

TURF MANAGEMENT PROFESSORSHIP ENDOWMENT: DECEMBER 31, 2012 TO JUNE 30, 2013 REPORT.

Alec Kowalewski, Ph.D.
Assistant Professor, Turfgrass Specialist
Department of Horticulture, Oregon State University
alec.kowalewski@oregonstate.edu

The Turf Management Professorship Endowment supports the sole turf faculty position within the Department of Horticulture at Oregon State University. With this report I hope to 1) introduce myself to the donors who have given this generous endowment and 2) share a summary of the activities this endowment has facilitated since I joined the faculty in December 2012.

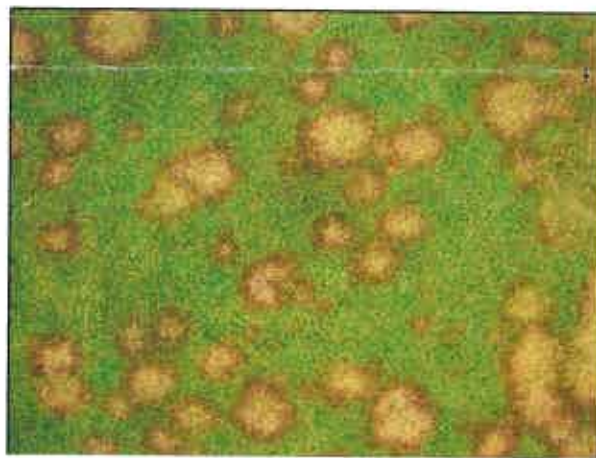
The turf position is a two-way, 9-month appointment, and reflects the land-grant mission of Oregon State University: 70% Teaching and Service; 30% Extension and Outreach. This year, I wish to emphasize the applied research campaign I have initiated at Oregon State University. The Turf Management Professorship Endowment funds the summer portion of my salary, which is the time of year when the majority of efforts will be directed toward research. I will also provide short summaries of the teaching and Extension activities to date as they are critical facets of the position.

Research: Fungicide Alternative Management Program for the Control of *Microdochium* Patch on Putting Greens

Microdochium patch can be observed year-around in cool, humid regions of the Pacific Northwest and Western Canada, and damages all turfgrass species within this geographical range. *Microdochium* patch is particularly problematic on annual bluegrass putting greens, a dominant putting green species in the Pacific Northwest. Under favorable conditions (September through May), this disease can kill significant amounts of turf which greatly disrupts the playability and aesthetics of the putting green surface. Historically, more money is spent on fungicides to combat this disease in the Pacific Northwest and Western Canada than any other turfgrass disease. Currently, fungicides applied every 3 to 4 weeks throughout the 9 month period of disease activity are the primary means for



Alec Kowalewski, Turfgrass Specialist, joined the faculty at Oregon State University in December of 2012. Kowalewski comes to Corvallis from Tifton, GA where he taught turfgrass management for Abraham Baldwin Ag. College and worked as a Research Scientist for the University of Georgia. Topics of extension and research interest include environmentally and economically sustainable turfgrass management practices and systems.



*Effect of *Microdochium* patch on an annual bluegrass putting green in Corvallis, Oregon.*

providing control of this pathogen, equating to roughly \$20,000 annually per golf course. In this project, we seek to identify optimal conventional control protocols, as well as examine a number of alternative and cultural practices that may impact the prevalence of this key pest on bluegrass putting greens. As a result of the financial burden and the potential for development of fungicide resistance associated with frequent fungicide applications, as well as growing pesticide bans and restrictions, turf managers as a whole are looking for methods to mitigate pesticide applications.

This work will be conducted by a graduate student, Clint Mattox, who has extensive experience in international work and in golf course superintendence. The results of this effort will represent partial completion of the requirements for the M.S. in Horticulture at Oregon State University.

Research Objectives:

- Evaluate the effects of dew removal by blowing, rolling and whipping on *Microdochium* patch management in a cool, humid climate.
- Quantify and compare the effects of alternative (non-conventional) control methods on the incidence of *Microdochium* patch on annual bluegrass putting green.
- Quantify and compare the effects of contrasting winter fertility practices as they effect turfgrass quality, color, and disease percentage caused by *Microdochium* patch.
- Evaluate the effects of commercially available biological control agents on *Microdochium* patch.
- Determine whether sulfur applied with and without contrasting calcium sources reduces the annual number of fungicide applications required to manage *Microdochium* patch on annual bluegrass.

Potential benefits to turf (golf) industry include:

1. Economic
2. Environmental
3. Social



*Preliminary Findings: Effects of dew whipping (far-left), rolling (left-center), blowing (right-center) and control (far-right) on *Microdochium* patch incidence on annual bluegrass putting greens observed at the Lewis-Brown farm in Corvallis, OR, spring 2013. While rolling did not provide entire suppression of the pathogen, disease activity was substantially reduced providing promising results for future research in which rolled will be combined with other potential fungicide alternative control methods.*

Without the Turf Management Professorship Endowment this work would not be possible. Under the current financial condition, public institutions struggle to remain financially solvent, and faculty all too often devote their effort to identifying sources of salary. The fiscal security of an endowed professorship allows me to devote my time and attention to the land-grant missions of teaching, research, and Extension, and gives me the opportunity to mentor aspiring graduate students like Clint Mattox and provide the supervision that will develop the next generation of turf researchers.

Sidebar: Graduate Student Clint Mattox takes on Microdochium Patch:

Clint Mattox, a Purdue University graduate, has been working in the turf industry for last 10 years, five of them as a golf course superintendent. He comes to his graduate studies by way of Togo, in the Horn of Africa, and more recently Germany and France. Although he arrived only in January 2013, Clint has already initiated a series of preliminary projects to explore the effects of dew removal, winter fertilization, short-wavelength ultraviolet radiation, and fungicide alternative products on Microdochium patch. This fall, he will begin research on Microdochium patch management by combining the fungicide-alternative products and cultural practices. In addition to the Turf Management Professorship Endowment, I acknowledge the support of the Northwest Turf Association, Western Canada Turfgrass Association and Integrated Pest Management Center for this work.

Teaching: I teach upper division (junior-senior level) undergraduate courses each term of the regular academic year, including one course in the fall with on-site and online sections, one in the winter, and two in the spring. Further, I am the academic advisor for the Turf Club. This is an active student-run group that provides professional development, academic support, and social interaction for undergraduates interested in turf grass.

Extension: My Extension program is active, and includes programming for the golf, sports, commercial, residential and municipal turf. This program is delivered as field days, tours, seminars and meetings/conference at which I engage stakeholders from seed companies, providers of maintenance equipment and products, and the golf, sports and commercial turf industries. In the seven months since I assumed this position, I have been in contact with over 300 stakeholders, have provided 6 invited talks and seminars, participated in 11 interviews, and submitted 3 documents for publication.



Graduate Assistant Clint Mattox assists undergraduate students in preparation for the Collegiate 2013 Turf Bowl Competition. Clint joined the turf program in Dec 2103 from Paris, France.



Turf Club members represented OSU in the 2013 Collegiate Turf Bowl Competition at the Golf Industry Show in San Diego, CA.



Lewis-Brown Turf Field Tour highlighting the latest research at OSU for employees of Ewing Irrigation 17 attendees, Corvallis, OR.

2013 Oregon State University Turf Field Day: Finally, I would like to extend an invitation for you to participate and attend the Annual Oregon State University Turf Field Day, which will only be held on Friday, September 13, 2013. This year the event will include the OSU Turf Field Day, Equipment Exhibition and Industry Booths at the Lewis Brown Farm and then a golf tournament followed by dinner at Trysting Tree GC. The day is designed to provide an update on current and ongoing research at OSU, and provide vendors with an opportunity to showcase their equipment and products. Not to forget the opportunity to catch up with friends, visit the old OSU stomping grounds, and just have some fun.



2013 OSU Turf Field Day will be held September 13 at the Lewis-Brown Turf Farm 3329 Peoria Rd.