

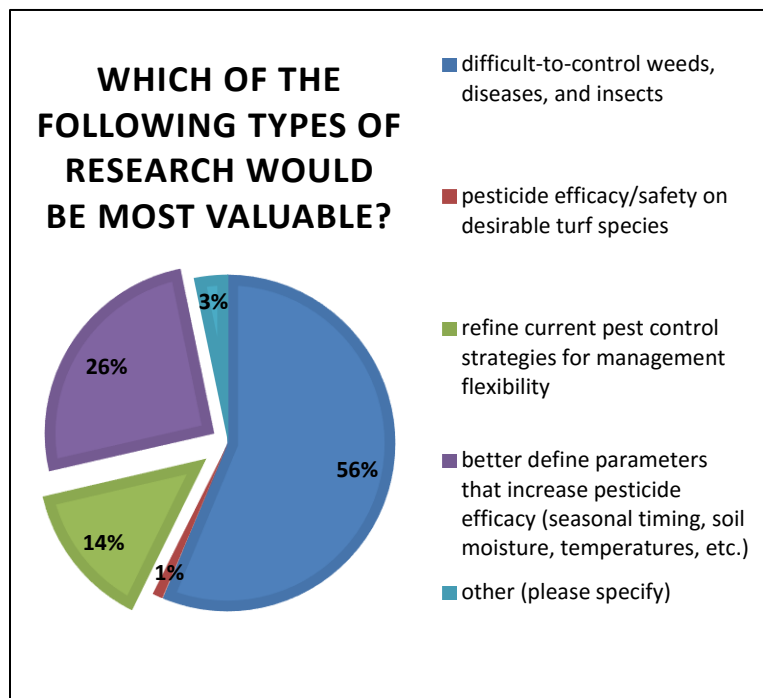
## Results from the weed and disease management survey November 29, 2016

Shortly after I started at UNL this summer, I asked you to complete a survey to direct the future of our turfgrass pest control research. I am very appreciative for all respondents, and I am happy now to share these results and the plausible directions of future research.

We have a diverse list of stakeholders, and we'll continue to work to best serve all segments. The largest proportion of respondents were homeowners (35%), followed by golf course superintendents (18%), lawn care operators (15%), athletic field managers (8%), persons in sales (8%), persons managing public or private grounds (8%), master gardeners (6%), turfgrass producers (1%), and UNL extension educators (1%). While weeds were identified as the most problematic pests (71% of respondents), many are most concerned with diseases (26%), and some with insects (3%). Primary pest concerns seem to be largely determined by the industry segment of the respondent – those managing higher-value turf are perhaps more concerned with diseases rather than weeds. Further, the most problematic pests identified within each pest category (weed, disease, or insect) also varied based on the industry segment of the respondent. Accordingly, future investigations will include weed management, but I also hope to increase the amount of applied turfgrass disease management research from UNL. To this end, Dr. Kreuser and I recently hired a research technologist with a background in plant pathology. We'll officially introduce him in a *Turf iNfo* very soon.

In terms of scheduling pest control practices, most respondents implement some type of scouting strategy for weeds and diseases, but there was an even split between scouting strategies and calendar-based scheduling when considering insect control. It is encouraging that scouting practices are a predominant method of scheduling pest control measures rather than solely basing this decision by the date on the calendar, and we'll hopefully continue to find new ways to more easily (and precisely) schedule pest control practices. Dr. Kreuser's growing degree day models for plant growth regulator applications are a great example of how we can always get better at more precisely implementing turf management strategies.

For me, the most interesting part of the survey was the simple question described by the pie chart to the right, where respondents were asked to identify a broad research area that would be most valuable to turf management from their perspective. It's not surprising that most are interested in strategies to better control difficult weeds, diseases, and insects, but it is very interesting to me at how many respondents are most interested in learning how to better define parameters that affect pesticide efficacy (*represented by the purple slice*) or how to refine current cultural and chemical control strategies for flexibility in a management system (*represented by the green slice*). These are areas where I think relatively modest increases in



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knowledge can have a large impact on all segments of the industry, while also helping us learn how to best implement control strategies for the most difficult-to-manage pests. Almost no one was directly interested in pesticide efficacy and safety on desirable turf species (*represented by the red slice*), but I suspect this is because that was a poorly written response. The response I wrote could be taken to mean how well pesticides do or do not control desirable turf species, which, I agree, isn't interesting. I meant for this response to indicate how well pesticides work on various pests (e.g. annual bluegrass), while at the same time evaluating their safety on desirable turfgrass species (e.g. Kentucky bluegrass). I suspect most are still interested in this type of research. So, while I hope the majority of future research focuses on cultural control through a better understanding of ecological aspects of pest prevalence and how to best integrate chemical control strategies into a management system while minimizing environmental risk, I absolutely also hope to continue to evaluate pesticide efficacy/safety to maintain a repository of knowledge of current pesticides and uses, including factors that affect efficacy and safety.

In the final question of the survey, I asked participants to identify general ways our turf research program can be of better service to the industry. Most didn't respond to the question, or indicated that they were very happy with the current state of the turf program. Further, most of the suggestions that were offered were either very specific, or further highlighted needs for flexible management strategies for difficult turfgrass pests.

I've already initiated two simple research projects this fall to better define the effects of mowing before or after the application of various herbicides. I look forward to sharing the results of these and future studies as appropriate.

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