

## **Biographical Sketch**

**WILLIAM A. MEYER**

**Professor, Director of Turfgrass Breeding  
C.Reed Funk Distinguished Professor of Grass Genetics**

### **Rutgers University**

**School of Environmental and Biological Sciences (formerly Cook College)**

**Plant Biology & Pathology Department**

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### **EARNED DEGREES**

B.S., Horticulture-Turf, 1968, University of Illinois

M.S., Plant Pathology, 1969, University of Illinois

Graduate Study in Central India, JNAU Agricultural University, Jabalpur, India; studying  
soil borne disease of soybeans, 1971.

Ph.D., Plant Pathology, 1972, University of Illinois

### **EMPLOYMENT HISTORY**

Professor - Plant Biology & Pathology Dept., Rutgers University, April 1996 – present,  
Turfgrass Breeder. Director of Turfgrass Breeding.

Associate Director - Center for Turfgrass Science, 1996 - present

Director - Adelpia Research Farm, Hort Farm II, 1996 - present

Research Director - 1972-1975, Warrens Turf Nursery, Palos Park, IL.

Vice-President-Research - 1975-1996, Turf-Seed, Inc., Hubbard, OR

President - Turfgrass Breeder - 1975-1996, Pure Seed Testing, Inc., Hubbard OR

Adjunct Member of Graduate Faculty - 1983-1996, Oregon State  
University, Dept. of Crop Science.

### **TEACHING EXPERIENCE**

Turfgrass Management 11:776:304 - Undergraduate Course since 2003, Every Fall Turf I  
Regional Concerns Seminar - Rutgers Office of Continuing Professional Education -  
Every Fall and Winter Cultivars and Species Turf II.

## **PROFESSIONAL ACTIVITIES:**

American Society of Agronomy  
Crop Science Society of America (CSSA)  
International Turfgrass Society  
National Council of Commercial Plant Breeders  
American Phytopathological Society  
Grass Breeders Work Planning Conference  
International Seed Federation  
New Jersey Turfgrass Association  
Midwest Golf Course Superintendents Association (Honorary)  
Golf Course Superintendents Association of America  
New Jersey Golf Course Superintendents Association (Honorary)  
Atlantic Seedsmen Association (Honorary)  
Turfgrass Breeder's Assn

## **HONORS AND AWARDS:**

Wright Fellowship, University of Illinois, 1970 and 1971  
Golf Course Superintendents Assn. of America Scholarship, 1967  
Genetics and Plant Breeding Award for Industry for Crop Science Society  
of America, 1991  
Fellow of the Crop Science Society of America, 1993  
Fellow of the American Society of Agronomy, 1994  
Fred Grau Turfgrass Science Award of Crop Science Society of America, 1994  
Honorable Academician of Kyrgyz Agrarian Academy, Biskek, 2001  
Non-resident Fellow of the Noble Foundation, Ardmore, OK, 2002 -2008  
C. Reed Funk Turfgrass Breeder's Award, 2005  
New Jersey Turfgrass Recognition Award, December, 2005  
Honorary Lifetime Membership in Oregon Seed Trade Association, May 2006  
Distinguished Service Award from Golf Course Superintendents Association of America,  
February 2007  
Part of group that was recognized for a Team Award, 2007 from NJAES & RCE for gray  
leaf spot control in perennial ryegrass  
Professor of Year, Plant Biology Graduate Student Club, May 2009  
New Jersey Turfgrass Association, Man of Year, 2009  
Breeder's Cup Award, Turfgrass Breeder's Assn., 2011  
Impact Award from the National Assn of Plant Breeders, August 2014  
**Awarded Life Time Membership ,Turfgrass Breeder's Assn Oct 2015**

## **EXTERNAL GRANTS RECEIVED**

1. Bonos, S.A, J. Honig, T. Gianfagna, B. Huang and W.A. Meyer. 2007-2009. Evaluation of perennial ryegrass, creeping bentgrass and Kentucky bluegrass for salt tolerance. \$75,000. United States Golf Association.
2. 2012-2016 USDA Specialty Crops Research Initiative Germplasm Improvement of Low-Input Fine Fescues in Response to Consumer Attitudes and Behaviors. \$2,136,489. Eric Watkins and S.A. Bonos, P.I.'s, W.A. Meyer, Co-P.I.
3. 2017-2021 Increasing low input turfgrass adoption through breeding, innovation and public education. \$5,488,602. RU portion \$2.2M. NIFA Specialty Crops Research Initiative. P.I. Watkins, E. with S.A. Bonos, N Anderson, S. Bauer, B.S. Bushman, B. Clarke, A. Hegeman, J. Honig, B. Horgan, B. Huang, P. Koch, Alec Kowalewski, W. Meyer, J. Murphy, K. Nelson, A. Patton, S. Shekhar, C. Yue, N. Zhang.

### **Research Interests**

My breeding and research goal has been to use classical approaches to develop improved turf and forage grasses that have improved turf performance and seed production capacity. The main objectives are improved disease and insect resistance, improved heat and drought tolerance and enhanced seed production. This research includes the development of research methods to expedite the improvement process on cool-season turfgrasses.

### **PUBLICATIONS**

#### *Research publications:*

Meyer, W. A., L. Hoffman, and S. A. Bonos. 2017. Breeding cool-season turfgrass cultivars for stress tolerance and sustainability in a changing environment. *Int. Turfgrass Soc. Res. J.* 13:p. 1-8.

Honig, J. A., E. Zelzion, N. E. Wagner, C. Kubik, V. Averello, J. Vaiciunas, D. Bhattacharya, S. A. Bonos, and W. A. Meyer. 2017. Microsatellite Identification in Perennial Ryegrass using Next-Generation Sequencing. *Crop Sci.* 57(Suppl1):S-331-S-340. doi:10.2135/cropsci2016.07.0608

Koch, E. D. J. Honig, J. Vaiciunas, W. A. Meyer and S. A. Bonos. 2017. Endophyte effect on salinity tolerance in perennial ryegrass. *International Turfgrass Society Research Journal* 13:1–7 (2017). doi: 10.2134/itsrj2016.05.0444.

Yue, C., J. Wang, E. Watkins, S.A. Bonos, K.C. Nelson, J.A. Murphy, W.A. Meyer, and B.P. Horgan. 2016. Heterogeneous U.S. and Canada consumer preference for turfgrass attributes. *Canadian Journal of Agricultural Economics* 00 (2016) 1–37. DOI: 10.1111/cjag.12128.

- Jespersen, D., E. Merewitz, Y. Xu, J. Honig, S. Bonos, W. Meyer, B. Huang. 2016. Quantitative trait loci associated with physiological traits for heat tolerance in creeping bentgrass. *Crop Science* Vol. 56 No. 3, p. 1314-1329.
- Luo J, Vines PL, Grimshaw A, Hoffman L, Walsh E, Bonos S, Clarke BB, Murphy JA, Meyer WA, Zhang N. *Magnaporthiopsis meyeri-festucae* sp. nov. associated with a summer patch-like disease of fine fescue turfgrasses. *Mycologia*, under review.
- Wang, J., P. Burgess, S. Bonos, W. Meyer, and B. Huang. 2017. Physiological responses and genetic variations in drought and heat tolerance for fine fescues. *J. Am. Hort Sci.* (in press)
- Xu, Y., J. Wang, S. Bonos, W. Meyer, and B. Huang. 2017. Candidate genes and molecular markers associated with heat tolerance in fine fescue. In *J. Mo. Biol. Sci.* (in preparation, to be submitted in September)
- Honig, H., J. Vaiciunas, V. Averello, C. Kubik, W.A. Meyer and S.A. Bonos. 2015. Classification of bentgrass (*Agrostis*) cultivars and accessions based on microsatellite (SSR) markers *Genet Resour Crop Evol.* DOI 10.1007/s10722-015-0307-6
- Koch, M., W.A. Meyer and S.A. Bonos. 2015. heritability of salinity tolerance in perennial ryegrass. *Crop Science* 55(4): 1834-1842.
- Beirn, L.A., Meyer, W.A., Clarke, B.B., and Crouch, J.A. 2015. A greenhouse-based inoculation protocol for fungi causing crown rust and stem rust diseases of kentucky bluegrass turf. *HortScience*, in press.
- Honig, J.A., C. Kubik, W. Meyer, K. Amundsen, S.E. Warnke and S.A. Bonos. 2014. PCR marker-based genetic linkage map of creeping bentgrass and identification of QTL for dollar spot resistance. *Molecular Breeding*. 34(1):185-203
- Cross, J.W., S.A. Bonos, B. Huang and W.A. Meyer. 2013. Evaluation of heat and drought tolerance as components of summer stress on tall fescue genotypes. *HortScience*. 48(12):1562-1567.
- Saxena, P., B. Huang, S.A. Bonos and W.A. Meyer. 2013. Photoperiod and temperature effects on rhizome production and tillering rate in tall fescue (*Lolium arundinaceum* (shreb) Darby. 2013. *Crop Science* 54 (3):1205-1210.
- Beirn, Lisa A., Melinda Moy, William A. Meyer, B.B. Clarke and JoAnne Crouch. 2011. Molecular analysis of turfgrass rusts reveals widespread distribution of *Puccinia coronata* as a pathogen of Kentucky bluegrass in the United States. *Plant Dis.* 95:1547-1557.

- Honig, J., S.A. Bonos and W.A. Meyer. 2010. Isolation and characterization of 88 polymorphic microsatellite markers in Kentucky bluegrass (*Poa pratensis* L.). *HortScience* 45(11):1759-1763.
- Merewitz, E., W.A. Meyer, S.A. Bonos and B. Huang. 2010. Drought stress responses and recovery of Texas x Kentucky hybrids and Kentucky bluegrass genotypes in temperate climate conditions. *Agronomy Journal* 102:258-268.
- Bokmeyer, J., S.A. Bonos and W.A. Meyer. 2009. Inheritance characteristics of brown patch resistance in tall fescue. *Crop Science* 49:2302-2308.
- Rotter, D., K. Amundsen, S.E. Warnke, S.A. Bonos, W.A. Meyer and F.C. Belanger. 2009. Colonial bentgrass (*Agrostis capillaris*) genetic linkage mapping reveals the chromosomal location of genes for dollar spot resistance. *Crop Science* 49:1609-1619.
- Bokmeyer, J., S.A. Bonos and W.A. Meyer. 2009. Broad-sense heritability and stability analysis of brown patch resistance in tall fescue. *Hort Sci.* 44:289-292.
- Shortell, R.R., W.A. Meyer and S.A. Bonos. 2009. Classification and inheritance of morphological and agronomic characteristics in Kentucky bluegrass (*Poa pratensis* L.). *Hort Sci* 44:274-279.
- Kubik, C., J. Honig, W.A. Meyer and S.A. Bonos. 2009. Genetic diversity of creeping bentgrass cultivars using SSR markers. *International Turfgrass Society Research Journal* 11:533-547.
- Park, B.S., J.M. Bokmeyer, J.A. Murphy, S.A. Bonos, and W.A. Meyer. 2009. Evaluation of tall fescue under simulated wear. *International Turfgrass Society Research Journal* 11:563-572.
- Watkins, E., S.A. Bonos and W.A. Meyer. 2009. Heritability of brown patch resistance in tall fescue. *International Turfgrass Society Research Journal* 11:271-281.
- Watkins, E., S.A. Bonos, M. Clark and W.A. Meyer. 2009. Ploidy determination of tufted hairgrass collections using flow cytometry. *International Turfgrass Society Research Journal* 11:599-605.
- Abraham, E., S.A. Bonos and W.A. Meyer. 2008. Differential responses of hybrid bluegrass and Kentucky bluegrass to drought and heat stress. *HortScience* 43(7):2191-2195.
- Rotter, D., Bharti, A.K., Li, H.M., Luo, C., Bonos, S.A., Bughrara, S., Jung, G., Messing, J., Meyer, W.A., Rudd, S., Warnke, S.E., Belanger, F.C. 2007. Analysis of EST sequences suggests recent origin of allotetraploid colonial and creeping bentgrasses. *Mol. Genet. Genomics* 278:197-209.

*Cultivar Registrations:*

Bonos, S.A., S. Tubbs, K. Hignight, D. Rush, R. Bara and W.A. Meyer. 2009. Registration of 'Bedazzled' Kentucky bluegrass. *Journal of Plant Registrations* 3:127-131.

Bonos, S.A., S. Johnson, D. Smith, W.A. Meyer and C.R. Funk. Registration of 'Cindy Lou' strong creeping red fescue. *Journal of Plant Registrations* 1:49-50.

Bonos, S.A., D. Hignight, K. Hignight, Tami Brown and W.A. Meyer. 2012. Registration of 'Mallard' Kentucky bluegrass. *Journal of Plant Registrations* 6:6-10.

450 Plant Variety Protection Applications Applied for or Issued