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Paul L. Koch

Assistant Professor: 70% Extension, 20% Teaching, 10% Research
January 2014 to present
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Education: PhD, University of Wisconsin – Madison, 2012 (Plant Pathology)
M.S., University of Wisconsin – Madison, 2007 (Plant Pathology)
B. S., University of Wisconsin – Madison, 2005 (Horticulture & Soil Science)

INSTRUCTION

Primary Instructor:

Horticulture 261: *Introduction to Turfgrass Management* (1 cr) - Fall semesters
Horticulture 262: *Introduction to Turfgrass Management Lab* (2 cr) - Fall semesters in even years
Horticulture 461: *Advanced Turfgrass Management* (3 cr) - Fall semesters in even years

Co-Instructor:

Plant Pathology 602: *Ecology, Epidemiology, and Control of Plant Diseases* (3 cr) Fall semesters in even years. With Rick Lankau.

Guest Lectures:

Plant Pathology 300: *Introduction Plant Pathology*. UW – Madison: Plant Disease Diagnostics:
10/29/2018, 11/1/2017, 10/31/2016, 10/30/2015, 10/31/2012
Horticulture 121; *Horticulture Colloquium*. UW – Madison: Endocrine Disruption and Urban Pesticide
usage: 9/30/2014
Molecular and Environmental Toxicology 606; *Colloquium in Toxicology*. UW – Madison: Endocrine
Disruption and urban pesticide usage: 9/23/14

12 additional guest lectures prior to 2014

HONORS AND AWARDS

2018 – Alfred Toepfer Faculty Fellow Award
2014 – Turf and Ornamental Communication Association (TOCA) Award: Writing for a commercial
publication – Turf feature article: Beat the summer heat, plan for snow mold! Golfdom, August 2013.

CURRENT COLLEGE AND DEPARTMENTAL SERVICE

Scholastic Policies and Action Committee (College)
Russell Labs IT Representative (Department)
Long Range Planning (Department)

Undergraduate Advisor (Department)

RESEARCH

External Research Funding Since 2014

1. Alterations in ecological competition within the plant microbiome in response to repeated fungicide applications. University of Wisconsin Fall Research Competition. 2019-2020. \$51,000
2. Using the Smith-Kerns dollar spot model for precision management of dollar spot on golf course fairways. United States Golf Association. 2019-2020. \$10,000/yr
3. Increasing low-input turfgrass adoption through breeding, innovation, and public education. USDA Specialty Crop Research Initiative. 2017-2021. \$60,000/yr
4. *Sclerotinia homoeocarpa* epidemiology and resistance development as measured through improved molecular detection techniques. United State Golf Association. 2018-2021. \$35,000/yr
5. Dollar spot control using urea and iron sulfate. Golf Course Superintendents Association of America. 2018-2020. \$20,000/yr
6. The Impact of Seasonal Temperature Variation on Microbial Community Structure and Pesticide Fate in Urban Landscapes. Hatch (as part of start up). 2017-2020.
7. Effect of snow cover and anti-transpirants on the persistence of snow mould fungicides. Canadian Allied Turfgrass Research Group. 2016-2018. \$20,000/yr
8. Plant uptake of propiconazole applied as a snow mold fungicide and the impact of application timing on snow mold control. Golf Course Superintendents Association of America. 2015-2016. \$16,000/yr
9. Development of loop-mediated isothermal amplification (LAMP) assays for detection of common root-infecting pathogens of turfgrass. OJ Noer Foundation. 2015-2017. \$16,882/yr
10. Low-input fine fescues. Specialty Crop Research Initiative. 2012-2017. \$24,703/yr

Peer-reviewed Publications (16 Total, 11 since 2014):

1. Kaminski, J.E., Russell, T., Koch, P.L. First report of *Ophiosphaerella agrostidis* infecting creeping bentgrass in Wisconsin. Plant Disease 103:2129. <https://doi.org/10.1094/PDIS-02-19-0415-PDN>
2. Bier, P.V., Persche, M., Koch, P., Soldat, D.J. 2018. A long term evaluation of differential potassium fertilization of a creeping bentgrass putting green. Plant Soil 431: 303-316. <https://doi.org/10.1007/s11104-018-3765-8>
3. Koch, P.L., Hugie, K., Watkins, E. 2018. Resistance of prairie junegrass and tufted hairgrass germplasm to diseases common in temperate low-input turfgrass systems. Plant Health Progress 19: 310-318. doi.org/10.1094/PHP-05-18-0022-RS
4. Smith, D.L. and Kerns, J.P., Walker, N.R., Payne, A.F., Horvath, B., Inguagiato, J., Kaminski, J., Tomaso-Peterson, M., Koch, P.L. 2018. Development and validation of a weather-based warning system to advise fungicide application to control dollar spot on turfgrass. PLOS One. <https://doi.org/10.1371/journal.pone.0194216>
5. Karakkat, B., Hockemeyer, K., Koch, P.L. 2018. Detection of root-infecting fungi on cool-season turfgrasses using loop-mediated isothermal amplification and recombinase polymerase amplification. J Microbiol Methods 151: 90-98. doi: 10.1016/j.mimet.2018.06.01
6. Karakkat, B., Jackson, V., Koch, P.L. 2018. Incidence and distribution of *Puccinia coronata* and *P. graminis* on turfgrass in the Midwestern United States. Plant Disease 102(5): 955-963. doi.org/10.1094/PDIS-09-17-1353-RE
7. Koch, P.L., Soldat, D.J., Horgan, B.P., Bauer, S.J., Patton, A.J. 2017. The Great Lakes School of Turfgrass Science: A Nine-State Collaboration to Improve the Turfgrass Short Course. Journal of Extension 55(3): <https://www.joe.org/joe/2017june/iw4.php>

8. Reedich, L.M., Millican, M.D., Koch, P.L. 2017. Temperature impacts on soil microbial communities and potential implications for the biodegradation of turfgrass pesticides. *Journal of Environmental Quality* 46(3): 490-497. doi: 10.2134/jeq2017.02.0067.
9. Koch, P.L. 2016. Optimal fungicide timing for suppression of *Typhula* blight under winter covers. *Agronomy Journal* 108: 1-6. Doi: 10.2134/agronj2016.04.0241
10. Koch, P.L., Stier, J. C., Kerns, J.P. 2015. Snow cover has variable effects on persistence of fungicides and their suppression of microdochium patch on amenity turfgrass. 2015. *Plant Pathology*. doi: 10.1111/ppa.12379
11. Koch, P.L., Kerns, J.P. 2015. Temperature influences persistence of chlorothalonil and iprodione on creeping bentgrass foliage. *Plant Health Progress*. doi: 10.1094/PHP-RS-15-00012. **Selected as an Editor's Pick.**
12. Koch, P.L., Stier, J. C., Senseman, S. A., Sobek, S., Kerns, J.P. 2013. Modification of commercially-available ELISA assays to determine chlorothalonil and iprodione concentrations on golf course turfgrass. *Crop Protection* 54(12): 35-42.
13. Koch, P.L., Kerns, J.P. 2012. Impact of novel fungicide timings on the development of snow mold and dollar spot on golf course turfgrass. *International Turfgrass Research Society Journal* 12: 97-101.
14. Koch, P.L., Kerns, J.P. 2012. Relative resistance of creeping bentgrass cultivars to *Sclerotinia homoeocarpa* and *Typhula incarnata*. Online. *Applied Turfgrass Science* doi: 10.1094/ATS-2012-1022-01-RS.
15. Koch, P. L., Kerns, J. P., Stier, J. C. 2009. Spring time fungicide applications delay and reduce dollar spot disease of turfgrass in Wisconsin. *International Turfgrass Society Research Journal* 11(I): 241-252.
16. Koch, P. L., Grau, C. G., Jo, Y. K., Jung, G. 2009. Thiophanate-methyl and propiconazole sensitivity in *Sclerotinia homoeocarpa* populations from golf courses in Wisconsin and Massachusetts. *Plant Disease* 93(1): 100-105.

Plant Disease Management Reports (32 Total, 13 since 2014):

1. Koch, P. L. 2018. Preventative fungicide applications for the control of dollar spot at putting green height, 2017. *Plant Disease Management Reports* 11 (T037).
2. Koch, P. L. 2018. Preventative fungicide applications for the control of gray snow mold on creeping bentgrass, 2016-2017. *Plant Disease Management Reports* 12 (T038).
3. Koch, P. L. 2017. Preventative fungicide applications for the control of dollar spot at putting green height, 2016. *Plant Disease Management Reports* 11 (T005).
4. Koch, P. L. 2017. Preventative fungicide applications for the control of gray snow mold on creeping bentgrass, 2015-2016. *Plant Disease Management Reports* 11 (T004).
5. Koch, P. L. 2017. Preventative fungicide applications for the control of *Microdochium* patch on creeping bentgrass, 2015-2016. *Plant Disease Management Reports* 11 (T003)
6. Koch, P. L. 2016. Preventative fungicide applications for the control of dollar spot at fairway height, 2015. *Plant Disease Management Reports* 10 (T016).
7. Koch, P. L. 2016. Preventative fungicide applications for the control of *Typhula* blight on creeping bentgrass, 2014-2015. *Plant Disease Management Reports* 10 (T017).
8. Koch, P. L. 2016. Preventative fungicide applications for the control of *Microdochium* patch on creeping bentgrass, 2014-2015. *Plant Disease Management Reports* 9 (T018)
9. Koch, P.L. 2015. Preventative fungicide applications for the control of dollar spot at fairway height, 2014. *Plant Disease Management Reports* 9 (T033).
10. Koch, P.L. 2015. Preventative fungicide applications for the control of dollar spot at putting green height, 2014. *Plant Disease Management Reports* 9 (T028).
11. Koch, P. L., Kerns, J. P. 2015. Preventative fungicide applications for the control of snow mold on creeping bentgrass, 2013-2014. *Plant Disease Management Reports* 9 (T029).
12. Koch, P.L. 2014. Preventative fungicide applications for the control of dollar spot at fairway height, 2013. *Plant Disease Management Reports* 8 (T012).

13. Koch, P.L. 2014. Preventative fungicide applications for the control of dollar spot at putting green height, 2013. Plant Disease Management Reports 8 (T013).
14. Koch, P. L., Kerns, J. P. 2013. Preventative fungicide applications for the control of Pythium blight on perennial ryegrass, 2012. Plant Disease Management Reports 7 (T003).
15. Koch, P. L., Kerns, J. P. 2013. Preventative fungicide applications for the control of leaf spot on golf course fairways, 2012. Plant Disease Management Reports 7 (T002).
16. Koch, P. L., Kerns, J. P. 2013. Preventative fungicide applications for the control of dollar spot on creeping bentgrass at putting green height, 2012. Plant Disease Management Reports 7 (T001).
17. Koch, P. L., Kerns, J. P. 2012. Preventative fungicide applications for the control of snow mold on creeping bentgrass, 2010-2011. Plant Disease Management Reports 6 (T010).
18. Koch, P. L., Kerns, J. P. 2012. Preventative fungicide applications for the control of Pythium blight on perennial ryegrass, 2011. Plant Disease Management Reports 6 (T005).
19. Koch, P. L., Kerns, J. P. 2012. Preventative fungicide applications for the control of anthracnose at fairway height, 2011. Plant Disease Management Reports 6 (T006).
20. Koch, P. L., Kerns, J. P. 2012. Preventative fungicide applications for the control of brown patch at fairway height, 2011. Plant Disease Management Reports 6 (T007).
21. Koch, P. L., Kerns, J. P. 2012. Preventative fungicide applications for the control of dollar spot at fairway height, 2011. Plant Disease Management Reports 6 (T008).
22. Koch, P. L., Kerns, J. P. 2012. Preventative fungicide applications for the control of dollar spot at putting green height, 2011. Plant Disease Management Reports 6 (T009).
23. Koch, P. L., Kerns, J. P. 2011. Preventative fungicide applications for the control of dollar spot on creeping bentgrass under putting green conditions, 2010. Plant Disease Management Reports 5 (T034).
24. Koch, P. L., Kerns, J. P. 2011. Preventative fungicide applications for the control of snow mold on creeping bentgrass, 2009-2010(III). Plant Disease Management Reports 5 (T033).
25. Koch, P. L., Kerns, J. P. 2011. Preventative fungicide applications for the control of snow mold on creeping bentgrass, 2009-2010(II). Plant Disease Management Reports 5 (T032).
26. Koch, P. L., Kerns, J. P. 2011. Preventative fungicide applications for the control of snow mold on creeping bentgrass, 2009-2010(I). Plant Disease Management Reports 5 (T031).
27. Koch, P.L., Kerns, J. P. 2010. Curative fungicide applications for the control of dollar spot at putting green height, 2009. Plant Disease Management Reports 4 (T013).
28. Koch, P. L., Kerns, J. P. 2010. Preventative fungicide applications for the control of dollar spot at putting green height, 2009. Plant Disease Management Reports 4 (T012).
29. Kerns, J. P., Koch, P. L. 2010. Preventative fungicide applications for the control of dollar spot at fairway height, 2009. Plant Disease Management Reports 4 (T011).
30. Koch, P. L., Kerns, J. P. 2009. Preventative fungicide applications for the control of snow mold on creeping bentgrass, 2008-2009 (II). Plant Disease Management Reports 3: T075.
31. Koch, P. L., Kerns, J. P. 2009. Preventative fungicide applications for the control of snow mold on creeping bentgrass, 2008-2009 (I). Plant Disease Management Reports 3: T074.
32. Koch, P. L., Kerns, J. P. 2009. Preventative fungicide applications for the control of snow mold on creeping bentgrass, 2007 to 2008. Plant Disease Management Reports 3: T030.

Research Presentations (16 Total):

1. Integrated turfgrass disease management using insights from the turfgrass phytobiome and disease predictive modeling. North Carolina State University Departmental Seminar. Raleigh, NC. 30 Jan 19.
2. Communicating pesticide toxicology and turfgrass microbiomes through the prism of plant pathology. University of Maryland Departmental Seminar. College Park, MD. 12 Oct 17.
3. Fine Fescue Resistance to Snow Molds. Specialty Crops Research Initiative Grant Update. Portland, OR. 24 May 16.

4. Fine Fescue Resistance to Snow Molds. Specialty Crops Research Initiative Grant Update. Portland, OR. 19 May 15.
5. Impact of spring and fall fungicide timings on development of Typhula Blight and dollar spot on golf course turfgrass. International Turfgrass Society Meeting. Beijing, China. 17 July 2013.
6. Effect of snow cover on the degradation of the fungicides iprodione and chlorothalonil on golf course turfgrass. European Turfgrass Society Meeting. Kristiansand, Norway. 25 June 2012.
7. Fungicide fate: How variable environmental conditions affect fungicide degradation and disease management on golf course turfgrass. University of Wisconsin – Madison Department of Plant Pathology Seminar. Madison, WI. 23 Apr 2012.
8. Using ELISA to determine the effect of temperature on the degradation of the fungicides chlorothalonil and iprodione on golf course turfgrass. American Society of Agronomy Annual Meeting, San Antonio, TX. 18 Oct 2011.
9. Degradation of the fungicide iprodione and chlorothalonil on golf course turfgrass under winter conditions. American Society of Agronomy Annual Meeting, Long Beach, CA. 1 Nov 2010.
10. Novel fungicide timings for the control of dollar spot and snow mold. American Phytopathological Society Annual Meeting, Charlotte, NC. 9 Aug 2010.
11. Validation of ELISA kits for determining fungicide concentration on golf course turfgrass. American Society of Agronomy Annual Meeting, Pittsburgh, PA. 3 Nov 2009.
12. Fungicide concentration analysis on creeping bentgrass leaf blades using commercially available ELISA kits for the control of *Microdochium nivale*. American Phytopathological Soc Annual Meeting, Portland, OR. 3 Aug 2009.
13. Spring time fungicide applications delay and reduce dollar spot disease of turfgrass in Wisconsin. International Turfgrass Research Society Meetings. Santiago, Chile. 27 July 2009.
14. Thiophanate-methyl and propiconazole *in vitro* sensitivity of *Sclerotinia homoeocarpa* isolates collected from golf course putting greens, fairways, and roughs in Wisconsin and Massachusetts. American Phytopathological Soc. Annual Meeting, San Diego, CA. 28 July – 1 August 2007.
15. Thiophanate-methyl and propiconazole *in vitro* sensitivity of *Sclerotinia homoeocarpa* collected from golf course putting greens, fairways, and roughs. UW-Madison Plant Pathology departmental seminar. 26 April 2007.
16. Thiophanate-methyl and propiconazole *in vitro* sensitivity of *Sclerotinia homoeocarpa* isolates collected from golf course putting greens, fairways, and roughs. American Phytopathological Soc. Annual Meeting, Quebec City, Quebec, Canada. 31 July – 2 August 2006.

EXTENSION

Extension Presentations (197 Total, 155 since 2014):

1. Impact of cultural practices and pesticide applications on the turfgrass microbiome, Idaho Golf Course Superintendents Association Meeting, Boise, ID, 27 Feb 19
2. Precision Disease Management: Present Successes and Future Research Needs, Idaho Golf Course Superintendents Association Meeting, Boise, ID, 26 Feb 19
3. The white menace: strategies for dealing with winter injury on turfgrass. Idaho Golf Course Superintendents Association Meeting, Boise, ID, 26 Feb 19
4. Understanding and managing turfgrass diseases, Grounds Maintenance/UW Extension, Kenosha, WI, 20 Feb 19
5. Understanding and managing turfgrass diseases, Grounds Maintenance/UW Extension, Waukesha, WI, 20 Feb 19
6. The turfgrass year in review, Syngenta Distributor Meeting, Quad Cities, IL, 29 Jan 19

7. The turfgrass year in review, Syngenta Distributor Meeting, Peoria, IL, 28 Jan 19
8. Understanding and managing turfgrass diseases, Grounds Maintenance/UW Extension, Madison, WI, 25 Jan 19
9. CSI Turfgrass; Identification and Management of the most common lawn diseases, Michigan Turfgrass Foundation Winter Meeting, Lansing, MI, 23 Jan 19
10. Snow mold control; what works and why the heck didn't it work at my place, Michigan Turfgrass Foundation Winter Meeting, Lansing, MI, 23 Jan 19
11. Implementing the Smith-Kerns Dollar Spot Model at Your Facility, Michigan Turfgrass Foundation Winter Meeting, Lansing, MI, 22 Jan 19
12. Impact of cultural practices and pesticide applications on the turfgrass microbiome, Wisconsin Turfgrass Association Research Day, Madison, WI 8 Jan 19
13. Snow mold control; what works and why the heck didn't it work at my place, Golf Course Superintendents Association of America Webinar, Online, 5 Dec 18
14. Implementing the Smith-Kerns Dollar Spot Model at Your Facility. Central Illinois Golf Course Superintendents Winter Meeting, Peoria, IL, 3 Dec 18
15. Dollar spot 101: A comprehensive look at our most sprayed-for disease, Wisconsin Golf Course Superintendents Association Turf Symposium, Kohler, WI 28 Nov 18
16. Snow mold control; what works and why the heck didn't it work at my place, Manitoba Golf Course Superintendents Association, Winnipeg, Canada, 15 Nov 18
17. Dollar spot and the kitchen sink; an integrated approach to dollar spot management, Manitoba Golf Course Superintendents Association, Winnipeg, Canada, 15 Nov 18
18. Lawn Care 101, Milwaukee/Waukesha County Master Gardener Training, Milwaukee, WI, 29 Oct 18.
19. The white menace: strategies for dealing with winter injury on turfgrass. Syngenta and Simplot Fall Research Update, McCall, ID, 20 Sep 2018
20. Koch Research Update, BASF Innovation Days, Raleigh, NC, 11 Sep 18
21. Implementing the Smith-Kerns Dollar Spot Model at Your Facility. Midwest Association Area Golf Course Superintendents Meeting, Elgin, IL, 27 Aug 2018
22. Identification and Management strategies for Wisconsin Lawn Diseases, Wisconsin Horticulture Update, Online, 13 Jul 18.
23. Communicating Pesticide Risk and Sustainable Pest Management to the General Public, Responding to Horticulture Inquiries, Stevens Point, WI 23 May 2018
24. Communicating Pesticide Risk and Sustainable Pest Management to the General Public, Responding to Horticulture Inquiries, Madison, WI 22 May 2018
25. Communicating Pesticide Risk and Sustainable Pest Management to the General Public, Responding to Horticulture Inquiries, Menomonie, WI 20 Apr 2018
26. Identification and Management of the most common lawn and grounds problems, Wisconsin Landscape Contractors Association, Kimberly, WI. 23 Mar 18
27. Fungicide Rotation Program Development and Implementation, Golf Course Superintendents Association Webinar, 3 Mar 2018
28. Implementing the Smith-Kerns Dollar Spot Model at Your Facility. Northwest Illinois Golf Course Superintendents Association Meeting, Elgin, IL, 13 Mar 2018
29. Implementing the Smith-Kerns Dollar Spot Model at Your Facility. Wisconsin Golf Course Superintendents Meeting, Fond du Lac, WI, 27 Feb 2018
30. The white menace: winter injury on turfgrass. Reinders Winter Meeting, St Germain, WI, 22 Jan 2018
31. Identification and Management of Turfgrass Rusts, Nebraska Turfgrass Conference, Lincoln, NE, 10 Jan 2018
32. Precision Disease Management: Present Successes and Future Research Needs, Nebraska Turfgrass Conference, Lincoln, NE, 10 Jan 2018
33. Precision Disease Management: Present Successes and Future Research Needs, Wisconsin Turfgrass Association Research Day, Madison, WI, 9 Jan 2018

34. Reduced-risk disease control: How to do it AND what to do with it, Northern Green Expo, Minneapolis, MN, 4 Jan 2018
35. The white menace: winter injury on turfgrass. Northern Green Expo, Minneapolis, MN, 4 Jan 2018
36. Precision Disease Management: Present Successes and Future Research Needs, Northern Green Expo, Minneapolis, MN, 4 Jan 2018
37. A Greener Future: strategies for developing a reduced risk turf management plan. Northern Green Expo, Minneapolis, MN, 2 Jan 2018
38. Pesticides, human health, and endocrine disruption, Ohio Turfgrass Foundation Conference, Columbus, OH. 5 Dec 17
39. Precision Disease Management: Present Successes and Future Research Needs, Ohio Turfgrass Foundation Conference, Columbus, OH. 5 Dec 17
40. Identification and Management of the most common sports turf problems, Ohio Turfgrass Foundation Conference, Columbus, OH. 5 Dec 17
41. Identification and Management of the most common lawn and grounds problems, Ohio Turfgrass Foundation Conference, Columbus, OH. 5 Dec 17
42. Reducing Hazard Associated with Turfgrass Management: A Wisconsin Case Study, Midwest Pesticide Action Committee Conference, Schaumburg, IL. 13 Nov 17
43. Diseases Affecting Your Playing Surfaces, Wisconsin Sports Turf Association Meeting, Pewaukee, WI. 11 Oct 17
44. Lawn Care 101, Wisconsin Master Gardener Program, Waukesha, WI. 11 Oct 17
45. Lawn Care 101, Wisconsin Master Gardener Program, Milwaukee, WI. 9 Oct 17
46. Timing is everything: using growing degree days to time landscape applications, Chicago Landscape Association Turf Education Day, Chicago, IL. 21 Sep 17
47. Selecting reduced-toxicity herbicides for effective weed control, Chicago Landscape Association Turf Education Day, Chicago, IL. 21 Sep 17
48. Snow mold control: what works and why the hell didn't it work at my place, Target Specialty Products Snow Mould Product Launch, Ottawa, Canada. 8 Sep 17
49. Snow mold control: what works and why the hell didn't it work at my place, Target Specialty Products Snow Mould Product Launch, Quebec, Canada. 7 Sep 17 - PM
50. Snow mold control: what works and why the hell didn't it work at my place, Target Specialty Products Snow Mould Product Launch, Quebec, Canada. 7 Sep 17 - AM
51. Snow mold control: what works and why the hell didn't it work at my place, Target Specialty Products Snow Mould Product Launch, Ontario, Canada. 16 Aug 17 - PM
52. Snow mold control: what works and why the hell didn't it work at my place, Target Specialty Products Snow Mould Product Launch, Ontario, Canada. 16 Aug 17 - AM
53. Snow mold control: what works and why the hell didn't it work at my place, Target Specialty Products Snow Mould Product Launch, Ontario, Canada. 15 Aug 17 - PM
54. Snow mold control: what works and why the hell didn't it work at my place, Target Specialty Products Snow Mould Product Launch, Ontario, Canada. 15 Aug 17 - AM
55. Snow mold control: what works and why the hell didn't it work at my place, Target Specialty Products Snow Mould Product Launch, Ontario, Canada. 14 Aug 17
56. UW-Madison Research update, University of Wisconsin Summer Turfgrass Field Day, Madison, WI. 25 Jul 17
57. Lawn Care Basics for a low-input lawn, Janesville Rotary Club, Janesville, WI. 23 May 17
58. Pesticide Applicator Training Program, Cat 3.0, Pesticide Applicator Training Program, Oconomowoc, WI. 19 Apr 17
59. University of Wisconsin Snow Mold Field Days, University of Wisconsin, Wausau, WI. 13 Apr 17
60. Pesticide Applicator Training Program, Cat 3.0, Pesticide Applicator Training Program, Green Bay, WI. 12 Apr 17
61. Pesticide Applicator Training Program, Cat 3.0, Pesticide Applicator Training Program, Oconomowoc, WI. 5 Apr 17

62. Selecting Reduced-Risk Lawn Care Products, Midwest Pesticide Action Center Webinar, Online. 4 Apr 17
63. University of Wisconsin Phytobiomes Update, Northeast Multistate Turf Phytobiome Planning Group, Washington, D.C. 31 Mar 17
64. Pesticide Applicator Training Program, Cat 3.0, Pesticide Applicator Training Program, Eau Claire, WI. 29 Mar 17
65. Snow mold control: what works and why the hell didn't it work at my place, Michigan Golf Course Superintendents Meeting, Traverse City, MI. 28 Mar 17
66. Pesticide Applicator Training Program, Cat 3.0, Pesticide Applicator Training Program, Oconomowoc, WI. 1 Mar 17
67. Snow mold control: what works and why the hell didn't it work at my place, Golf Industry Show, Orlando, FL. 6 Feb 17
68. Strategies for Reduced-Risk Lawn Care, Grounds Maintenance – UW Extension Sheboygan County, Sheboygan, WI. 3 Feb 17
69. Strategies for Reduced-Risk Lawn Care, Grounds Maintenance – UW Extension Waukesha County, Waukesha, WI. 1 Feb 17
70. Strategies for Reduced-Risk Lawn Care, Grounds Maintenance – UW Extension Kenosha County, Pleasant Prairie, WI. 1 Feb 17
71. Reduced-risk disease control: How to do it AND what to do with it, Ottawa Valley Turfgrass Managers Conference, Ottawa, Canada. 25 Jan 17
72. Snow mold control: what works and why the hell didn't it work at my place, Ottawa Valley Turfgrass Managers Conference, Ottawa, Canada. 24 Jan 17
73. Precision Disease Management: Present Successes and Future Research Needs, Ottawa Valley Turfgrass Managers Conference, Ottawa, Canada, 24 Jan 17
74. Buttoned up for Winter? Green Cover impacts on turf health and snow mold development, Ottawa Valley Turfgrass Managers Conference, Ottawa, Canada. 24 Jan 17
75. Strategies for Reduced-Risk Lawn Care, Grounds Maintenance – UW Extension Dane County, Madison, WI. 10 Jan 17.
76. Precision Disease Management: Present Successes and Future Research Needs, Northwest IL Golf Course Superintendents Association Meeting, Rockford, IL. 11 Jan 17
77. Precision Disease Management: Present Successes and Future Research Needs, Wisconsin Turfgrass Research Day, Madison, WI. 10 Jan 17
78. Snow mold control: what works and why the hell didn't it work at my place. Indiana Green Expo, Indianapolis, IN. 5 Jan 17
79. Identification and Management of Turfgrass Rusts, Indiana Green Expo, Indianapolis, IN. 5 Jan 17
80. Fertility Approaches for Disease Management, Indiana Green Expo, Indianapolis, IN. 4 Jan 17
81. Fusarium control and new ways to look at disease control. Oregon Pest Management Conference. Portland, OR. 8 Dec 2016
82. Anthracnose and brown ring patch control with new technology. Oregon Pest Management Conference. Portland, OR. 8 Dec 2016
83. Buttoned up for winter? Green cover impacts on turf health and snow mold development. Wisconsin Turfgrass Symposium. Kohler, WI. 1 Dec 2016
84. The Common Ground Initiative. Wisconsin Turfgrass Symposium. Kohler, WI. 30 Nov 2016
85. A Greener Future: strategies for developing a reduced risk turf management plan. Wednesday Night at the Lab. Madison, WI. 19 Oct 2016
86. Lawn Care 101. Milwaukee County Master Gardeners. Hales Corners, WI. 18 Oct 2016
87. Lawn Care 101. Waukesha County Master Gardeners. Waukesha, WI. 18 Oct 2016
88. Year in review. Reinders Turf Seminar. Stevens Point, WI. 22 Sep 2016
89. A Greener Future: strategies for developing a reduced risk turf management plan. Maple Bluff Community Meeting. Madison, WI. 20 Sep 2016
90. Snow Mold Control: What works and why didn't it work at my place? BASF Seminar. Denver, CO. 1 Sep 2016

91. The Common Ground Initiative. Wisconsin Golf Course Superintendents Association meeting. Green Bay, WI. 15 Aug 2016
92. University of Wisconsin Summer Turfgrass Field Day. Madison, WI. 26 Jul 2016
93. Fun with microscopes. Grandparents University. Madison, WI. 22 Jul 2016.
94. Turf species review. Grandparents University. Madison, WI. 21 Jul 2016.
95. A Greener Future: strategies for developing a reduced risk turf management plan. Sustainable Stoughton Monthly Meeting. Stoughton, WI. 26 May 2016
96. Identification and management strategies for Midwest lawn diseases. Jefferson County Master Gardeners. Fort Atkinson, WI. 12 May 2016
97. Pesticide Applicator Training Program Category 3.0: Turf and Ornamental. Oconomowoc, WI 20 Apr 2016
98. University of Wisconsin Snow Mold Field Days. Wausau, WI. 13 Apr 2016
99. Pesticide Applicator Training Program Category 3.0: Turf and Ornamental. Wausau, WI 13 Apr 2016
100. The skinny on plant defense activators. Reinders Turf Seminar. La Crosse, WI. 7 Apr 2016
101. Pesticide Applicator Training Program Category 3.0: Turf and Ornamental. Oconomowoc, WI 6 Apr 2016
102. Pesticide Applicator Training Program Category 3.0: Turf and Ornamental. Eau Claire, WI 30 Mar 2016
103. Pesticide Applicator Training Program Category 3.0: Turf and Ornamental. Oconomowoc, WI 24 Apr 2016
104. Identification and management of turfgrass rusts. Wisconsin Sod Producers Association Annual Meeting. Des Plaines, IL. 22 Mar 2016.
105. Pink snow mold: Midwest vs Northwest. Oregon State University Snow Mold Field Day. Corvallis, OR. 10 Mar 2016.
106. Pesticide Applicator Training Program Category 3.0: Turf and Ornamental. Oconomowoc, WI 7 Mar 2016
107. Pesticide Applicator Training Program Category 3.0: Turf and Ornamental. Green Bay, WI 2 Mar 2016
108. Snow Mold Control: What works and why didn't it work at my place? Northern Great Lakes Golf Course Superintendents Annual Meeting. Green Bay, WI. 2 Mar 2016
109. Reduced-risk pest management: How to do it and why it's important. Northern Great Lakes Golf Course Superintendents Annual Meeting. Green Bay, WI. 2 Mar 2016
110. Reduced-risk pest management: How to do it and why it's important. MidAtlantic Golf Course Superintendents Association Winter Meeting. Baltimore, MD. 24 Feb 2016
111. Reduced-risk pest management: How to do it and why it's important. Wisconsin Golf Course Superintendents Assistant's Meeting. Fond du lac, WI. 3 Feb 2016
112. Identification and management strategies for Midwest lawn diseases. Iowa Turfgrass Foundation Winter Conference. Iowa City, IA. 25 Jan 2016
113. The danger lurking below: how patch diseases can ruin your summer. Iowa Turfgrass Foundation Winter Conference. Iowa City, IA. 25 Jan 2016
114. Reduced-risk pest management: How to do it and why it's important. Iowa Turfgrass Foundation Winter Conference. Iowa City, IA. 25 Jan 2016
115. The white menace: winter injury on turfgrass. Illinois Turfgrass Foundation Winter Meeting. Chicago, IL. 13 Jan 2016
116. Pesticide and endocrine disruptors: what you need to know. Illinois Turfgrass Foundation Winter Meeting. Chicago, IL. 13 Jan 2016
117. Identification and management of turfgrass rusts. Illinois Turfgrass Foundation Winter Meeting. Chicago, IL. 13 Jan 2016.
118. Money matters: chemical and cultural control strategies to get the most bang for your fungicide buck. Connecticut Area Golf Course Superintendents Association Winter Meeting. Providence, RI. 12 Jan 2016

119. Reduced-risk pest management: How to do it and why it's important. Connecticut Area Golf Course Superintendents Association Winter Meeting. Providence, RI. 12 Jan 2016
120. The danger lurking below: how patch diseases can ruin your summer. Wisconsin Turfgrass Association Winter Turfgrass Research Day. Madison, WI. 5 Jan 2016.
121. Snow Mold Control: What works and why didn't it work at my place? Green Expo Turf and Landscape Annual Meeting. Atlantic City, NJ. 10 Dec 15.
122. Reduced-risk pest management: How to do it and why it's important. Green Expo Turf and Landscape Annual Meeting. Atlantic City, NJ. 9 Dec 15.
123. Reduced-risk disease control: How to do it and why it's important. Green Expo Turf and Landscape Annual Meeting. Atlantic City, NJ. 9 Dec 15.
124. The White Menace: Winter injury on turfgrass. Peaks and Prairies Golf Course Superintendents Association Meeting. Billings, MT. 28 Oct 15.
125. Reduced-risk disease control: How to do it and why it's important. Peaks and Prairies Golf Course Superintendents Association Meeting. Billings, MT. 27 Oct 15.
126. Snow Mold Control: What works and why didn't it work at my place? Peaks and Prairies Golf Course Superintendents Association Meeting. Billings, MT. 27 Oct 15.
127. University of Wisconsin Snow Mold Review. Golfdom Snow Mold Webinar. Online. 5 Nov 15.
128. Nutrient Impacts on Disease Development. Wisconsin Golf Course Superintendents Association Monthly Meeting. Valders, WI. 22 Jun 15.
129. All Things Turf. UW Extension Responding to Horticulture Inquiries. Wausau, WI. 27 May 15.
130. All Things Turf. UW Extension Responding to Horticulture Inquiries. Lake Geneva, WI. 14 May 15.
131. No Bull: The University Perspective. BASF Product Launch. La Crosse, WI. 12 May 15.
132. CSI Turfgrass: Deciphering what killed the lawn and what can be done to prevent it. UW Extension Grounds Maintenance Short Course. Sheboygan, WI. 20 Feb 15.
133. Beating the heat: Summer disease management strategies. Central Indiana Golf Course Superintendents Association Winter Meeting. Indianapolis, IN. 19 Feb 15.
134. CSI Turfgrass: Deciphering what killed the lawn and what can be done to prevent it. UW Extension Grounds Maintenance Short Course. Waukesha, WI. 18 Feb 15.
135. CSI Turfgrass: Deciphering what killed the lawn and what can be done to prevent it. UW Extension Grounds Maintenance Short Course. Racine, WI. 18 Feb 15.
136. Snow Mold Control: What works and why didn't it work at my place? Agrium Advanced Solutions Meeting. Toronto, Ontario, CAN. 5 Feb 15.
137. Snow Mold Control: What works and why didn't it work at my place? Bayer Green Solutions Meeting. Toronto, Ontario, CAN. 22 Jan 15.
138. Snow Mold Control: What works and why didn't it work at my place? Bayer Green Solutions Meeting. Toronto, Ontario, CAN. 21 Jan 15.
139. The White Menace: Winter injury on turfgrass. Quebec Golf Course Association Show. Quebec City, Quebec, CAN. 20 Jan 15.
140. Reduced-risk disease control: How to do it and why it's important. Wisconsin Turfgrass Research Day. Madison, WI. 6 Jan 15.
141. Pesticide Applicator Training 3.0, Turf and Landscape. 7 Sessions (15 Jan, 21 Jan, 16 Feb, 19 Feb, 25 Mar, 8 Apr, 17 Apr).
142. Lawn Care 101. La Crosse County Master Gardener Training. Online. 18 Nov 14.
143. Snow Mold Control: What works and why didn't it work at my place? Midwest Association of Golf Course Superintendents. Medinah, IL. 12 Nov 14.
144. Pesticides and Endocrine Disruption. ANRE Conference. Wisconsin Dells, WI. 22 Oct 14.
145. Snow Mould Control: What works and why didn't it work at my place? Direct Solutions Fall Meeting. Toronto, CAN. 18 Sep 14.
146. Winterkill: Mechanisms and Prevention. Direct Solutions Fall Meeting. Toronto, CAN. 18 Sep 14.

147. Reduced-Input Lawn Care. Ozaukee Conuty Master Gardener Training. Port Washington, WI. 16 Sep 14.
148. Various Presentations. Wisconsin Turfgrass Association Summer Field Day. Madison, WI 29 Jul 14.
149. Snow Mould Control: What works and why didn't it work at my place? Bayer Green Solutions Meeting. Calgary, CAN. 17 Jul 14.
150. Identification and Management of Turfgrass Rust. Wisconsin Sod Producers Association Summer Meeting. Chicago, IL. 15 Jul 14.
151. Review of the Great Lakes School of Turfgrass Management. North Central Extension and Research Activities. West Lafayette, IN. 18 Jun 14.
152. Turfgrass Management 101. Briggs and Stratton seminar series. Port Washington, WI. 10 Jun 14.
153. Wisconsin Snow Mold Research Update. Bayer Research Meetings. New Orleans, LA. 20 May 14.
154. Fungicide fate; how variable environmental conditions impact fungicide persistence. Syngenta Research Meetings. Baltimore, MD. 13 May 14.
155. Control and Management of Rust on Turfgrass. Wisconsin Turfgrass Research Day. Madison, WI. 14 Jan 14.
156. Around the world of snow mold in 60 minutes. Wisconsin Golf Course Superintendents Monthly Meeting. Stevens Point, WI. 20 Aug 2013.
157. Rust management for home lawns and sod production. Wisconsin Turfgrass Association Summer Field Day. Madison, WI. 30 Jul 2013.
158. The impact of winter covers on turf health and disease development. Northern Great Lakes Golf Course Superintendents Association Annual Meeting. Wausau, WI. 5 Mar 2013.
159. New fungicides for the turfgrass market. North Central Turfgrass Association Annual Conference. Fargo, ND. 27 Feb 2013
160. The fate of your fungicides: how the environment affects the fungicides you apply. North Central Turfgrass Association Annual Conference. Fargo, ND. 27 Feb 2013
161. Grassy weed identification and control. Brown County Master Gardener Education. Green Bay, WI. 8 Jan 13.
162. The EPA and the future of fungicide regulation. Rocky Mountain Regional Turfgrass Conference and Trade Show. Denver, CO. 6 Dec 2012.
163. New fungicides for the turfgrass market. Rocky Mountain Regional Turfgrass Conference and Trade Show. Denver, CO. 5 Dec 2012.
164. The fate of your fungicides: how the environment affects the fungicides you apply. Rocky Mountain Regional Turfgrass Conference and Trade Show. Denver, CO. 4 Dec 2012.
165. Identifying and managing summer patch on Kentucky bluegrass and annual bluegrass. Wisconsin Turfgrass Association Summer Field Day. Madison, WI. 31 Jul 2013.
166. Testing fungicide persistence and preparing for summer stress. Northwest Illinois Golf Course Superintendents Monthly Meeting. Freeport, IL. 13 June 2012.
167. Know your fungicides: Using ELISA to measure fungicide degradation. Midwest Association of Golf Course Superintendents Annual Meeting. Chicago, IL. 17 Jan 2012.
168. The 5 most common diseases of Wisconsin sports fields. Wisconsin Sports Turf Managers Association Annual Meeting. Wisconsin Dells, WI: 1 Dec 2011.
169. Daconil Action: A different kind of fungicide. Daconil Action Launch Meeting. Rockford, IL: 11 Oct 2011
170. Snow mold control: looking back and planning ahead. Wisconsin Golf Course Superintendents Association Monthly Meeting. Wausau, WI: 15 Aug 2011.
171. Effect of temperature on the degradation of fungicides. University of Wisconsin Turfgrass Field Day. Madison, WI: 27 July 2011.
172. What happened in 2010? What can be done to prevent it in 2011? Wisconsin Golf Course Club Managers Winter Meeting. Milwaukee, WI: 18 Jan 2011

173. Use of modern bentgrass cultivars to reduce fungicide inputs. University of Wisconsin Turfgrass Field Day. Madison, WI: 27 July 2010
174. The Fate of your fungicides. Reinders “Power through knowledge” seminar. La Crosse, WI: 17 Mar 2010.
175. Alternative fungicide programs. North Central Turfgrass Association Winter Meeting. Fargo, ND: 24 Feb 2010.
176. Snow molds and snow scalds. North Central Turfgrass Association Winter Meeting. Fargo, ND: 24 Feb 2010.
177. Non-traditional fungicide timing for the control of snow mold and dollar spot on Wisconsin golf courses. University of Wisconsin Turfgrass Field Day. Verona, WI: 28 July 2009.
178. Control of dollar spot using standard and experimental fungicides. University of Wisconsin Turfgrass Field Day. Verona, WI: 22 July 2008.
179. Summer stress syndrome. Reinders “Power through knowledge” golf seminar. Minneapolis, MN, 10 March 2008.
180. Diseases of turfgrass...what’s eating my lawn? Sheboygan County Grounds Maintenance Short Course. Sheboygan Falls, WI, 29 February 2008
181. Diseases of turfgrass...what’s eating my lawn? Milwaukee County Grounds Maintenance Short Course. Hales Corners, WI, 29 February 2008.
182. Diseases of turfgrass...what’s eating my lawn? Waukesha County Grounds Maintenance Short Course. Waukesha, WI, 27 February 2008.
183. Diseases of turfgrass...what’s eating my lawn? Kenosha County Grounds Maintenance Short Course. Bristol, WI, 27 February 2008.
184. Turfgrass Disease Presentation. ProGreen Plus Open House, Milwaukee, WI, 13 February 2008.
185. Pesticide Applicator Training Session (w/ Dr. Chris Williamson of entomology). Waukesha, WI, 8 February 2008.
186. Better Informed, Better Turf, Better Business! Weedman Lawn Care Technical Training Session. Middleton, WI, 4 February 2008.
187. Diseases of turfgrass...What’s eating my lawn? Dane County Winter Seminar Series. Madison, WI, 24 January 2008.
188. The Turfgrass Diagnostic Lab 2007 Year in Review. Wisconsin Turfgrass Association Winter EXPO, Middleton, WI, 9 January 2008.
189. Cultivar and mowing height effect on necrotic ring spot and summer patch on Kentucky Bluegrass. University of Wisconsin Turfgrass Field Day, Verona, WI: 26 July 2007.
190. Control of Sclerotinia Dollar Spot. University of Wisconsin Turfgrass Field Day. Verona, WI: 26 July 2007.
191. Timing of fungicides for early dollar spot suppression. Reinders “Power through knowledge” golf seminar, Rice Lake, WI, 8 May 2007.
192. Turfgrass, the environment, and you! ProGreen Plus Open House, Milwaukee, WI, 15 February 2007.
193. The Turfgrass Diagnostic Lab 2006 Year in Review. Wisconsin Turfgrass Association EXPO, Madison, WI, 9-10 January 2007.
194. Root diseases: What is going on down there? Wisconsin Golf Symposium, Kohler, WI, 28-29 November 2006.
195. Control of Sclerotinia Dollar Spot. University of Wisconsin Turfgrass Field Day. Verona, WI, 1 August 2006.
196. Controlling the Five Most Common Home Lawn Diseases. University of Wisconsin Turfgrass Field Day. Verona, WI, 1 August 2006.
197. Moss Control Strategies for Wisconsin. University of Wisconsin Turfgrass Field Day, Verona, WI, 26 July 2005.

Extension Publications (110 total; 45 since 2014):

National Trade Publications:

1. Patton, A.J., M. Elmore, J. Hoyle, J. Kao-Kniffin, B. Branham, T. Voigt, N. Christians, A. Thoms, G. Munshaw, A. Hathaway, T. Nikolai, B. Horgan, L. Miller, X. Xiong, W. Kreuser, R. Gaussoin, D. Gardner, Z. Raudenbush, D. Li, P. Landschoot, D. Soldat, and P. Koch. 2019 Turfgrass Weed Control for Professionals. Purdue University Extension Publication. TURF-100. pp. 128.
2. Koch, P.L., Liesch, P.J., Williamson, R.C., Soldat, D.J., Renz, M.J., Drake, D., Nice, G. 2018. Managing Turfgrass Pests in Wisconsin: A Guide for Turfgrass Professionals. University of Wisconsin Extension, Cooperative Extension Publication, A3714.
3. Koch, P.L. and Hockemeyer, K. 2018. Plant uptake and optimal timing of snow mold fungicides. *Golf Course Management* Feb 2019: 66-70
4. Koch, P.L. 2018. The thin white line. *Golfdom* 74(8): 34-38
5. Koch, P.L. 2017. One shot to succeed for snow mold control. *Golfdom* 73(8): 48-52
6. Koch, P.L. 2016. Snow mold lessons learned from last winter. *Golfdom* 72(8): 28-30
7. Koch, P.L., Kerns, J.P. 2015. Influence of temperature on fungicide persistence. *Golf Course Maintenance* 83(10): 78-84.
8. Koch, P.L., Stier, J.C., Kerns, J.P. 2015. Snow mold fungicide persistence. *Golf Course Maintenance* 83(8): 89-93.
9. Koch, P.L. 2015. One snow mold fungicide to rule them all? *Golfdom* 71(8): 38-40.
10. Koch, P.L. 2014. What causes snow mold? *Golfdom*. 19 Aug 2014.
11. Koch, P.L., Kerns, J.P. 2014. An introduction to fungicide resistance management on golf courses. *Spanish Greenkeepers Association Magazine*.
12. Koch, P.L. 2013. The Cold Facts About Snow Mold (Interview). *Lawn & Landscape* 34(11): 68-71.
13. Koch, P.L. 2013. When fungi attack! *SportsTurf* 29(9): 20-23.
14. Koch, P.L. 2013. Beat the summer heat, plant for snow mold! *Golfdom* 69(8):40-44.
15. Koch, P.L., Kerns, J.P. 2013. Relative resistance of creeping bentgrass cultivars to dollar spot and Typhula blight. *Golf Course Management* 81(1): 132 – 136.
16. Kerns, J.P., Koch, P.L., Smith, D. 2009. Dollars and Cents. *Golf Course Industry* 21(9):32-40.
17. Jung, G., Chang, T., Koch, P., Abler, S. 2008. Minimum fungicide rates for species-specific snow mold control: Knowing the optimal fungicide rate for controlling a particular species of fungus allows superintendents to reduce inputs and expenses. *Golf Course Management* 76(11): 99-102.

Regional Trade Publications:

1. Koch, P.L. 2018. Impact of nitrogen on dollar spot suppression. *The Grass Roots* 47(6): 10-14
2. Koch, P.L. 2018. Gray leaf spot creeps northward. *The Grass Roots* 47(5): 32-34
3. Koch, P.L. 2018. University of Wisconsin snow mold update. *The Grass Roots* 47(4): 6-11
4. Koch, P.L. 2018. Turf Management Mobile: A New Tool for Professional Turfgrass Managers. *The Grass Roots* 47(3): 6-11
5. Koch, P.L. 2018. The Smith-Kerns Dollar Spot Prediction Model. *The Grass Roots* 47(2): 26-31
6. Koch, P.L. 2018. Gaining steam in 2017: A state of the pathology lab update. *The Grass Roots* 47(1): 6-11
7. Koch, P.L. 2018. University of Wisconsin Snow Mold Evaluations. *The Hole Notes – Minnesota Golf Course Superintendent Association Publication* 53(7).
8. Koch, P.L. 2017. Biological Fungicides for Dollar Spot Control. *The Grass Roots* 46(6): 6-9
9. Koch, P.L. 2017. SDHI Fungicide Resistance: Coming Soon to Your Course. *The Grass Roots* 46(5): 32-35
10. Koch, P.L. 2017. University of Wisconsin Snow Mold Reports. *The Grass Roots* 46(4): 6-13
11. Koch, P.L. 2017. Diseases to Spray For and Diseases to Let Go. *The Grass Roots* 46(3): 8-11
12. Koch, P.L. 2017. The Continuing Debate Surrounding Snow Mold Fungicide Reapplications. *The Grass Roots* 46(2): 6-9

13. Koch, P.L. 2017. Old Faces, New Roles: A State of the Lab Update. *The Grass Roots* 46(1): 26-29
14. Koch, P.L. 2017. 2016-2017 Snow Mold Control Evaluations. *The Hole Notes* 52(7): 28-53
15. Koch, P.L. 2017. Continuing Debate: Snow Mold Winter Reapplications. *The Hole Notes* 52(7): 42-49
16. Koch, P.L. 2016. The Common Ground Initiative. *The Grass Roots* 45 (6): 6-9
17. Koch, P.L. 2016. The benefits of fall disease cleanup. *The Grass Roots* 45 (5): 32-35
18. Koch, P.L. 2016. 2015-2016 Snow mold review. *The Grass Roots* 45 (4): 18-25
19. Koch, P.L. 2016. Money matters: which cultural disease management practices make the most financial sense? *The Grass Roots* 45 (3): 18-21
20. Koch, P.L. 2016. Precision disease management: the wave of the future? *The Grass Roots* 45 (2): 42-44
21. Koch, P.L. 2016. Influence of temperature on fungicide persistence. *The Grass Roots* 45 (1): 44-49
22. Koch, P.L. 2015. State of the Lab Update. *The Grass Roots* 44 (6): 20-25.
23. Koch, P.L. 2015. Snow Mold Fungicide Persistence. *The Grass Roots* 44 (5): 8-14.
24. Koch, P.L. 2015. Wisconsin Snow Mold Review. *The Grass Roots* 44 (4): 6-17.
25. Koch, P.L. 2015. The skeptical plant defense activation user. *The Grass Roots* 44 (3): 8-9.
26. Koch, P.L. 2015. Spring Disease Checklist. *The Grass Roots* 44 (2): 14-16.
27. Koch, P.L. 2015. Turfgrass Pathology Research Roundup. *The Grass Roots* 44 (1): 24-26.
28. Koch, P.L. 2014. Snow Mold Review. *The Hole Notes*.
29. Koch, P.L. 2014. How persistent are DMI fungicides following rainfall? *The Grass Roots* 43 (6): 28-29.
30. Koch, P.L. 2014. When it comes to anthracnose, location matters. *The Grass Roots* 43 (5): 24-26
31. Koch, P.L. 2014. Wisconsin Snow Mold Review. *The Grass Roots* 43 (4): 10-12.
32. Koch, P.L. 2014. Summer Research Preview. *The Grass Roots* 43 (3): 20-22.
33. Koch, P.L. 2014. Are you a rational superintendent. *The Grass Roots* 43 (2): 8.
34. Koch, P.L. 2014. The Winter Environment. *The Grass Roots* 43 (1): 8-10.
35. Koch, P.L. 2013. Impact of spring and fall fungicide timings on the development of Typhula blight and dollar spot on golf course turfgrass. *The Grass Roots* 42 (4): In press.
36. Koch, P.L. 2013. Be afraid of the dark. *The Hole Notes* July Digital Edition.
37. Koch, P.L. 2013. Relative resistance of creeping bentgrass cultivars to *Sclerotinia homoeocarpa* and *Typhula incarnata*. *The Grass Roots* 42(3): 16-22.
38. Koch, P.L. 2013. Uncle! A 2012 TDL Year in Review. *The Grass Roots* 42 (2): 8-11.
39. Koch, P.L. 2013. New fungicides for the turfgrass market in 2013. *The Grass Roots* 42(1): 10-13.
40. Koch, P.L. 2013. Don't spray blind! Analyzing turfgrass samples before applying pesticides can save you money. *Western Turf Magazine* 12(1): 14-15.
41. Koch, P.L. 2012. Don't tune out yet. *Talking Turf; North Central Turfgrass Association Fall Newsletter* 41(3): 24-25.
42. Koch, P.L. 2012. Thank you Dr. Kerns! *The Grass Roots* 41 (6): 8-10.
43. Koch, P.L. 2012. 2012 Snow Mold Research. *The Grass Roots* 41(5): 6-12.
44. Koch, P.L. 2012. Afraid of the dark. *The Grass Roots* 41(4): 12-15.
45. Koch, P.L. 2012. The incredible disappearing fungicide. *The Grass Roots* 41(3): 6-7.
46. Koch, P.L. 2012. Supporting the UW: Then, now, and in the future. *The Grass Roots* 41(2): 16-20.
47. Koch, P.L., Kerns, J.P. 2012. Winter worries of a different kind. *The Grass Roots* 41(1): 6-9.
48. Koch, P.L. 2011. Wait 'til next year...a 2011 year in review. *The Grass Roots* 40(6): 14-18
49. Koch, P.L., Kerns, J.P. 2011. 2010-2011 Snow Mold Report. *Hole Notes* 43(7).
50. Kerns, J.P., Koch, P.L. 2011. Preparing for Snow Mold Applications. *On Course* October 2011: 5-7.
51. Koch, P.L., Kerns, J.P. 2011. Another Fall Surprise for Snow Mold Control. *The Grass Roots* 40(5): 10-15.
52. Koch, P.L. 2011. Prove it! *The Grass Roots* 40(4): 8-10.
53. Koch, P.L., Kerns, J.P. 2011. Endocrine Disruption and Turfgrass Pesticides. *The Grass Roots* 40(3): 24-27.
54. Koch, P.L., Maxwell, D.P. 2011. Golf and Luxury in Guatemala: Touring a new Pete Dye Course on the Side of a Volcano. *The Grass Roots* 40(2): 36-40.

55. Koch, P.L., Kerns, J.P. 2011. Keystone Diseases for Wisconsin Golf Courses. *The Grass Roots* 40(1): 26-27
56. Kerns, J.P., Koch, P.L. 2010. Turf Diseases of the Great Lakes Region. UW Extension Publication A3187. Revision of original publication by S.W. Abler and G. Jung
57. Koch, P.L. 2010. Summer's Revenge, A 2010 TDL Year in Review. *The Grass Roots* 39(6): 45-47.
58. Kerns, J.P., Koch, P.L. 2010. Fall applications of potassium: are they much ado about nothing? *The Grass Roots* 39(6): 16-17.
59. Koch, P.L., Kerns, J. P. 2010. Don't forget those other growth regulators. *The Grass Roots* 39(5): 22-23.
60. Kerns, J.P., Koch, P.L. 2010. To be or not to be resistant! *The Grass Roots* 39(4): 22-23.
61. Koch, P.L., Kerns, J. P. 2010. Plan ahead to control snow mold this year. *The Grass Roots* 39(4): 18-21.
62. Koch, P.L., Kerns, J. P. 2010. Snow mold across America. *The Grass Roots* 39(3): 8-11.
63. Koch, P.L. 2010. What is ELISA, and why you should care. *The Grass Roots* 39(2): 10-13.
64. Koch, P.L. 2010. The Fate of your Fungicides. *The Grass Roots* 39(1): 10-11.
65. Koch, P.L., Kerns, J.P. 2010. Sick of summer? Plan ahead for snow mold control. *The Hole Notes* 42(7):
66. Koch, P.L. 2009. A TDL Year in Review; with weather like this, who needs a TDL? *The Grass Roots* 38(6): 10-14.
67. Koch, P.L., Kerns, J.P. 2009. Worried about controlling snow mold? *The Grass Roots* 38(5): 26-27.
68. Koch, P.L., Kerns, J.P. 2009. When the bark is bigger than the bite. *The Grass Roots* 38(4): 9-11.
69. Koch, P.L., Kerns, J.P. 2009. New services, same price. *The Grass Roots* 38(3): 9.
70. Koch, P.L., Kerns, J.P. 2009. Save money this year with the TDL. *The Grass Roots* 38(2): 8-11.
71. Koch, P.L., Kerns, J.P. 2009. The Science (and art) of diagnosing root diseases. *The Grass Roots* 38(1): 10-13.
72. Koch, P.L. 2008. My summer vacation – A 2008 TDL year in review. *The Grass Roots* 37(6): 19-23.
73. Koch, P.L. 2008. Early season control of dollar spot on Wisconsin fairways. *The Grass Roots* 37(5): 20-27.
74. Koch, P.L. 2008. A snow mold article...already? *The Grass Roots* 37(4): 20-21.
75. Koch, P.L. 2008. Disease forecasting in turfgrass...is it worth the risk? *The Grass Roots* 37(3): 13-17.
76. Koch, P.L. 2008. Gearing up for snow mold damage. *The Grass Roots* 37(2): 13-17.
77. Koch, P.L. 2008. Fungicide resistance in turfgrass – future trends and possible problems. *The Grass Roots* 37(1): 13-17.
78. Koch, P.L. 2007. A tale of two summers: The 2007 TDL year in review. *The Grass Roots* 36(6). 38-41.
79. Koch, P.L. 2007. Sick of snow mold? *Hole Notes* 39(7). 6-12.
80. Koch, P.L. 2007. Fungicide resistance in turfgrass – Current ideas and research. *The Grass Roots* 36(5). 15-21.
81. Koch, P.L. 2007. Fall (and snow mold) is almost here. *The Grass Roots* 36(4). 32-33.
82. Koch, P.L. 2007. Fungicide resistance in turfgrass – An introduction. *The Grass Roots* 36(3): 32-35.
83. Koch, P.L. 2007. Timing of fungicide applications for root-infecting fungi. *The Grass Roots* 36(2): 25-27.
84. Koch, P.L. 2007. Where did all the nematodes go? *The Grass Roots* 36(1): 25-27.
85. Koch, P.L. 2006. 2006: The TDL year in review. *The Grass Roots* 35(6): 8-9.
86. Koch, P.L. 2006. The rise and likely fall of PCNB. *The Grass Roots* 35(5): 15-17.
87. Koch, P.L. 2006. The great *Microdochium* outbreak of 2006. *The Grass Roots* 35(4): 19-21.
88. Koch, P.L. 2006. The decline of take-all patch? *The Grass Roots* 35(3): 12-15.

89. Koch, P.L. 2006. So Abler's gone...what's next? *The Grass Roots* 35(2): 11.
90. Koch, P.L. 2006. Moss Control in Wisconsin: A step in the right direction. *The Grass Roots* 35(2): 62-63.
91. Rivers, J., Sisk, P., Manemann, M., Koch, P., Abler, S., Jung, G. 2006. Preventative application of fungicides for the control of dollar spot. *The Grass Roots*. 35(2). 12-17.
92. Manemann, M., Jo, Y., Knulty, J., Sisk, P., Koch, P., Jung, G. 2006. Curative fungicide applications for managing dollar spot. *The Grass Roots* 35(1): 40-43.
93. Koch, P.L. 2005. An introduction to moss control in Wisconsin. *The Grass Roots* 34(4): 9-11.

Newsletter Articles (37 total; 13 since 2014):

1. Koch, P.L. 2018. Gray leaf spot's northern trek not only bad for golf courses. *Wisconsin Turfgrass Association Newsletter* 32(3): 6
2. Koch, P.L. 2018. Turf Management Mobile: A new tool for professional turfgrass managers. *Wisconsin Turfgrass Association Newsletter* 32(2): 9
3. Koch, P.L. 2018. Disease profile: Necrotic ring spot. *Wisconsin Turfgrass Association Newsletter* 32(1): 7
4. Koch, P.L. 2017. Using lower toxicity herbicides for weed control in lawns. *Wisconsin Turfgrass Association Newsletter* 31(3): 6
5. Koch, P.L. 2017. Ascocytha leaf blight. *Wisconsin Turfgrass Association Newsletter* 31(2): 9
6. Koch, P.L. 2017. Preventing and recovering from snow mold on lawns and athletic fields. *Wisconsin Turfgrass Association Newsletter* 31(1): 7
7. Koch, P.L. 2016. Revisiting leaf mulching, lawns, and snow mold. *Wisconsin Turfgrass Association Newsletter* 30 (3): 6
8. Koch, P.L. 2016. Turf pathologists meet in Tampa for the American Phytopathological Society Annual Meeting. *Wisconsin Turfgrass Association Newsletter* 30 (2): 9
9. Koch, P.L. 2016. Disease profile: Red Thread. *Wisconsin Turfgrass Association Newsletter* 30 (1): 7
10. Koch, P.L. 2015. With snow mold, timing is everything. *Wisconsin Turfgrass Association Newsletter* 29 (2): 5
11. Koch, P.L. 2014. One year later. *Wisconsin Turfgrass Association Newsletter* 28 (3): 12-13.
12. Koch, P.L. 2014. The key to outreach...and sales. *Wisconsin Turfgrass Association Newsletter* 28 (2): 4.
13. Koch, P.L., Maxwell, D. 2014. Gary R. Gaard, 1941 – 2014. *Wisconsin Turfgrass Association Newsletter* 28 (1): 3-4.
14. Koch, P.L. 2013. When it comes to snow mold, two fungicides are better than one. But why? *Wisconsin Turfgrass Association Newsletter* 27 (3): 6-7.
15. Koch, P.L. 2013. Rust research in progress...your help needed! *Wisconsin Turfgrass Association Newsletter* 27 (1): 9-10.
16. Koch, P.L. 2012. Thank you Dr. Kerns! *Wisconsin Turfgrass Association Newsletter* 26 (3): 3-4.
17. Koch, P.L. 2012. Sorting out Pythium on the roots. *Wisconsin Turfgrass Association Newsletter* 26 (2): 5.
18. Koch, P.L. 2012. Will the mild spring affect disease this summer? *Wisconsin Turfgrass Association Newsletter* 26(1): 4.
19. Koch, P.L. 2011. Beyond disease diagnosis. *Wisconsin Turfgrass Association Newsletter* 25(3): 5-6.
20. Koch, P.L. 2011. PCNB returns, but questions remain. *Wisconsin Turfgrass Association Newsletter* 25(2): 3.
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