be secured.

**HOW MUCH MONEY DO YOU REALLY NEED?** I hear that asked a lot from superintendents. I love to answer this question because, in most cases, the superintendent on the other end of my soapbox speech sits there with eyes wide in amazement of what it takes to run a successful research program.

**TECHNICIANS.** Let's begin here. Technicians are the backbone of many research programs if you're fortunate enough to have one. In the past, "hard money" technicians (paid by the university) were fairly common and researchers could focus on spending their grant money in other areas. In recent years, however, the costs have been passed on to the researcher. This includes salaries and benefits, as well as other associated costs. In general you can expect to pay \$45-70k+ for a technician. Money well spent if you're lucky enough to have a good technician.

**GRADUATE STUDENTS.** Grad students are among the most important asset in any research program. Working under the direction of the PI (principle investigator), graduate students are the ones in the trenches conducting the day-to-day activities of an individual project, spending hours tediously collecting data, and pulling the entire project together into a coherent thesis or dissertation. A typical M.S. or Ph.D. student is likely to spend 2 to 3 or 4 to 5 years completing a research project, respectively. Each graduate student comes at an average cost of approximately \$35-40k per year. This doesn't include additional expenses associated with the individuals and their projects.

**OTHER EXPENSES.** In addition to labor, researchers must pay for a variety of other expenses to keep a program afloat. These can include charges for lab and field space, manuscript fees (yes, we actually have to pay to publish our research in most scientific journals), vehicles, equipment and supplies, travel costs, and other miscellaneous expenses. Another fun fact...did you know that most universities require 48 percent to as much as 60 percent of a total grant be allocated towards indirect costs paid directly to the university?

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Feeding all of those mouths comes at a personal sacrifice, as well. Many universities hire new faculty on a "9-month" appointment with the expectation that the researcher will write grants in which they include their "summer salary" into the proposal. Unfortunately, most groups funding turf research have provisions that do not allow for this type of compensation to the PI and instead limit funding to technician or graduate student salaries. Many (dare I say most) faculty sacrifice their own summer salaries to make sure funding is in place to keep their program operating at full capacity.

**WHAT'S THE SOLUTION?** I have no clue. I continue to fight for every dollar that comes into my program in an effort to attract the best graduate students and provide real solutions to superintendents and the turfgrass industry. I also fully admit that if it wasn't for funding from some of the groups I mentioned

above that I wouldn't have been able to successfully complete my graduate studies and may have been less successful when submitting my tenure packet only a few years ago.

Superintendents must continue to push their national organizations to provide funding for research projects that benefit them. They must volunteer within their local associations to ensure funding is available to researchers in their region and give their time to serve on boards and research committees to direct the limited resources to projects that will yield the greatest impact.

Perhaps my biggest concern with limited research dollars is the impact it will have on turfgrass programs and young faculty. Resources at the university level are scarce. Vacant positions created by retiring faculty are being lost to disciplines where funding is on the rise and the turf industry isn't exactly in an economic peak at the moment. We are also seeing a trend in which many academics and recent doctoral graduates are seeking positions within the industry instead of academia. Finally, those young scientists who choose academia are finding it more difficult to obtain those competitive grants so desperately needed to successfully navigate the tenure process.

Research dollars aren't just about solving the latest problems superintendents face. The funding dilemma is much larger than that. Solutions to problems, training of graduate students, hiring new faculty and all of the things associated with or reliant upon research funding are at the very heart of this issue. While I can't expect every turf organization to direct all of its resources into research, those whose goal is to support the industry should look closely at the level of support they are providing academia relative to the level of support they are extracting from it. **GCI**