

C-4		Jt./C-1 98	Seed Germination (Bus. Mtg.) 104		Posters: Seed Production 199	<i>Symp.</i> : Modern Approaches to Improve Soybean Seed Competition 309	Posters: Seed Quality 310	
		Jt./C-2 99	Posters: Genetic Purity 105					
C-5	<b>SUNDAY, Oct. 31</b> Turfgrass Tour 67	Graduate Student Oral Presentation: I. Breeding, Fertility, Soils, & Management 106 Turfgrass Weed Control 107	Posters: Graduate Student Poster Competition and Turfgrass Pests 108	Graduate Student Oral Competition: II. Turfgrass Pest Management 200	Graduate Student Oral Competition: III. Environmental Stresses 202	<i>Symp.</i> : Winter Injury 311 Jt./A-1 273	Turfgrass Breeding and Biotechnology 311	Turfgrass Nutrition 390
	Extension Roundtable 67		Bus. Mtg. 111	Management, Soil Physical Properties, Nutrient Fate, and Diseases 201	Drought and Salinity 203		What's New in the Turfgrass Industry? 312	Environmental Stresses and Physiology 391
			<i>Symp.</i> : Water Use, Conservation & Public Policy for the Turfgrass Industry 111		Posters: Turfgrass Establishment and Management 204		Posters: Turfgrass Science, Breeding, and Biotechnology 313	
C-6		Robert F Barnes Graduate Oral Paper Competition 112	Forage Production and Nutrient Mgmt. 113	Forage and Grazing Lands Breakfast (Bus. Mtg.) 189	Plant and Animal Responses to Grazing 207	<i>Symp.</i> : Forage Breeding: Is There a Future? 315	Forage Nutritive Value 316	
		Forage Physiology and Biodiversity 112	Posters: Forage Establishment 114	<i>Symp.</i> : Grazing Research and Education: Continuous, Rotational, or Terminal? 206	Posters: Pasture Management and Animal Production 208		Posters: Forage Breeding and Genetics 316	
			Posters: Forage Ecology and Physiology 114		Posters: Herbage Production and Chemical Composition 209		Posters: Forage Chemical Composition 317	
			Posters: Nutrient Management and Fertilization 115					
C-7		<i>Symp.</i> : Polyploidy and Genome Interactions 116	Quantitative Trait Loci (QTL) Analyses: I. (Bus. Mtg.) 116	<i>Symp.</i> : New Technologies for Crop Improvement 210	Posters: Abiotic Stress and Disease Traits 212	Transformation/ Gene Expression 318	Manipulation of Value-added Traits 319	Molecular Markers/ Mapping 392
			Posters: Gene Manipulation and Expression 117	Posters: Quantitative Trait Loci (QTL) Analyses: II. 211			Posters: Molecular Marker-Assisted Selection 320	

(continued on next page)

## CROP SCIENCE DIVISIONS

### Div. C-5—Turfgrass Science

*Presiding: Gwen K. Stahnke, Washington State Univ.*

#### Turfgrass Tour

AM

- 9:15 **Buses begin loading at the Convention Place Entrance, Level 1 of the Convention Center.** Tickets required, \$55.00 each.
- 9:30 **Buses depart from the Convention Center.** The tour includes a stop at Glendale Country Club in Bellevue, WA. The country club features sand topdressed fairways, salmon bearing streams, water quality monitoring, Audubon sanctuary program, and other research projects. Lunch will be served in the clubhouse. Appropriate attire is required in the clubhouse thus not allowing blue jeans and tee shirts. The group will also tour Safeco Field (Seattle Mariners) facilities, including a natural grass field with a retractable roof and considerable shade challenges.
- 4:00 **Buses return to the Convention Center.**

FRIDAY—SUNDAY

### Div. C-5—Turfgrass Science

#### SESSION 1—CONVENTION CENTER, ROOM 608, SIXTH FLOOR

*Presiding: Kevin Frank, Michigan State Univ.*

#### Extension Roundtable: Lawns and the Environment

PM

- 6:55 **Introductory Remarks.**
- 7:00 **Updates: 1) Lawns and the Environment Initiative. 2) CSREES: The USDA-LGU Partnership.** J. Green\*, USDA CSREES PAS.
- 7:20 **Lawns and the Environment Initiative: Industry Perspective on Consumer Attitudes to the Risk/Benefits of Lawn in Urban Settings.** K. Hurto\*, TruGreen ChemLawn.
- 7:40 **Innovative Approaches to Consumer Education: Earth-Wise Lawn and Landscape Care and the “If Plants Could Talk” TV Series.** W.T. Hlubik\*, Rutgers Cooperative Extension.
- 8:00 **Florida’s Green Industries Best Management Practices: The Educational Program.** L. Trenholm\*, Univ. of Florida.
- 8:20 **Discussion.**
- 8:40 **Adjourn.**

Div. C-5—Turfgrass Science

SESSION 2—SHERATON SEATTLE HOTEL & TOWERS,  
GRAND BALLROOM B, SECOND FLOOR

*Presiding: Dale Bremer, Kansas State Univ.*

**Graduate Student Oral Competition: I—  
Breeding, Fertility, Soils, and Management**

AM

- 7:25 **Introductory Remarks.**
- 7:30 **Nitrogen Stress Level in Creeping Bentgrass can be Detected via Remote Sensing.** J.K. Kruse\*, Iowa State Univ., N.E. Christians, Iowa State Univ., M.H. Chaplin, Iowa State Univ.
- 7:45 **Peroxidase Genes And Their Diversity In Buffalograss.** O. Gulsen\*, Univ. of Nebraska-Lincoln, R.C. Shearman, Univ. of Nebraska-Lincoln, T.M. Heng-Moss, Univ. of Nebraska-Lincoln, K.P. Vogel, USDA-ARS, Lincoln, NE, D.J. Lee, Univ. of Nebraska-Lincoln, P.S. Baenziger, Univ. of Nebraska-Lincoln, G. Sarath, USDA-ARS, Lincoln, NE.
- 8:00 **Enhanced Linkage Map of Creeping Bentgrass using ESTs, and Mapping QTLs for Leaf Color, Shoot Density, Aggressiveness and Disease Resistance.** N. Chakraborty\*, UW Madison, J.J. Bae, UW Madison, J. Curley, UW Madison, S. Warnke, US National Arboretum, Washington D.C., G. Jung, UW Madison.
- 8:15 **Effects of Foliar-Applied Nitrogen on Creeping Bentgrass Color.** M.S. Harrell\*, Univ. of Kentucky, D.W. Williams, Univ. of Kentucky, A.J. Powell, Univ. of Kentucky.
- 8:30 **The Response of Growth, Quality and N Leaching from St. Augustinegrass Maintained on Soil Containing Different Organic Matter Contents.** D. Park\*, Univ. of Florida, J. Cisar, Univ. of Florida, G. Snyder, Univ. of Florida, K. Williams, Univ. of Florida.
- 8:45 **Discussion.**
- 8:50 **Recess.**
- 9:00 **Landscape Impact on Suburban Runoff: Determining Nutrient Loading Rates Based on Land Use.** Z.M. Easton\*, Cornell Univ., A.M. Petrovic, Cornell Univ.
- 9:15 **Estimation of Cation Exchange Capacity in Sand Root-zones.** M.S. Woods\*, Cornell Univ., Q.M. Ketterings, Cornell Univ., F.S. Rossi, Cornell Univ.
- 9:30 **Soil Physical Properties of Golf Course Putting Greens over Time.** J. Lewis\*, Univ. of Nebraska-Lincoln, R. Gaussoin, Univ. of Nebraska-Lincoln, R. Shearman, Univ. of Nebraska-Lincoln, M. Mamo, Univ. of Nebraska-Lincoln, C. Wortmann, Univ. of Nebraska-Lincoln.
- 9:45 **Basic Cation Soil Testing Methods for Sand Based Greens.** R.A. St. John\*, Iowa State Univ., N.E. Christians, Iowa State Univ., H.G. Taber, Iowa State Univ.
- 10:00 **Using Geostatistics to Evaluate Sand-Based Sports Fields.** J.T. Vanini\*, Michigan State Univ., S.A. Kravchenko, Michigan State Univ., B.J. Horvath, Michigan State Univ., J.N. Rogers, III, Michigan State Univ.
- 10:15 **Discussion.**
- 10:20 **Recess.**
- 10:30 **Use of Soil Testing to Predict Runoff Losses of Phosphorus from Turfgrass.** D.J. Soldat\*, Cornell Univ., A.M. Petrovic, Cornell Univ.

- 10:45 **Creeping bentgrass and tall fescue responses to biostimulants under deficit irrigation.** A.J. LaBranche\*, Virginia Tech, E.H. Ervin, Virginia Tech, X. Zhang, Virginia Tech.
- 11:00 **The Establishment of Turfgrass vs. Prairie Buffer Strips to Reduce Stormwater Runoff.** K. Steinke\*, Univ. of Wisconsin, J.C. Stier, Univ. of Wisconsin, W.R. Kussow, Univ. of Wisconsin.
- 11:15 **Cultivation Techniques to Maximize the Efficiency of Organic Matter Removal from Sand-Based Putting Greens.** J.W. Landreth\*, Univ. of Arkansas, D.E. Karcher, Univ. of Arkansas, M.D. Richardson, Univ. of Arkansas, J.M. McCalla, Univ. of Arkansas.
- 11:30 **Effect of Fall Preparation and Spring Transition Method on Overseeded Zoysiagrass Vigor and Quality.** J.B. Willis\*, Virginia Tech, S.D. Askew, Virginia Tech.
- 11:45 **Discussion.**
- 11:50 **Adjourn.**

**Div. C-5—Turfgrass Science**

**SESSION 3—SHERATON SEATTLE HOTEL & TOWERS,  
GRAND BALLROOM C, SECOND FLOOR**

*Presiding: Steve Keeley, Kansas State Univ.,  
Division of Horticulture*

**Turfgrass Weed Control**

AM

- 7:55 **Introductory Remarks.**
- 8:00 **Weed Control and Turfgrass Response to Herbicide Programs for Bermudagrass Seedling Establishment.** W.L. Barker\*, Virginia Tech, J.B. Willis, Virginia Tech, Blacksburg, VA, D.B. Ricker, Virginia Tech, Blacksburg, VA, S.D. Askew, Virginia Tech, Blacksburg, VA.
- 8:15 **Nimblewill Control with Dazomet.** J.B. Willis\*, Virginia Tech, J.B. Beam, Virginia Tech, Blacksburg, VA, W.L. Barker, Virginia Tech, Blacksburg, VA, S.D. Askew, Virginia Tech, Blacksburg, VA.
- 8:30 **Post Emergence Annual Bluegrass Control.** J.A. Borger\*, Penn State Univ., T.L. Watschke, Penn State Univ.
- 8:45 **Postemergence Control of Fairyway Height Annual Bluegrass with Bispyribac Sodium and HM9930.** R.N. Calhoun\*, Michigan State Univ., A.D. Hathaway, Michigan State Univ.
- 9:00 **Weed Control Options for Seeded Hybrid Bluegrass (*Poa pratensis* X *Poa arachnifera*) Establishment.** J.S. McElroy\*, Univ. of Tennessee, P.D. Hahn, Univ. of Tennessee, G.K. Breeden, Univ. of Tennessee, J.C. Sorochan, Univ. of Tennessee.
- 9:15 **Discussion.**
- 9:20 **Recess.**
- 9:30 **Selective Annual Bluegrass Control in Cool Season Turf with Velocity (Bispyribac-sodium).** A.G. Estes\*, Clemson Univ., L.B. McCarty, Clemson Univ., J.R. Chamberlin, Valent USA Corporation.

## DIV. C-5 — MONDAY, NOV. 1

- 9:45 **Annual Bluegrass Control in Kentucky Bluegrass.** S.E. Hart\*, Rutgers Univ., D.W. Lycan, Rutgers Univ.
- 10:00 **Effect of Bermudagrass Cultivar and Herbicide on Transition Success in the Upper South.** S.D. Askew\*, Virginia Tech, E.H. Ervin, Virginia Tech, Blacksburg, VA, X. Zang, Virginia Tech, Blacksburg, VA, J.B. Beam, Virginia Tech, Blacksburg, VA, W.L. Barker, Virginia Tech, Blacksburg, VA, J.B. Willis, Virginia Tech, Blacksburg, VA, A.J. LaBranche, Virginia Tech, Blacksburg, VA.
- 10:15 **Glyphosate-Resistant Creeping Bentgrass for Fairways in Virginia.** D.B. Ricker\*, Virginia Tech, J.B. Beam, Virginia Tech, W.L. Barker, Virginia Tech, J.B. Willis, Virginia Tech, S.D. Askew, Virginia Tech.
- 10:30 **Discussion.**
- 10:35 **Adjourn.**

MONDAY

### Div. C-5—Turfgrass Science

#### SESSION 4—CONVENTION CENTER, EXHIBIT HALL 4ABC, FOURTH FLOOR

Posters on Display 8:00 am–6:00 pm

Authors Present 1:00–3:00 pm

### Graduate Student Poster Competition and Turfgrass Pests

Poster  
no.

- 1325 **Perenniality Traits in *Poa annua* L. Populations throughout Utah's Diverse Environments.** A.N. Stoy\*, Utah State Univ., P.G. Johnson, Utah State Univ.
- 1326 **Multi-spectral Reflectance of Warm-season Turfgrasses as Influenced by Deficit Irrigation.** J.H. Lee\*, Univ. of Florida, J.B. Unruh, Univ. of Florida, L.E. Trenholm, Univ. of Florida.
- 1327 **Evaluation of Plant Defense Activators for Dollar Spot and Brown Patch Suppression in Creeping Bentgrass.** Q. Zhang\*, Kansas State Univ., J. Fry, Kansas State Univ., N. Tisserat, Kansas State Univ.
- 1328 **Potassium Supply Rates in a Calcareous Sand Rootzone.** M.S. Woods\*, Cornell Univ., Q.M. Ketterings, Cornell Univ., F.S. Rossi, Cornell Univ.
- 1329 **Development of a Precision Sensing Sprayer for the Application of Fertilizer to Turfgrass.** J.Q. Moss\*, Oklahoma State Univ., G.E. Bell, Oklahoma State Univ., J.B. Solie, Oklahoma State Univ., M.L. Stone, Oklahoma State Univ., D.L. Martin, Oklahoma State Univ., M.E. Payton, Oklahoma State Univ.
- 1330 **Evaluating Mowing Height and Fertilizer Regimes for Re-Establishment of Sports Fields in 70 Days.** J.T. Vanini\*, Michigan State Univ., J.N. Rogers, III, Michigan State Univ.
- 1331 **Fungal Induced Sex Change in Male Buffalograss Mimics Tasselseed-2 Mutants.** D.R. Huff, The Penn State Univ., Univ. Park, PA, A. Chandra\*, The Penn State Univ., Univ. Park, PA.
- 1332 **Effects of Rootzone Heating on TifSport Bermudagrass.** J.P. McPherson\*, Virginia Tech, E.H. Ervin, Virginia Tech, X. Zhang, Virginia Tech, J.M. Goatley, Virginia Tech.

- 1333 **Seasonal Canopy Carbon Exchange Rates of Trinexapacetyl and Paclobutrazol Treated Kentucky Bluegrass.** J.S. Beasley\*, Univ. of Illinois, B.E. Branham, Univ. of Illinois, L.A. Spomer, Univ. of Illinois.
- 1334 **Nutrient and Organic Matter Status in Aging Golf Course Putting Greens.** T.A. McClellan\*, Univ. of Nebraska-Lincoln, R.E. Gaussoin, Univ. of Nebraska-Lincoln, R.C. Shearman, Univ. of Nebraska-Lincoln, G.L. Horst, Univ. of Nebraska-Lincoln, M. Mamo, Univ. of Nebraska-Lincoln, C.S. Wortmann, Univ. of Nebraska-Lincoln.
- 1335 **Nitrogen Fertilization Effects on Three Lawn Species in Indiana.** K.S. Walker\*, Purdue Univ., West Lafayette, Indiana, C.A. Bigelow, Purdue Univ., West Lafayette, Indiana, G.A. Hardebeck, Purdue Univ., West Lafayette, Indiana.
- 1336 **Dormant seeding of bermudagrass cultivars.** B.R. Shaver\*, Univ. of Arkansas, M.D. Richardson, Univ. of Arkansas, D.E. Karcher, Univ. of Arkansas, J.H. McCalla, Univ. of Arkansas, P. Berger, Univ. of Arkansas.
- 1337 **Optimizing Irrigation Scheduling on Golf Course Putting Greens Using Capacitance Soil Moisture Sensors.** J. Sass\*, Univ. of Minnesota, B.P. Horgan, Univ. of Minnesota, V.W. Cline, The Toro Company.
- 1338 **High Temperature and Drought Effects of a Texas Bluegrass Hybrid Compared with Kentucky Bluegrass and Tall Fescue.** K. Su\*, Kansas State Univ., D. Bremer, Kansas State Univ., S. Keeley, Kansas State Univ., J. Fry, Kansas State Univ.
- 1339 **The Role of the Antioxidant Defense Response in Bentgrass Species Exposed to Drought Stress.** B. Huang, Rutgers University, New Brunswick, NJ, M. DaCosta\*, Rutgers Univ.
- 1340 **Evaluation of Machine Vision and Multispectral Radiometry in Assessment of Turf Nutrient and Moisture Status.** S. Narra\*, Univ. of Illinois at Urbana-Champaign, T.W. Fermanian, Univ. of Illinois at Urbana-Champaign, J.M. Swiader, Univ. of Illinois at Urbana-Champaign, T.B. Voigt, Univ. of Illinois at Urbana-Champaign, L.F. Tian, Univ. of Illinois at Urbana-Champaign.
- 1433 **Mapping of Quantitative Trait Loci (QTL) for Winter Hardiness in Perennial Ryegrass (*Lolium perenne* L.).** Y. Xiong\*, Iowa State University, S. Fei, Iowa State Univ., E.C. Brummer, Iowa State Univ., R. Arora, Iowa State Univ., R. Barker, USDA-ARS, Corvallis, G. Jung, Univ. of Wisconsin, S. Warnke, USDA-ARS, Washington, DC.
- 1434 **Response of Creeping Bentgrass Cultivars to Foliar-Applied Urea Nitrogen.** M.S. Harrell\*, Univ. of Kentucky, D.W. Williams, Univ. of Kentucky, A.J. Powell, Univ. of Kentucky.
- 1435 **Irrigation Scheduling On Sand Based Putting Greens Using Volumetric Water Content.** J.P. Miller\*, Univ. of Arkansas, D.E. Karcher, Univ. of Arkansas, M.D. Richardson, Univ. of Arkansas, B. Leinauer, New Mexico State Univ., J.W. Landreth, Univ. of Arkansas.
- 1436 **Winter Germination of Annual, Intermediate and Perennial Ryegrasses for Sports Turf.** M.J. Johns\*, Washington State Univ.-Puyallup, E.D. Miltner, Washington State Univ.-Puyallup, G.K. Stahnke, Washington State Univ.-Puyallup.
- 1437 **Methods of Direct Sensing to Measure Turf Diseases.** Z. Anderson\*, Univ. of Illinois, T.W. Fermanian, Univ. of Illinois, T. Frank, Univ. of Illinois, L.A. Spomer, Univ. of Illinois.
- 1438 **Integrating Drive herbicide and seawater to control kikuyugrass and annual bluegrass in seashore paspalum.** D. Green II\*, California Polytechnic State Univ., J. Przygodzinski, Kukio Golf Club, Captian Cook, HI.

- 1439 **Distribution of Ophiosphaerella Species Causing Spring Dead Spot of Bermudagrass in North Carolina.** E.L. Butler, NC State Univ., L.P. Tredway\*, NC State Univ.
- 1440 **Seasonal Ecology of the European Crane Fly, an Emerging Turfgrass Pest on Golf Courses in Quebec.** E. Taschereau\*, Univ. Laval, J. Brodeur, Univ. Laval, L. Simard, Univ. Laval, J. Dionne, Royal Canadian Golf Association, Oakville, Ontario.
- 1525 **Prediction estimates of Dollar Spot Incidence Occuring on a Mixed Sward of Creeping Bentgrass and Annual Bluegrass.** B.J. Horvath\*, Mich. St. Univ., A.N. Kravchenko, Mich. St. Univ., J.M. Vargas, Jr., Mich. St. Univ.
- 1526 **Response of Dallisgrass and Bahiagrass Along A Soil Moisture Gradient.** G.M. Henry\*, North Carolina State Univ., M.G. Burton, North Carolina State Univ., F.H. Yelverton, North Carolina State Univ.
- 1527 **Nitrogen Management in Turfgrass with an Example in Disease Control.** D. Li\*, North Dakota State Univ., C. Biller, North Dakota State Univ., S. Neate, North Dakota State Univ., R. Smith, North Dakota State Univ., C. Larson, North Dakota State Univ.
- 1528 **Improvement on Gray Leaf Spot Resistance through Recurrent Breeding Program.** Y. Han\*, Rutgers Univ., S.A. Bonos, Rutgers Univ., B.B. Clarke, Rutgers Univ., W.A. Meyer, Rutgers Univ.
- 1529 **Herbicide and Nutrient Effects on the Development of Gray Leaf Spot of Tall Fescue.** J.P. Gregg, NC State Univ., C.H. Peacock\*, NC State Univ., H.D. Shew, NC State Univ., L.P. Tredway, NC State Univ.
- 1531 **Sulfosulfuron a New Herbicide for Weed Management in Warm Season Turf.** S. Mitra\*, California State Polytechnic Univ., Pomona, P.C. Bhowmik, Univ. of Massachusetts, Amherst, R.P. Crockett, Monsanto Co., D.C. Riego, Monsanto Co.
- 1532 **Host Plant Resistance in Seashore Paspalum to the Tropical Sod Webworm and the Greenbug.** R.T. Nagata\*, Univ. of Florida, G.S. Nuessly, Univ. of Florida, Belle Glade, FL, R.H. Cherry, Univ. of Florida, Belle Glade, FL, M.G. Hentz, Univ. of Florida, Belle Glade, FL.
- 1533 **Evaluating Bispyribac Sodium Activity for Poa annua Removal from Bentgrass Greens.** R.N. Calhoun\*, Michigan State Univ., A.D. Hathaway, Michigan State Univ.
- 1534 **Heritability of Brown Patch Resistance in Tall Fescue.** S.A. Bonos\*, Rutgers Univ., E. Watkins, Univ. of Minnesota, W.A. Meyer, Rutgers Univ.
- 1535 **Effects of Nematode Management on Harvest Intervals in Bermudagrass Sod Production.** F.C. Waltz, Jr.\*, The Univ. of Georgia-Griffin, W.T. Crow, Univ. of Florida, N.R. Walker, Oklahoma State Univ., T.W. Green, The Univ. of Georgia-Cooperative Extension Serv, D.W. Lickfeldt, Dow AgroSciences LLC.
- 1536 **Survey of Entomopathogenic Nematodes on Golf Courses in Ontario and Quebec, Canada.** L. Simard\*, Agriculture and Agri-Food Canada, G. Belair, Agriculture and Agri-Food Canada, J. Dionne, Royal Canadian Golf Association, Oakville, Ontario.
- 1537 **Effect of Salinity and Subsurface Irrigation on Cool Season Turfgrass Establishment.** C. Johnson\*, New Mexico State Univ., B. Leinauer, New Mexico State Univ., A. Petermeier, New Mexico State Univ., B. Erhard, New Mexico State Univ.

- 1538 **Impact of Turfgrass System Age on Pronamide Biodegradation.** A.C. Hixson\*, N. C. State Univ, W. Shi, N. C. State, F.H. Yelverton, N. C. State, J.B. Weber, N. C. State.
- 1539 **Early Detection of Moisture Stress on Perennial Ryegrass Fairways via Remote Sensing.** J.K. Kruse\*, Iowa State Univ., N.E. Christians, Iowa State Univ., M.H. Chaplin, Iowa State Univ.
- 1540 **The Relationship among NDVI, Nitrogen, and Irrigation Rate on Bermudagrass.** X. XIONG\*, Oklahoma State Univ., G. BELL, Oklahoma State Univ.

**Div. C-5—Turfgrass Science**

**SESSION 5—SHERATON SEATTLE HOTEL & TOWERS,  
GRAND BALLROOM B, SECOND FLOOR**

*Presiding: Jack Fry, Kansas State Univ.*

**Div. C-5 Business Meeting**

PM

- 3:25 **Introductory Remarks.**
- 3:30 **Business Meeting.**
- 5:00 **Adjourn.**

**Div. C-5—Turfgrass Science**

**SESSION 6—SHERATON SEATTLE HOTEL & TOWERS,  
GRAND BALLROOM B, SECOND FLOOR**

*Presiding: Darin Lickfeldt, Dow AgroSciences LLC*

**Symposium—Water Use, Conservation, and  
Public Policy for the Turfgrass Industry**

PM

- 6:55 **Introductory Remarks.**
- 7:00 **Scanning the Waterfront: Water Use and Protection Issues Across the U.S.** G.T. Lyman\*, GCSAA.
- 7:20 **Can the Green Industry Support Landscape Water Policy?** A. Thurston\*, Tacoma Public Utilities.
- 7:40 **Research/Information To Maximize Water Conservation: Implications to Scientists.** R. Carrow\*, Univ. of Georgia-Griffin.
- 8:00 **Lessons Learned from Water Conservation Efforts in Production Agriculture.** A. Clemmens\*, USDA-ARS, Phoenix, AZ.
- 8:20 **The Role of Irrigation Technology for Efficient Water Use in Turfgrass and Landscape.** D. Zoldoske\*, CA State Univ.-Fresno.
- 8:40 **Discussion.**
- 9:00 **Adjourn.**

Div. C-5—Turfgrass Science

SESSION 7—CONVENTION CENTER, ROOM 608,  
SIXTH FLOOR

*Presiding: Clint Waltz, Univ. of Georgia*

**Graduate Student Oral Competition:  
II. Turfgrass Pest Management**

AM

- 7:25 **Introductory Remarks.**
- 7:30 **QTL Mapping of Resistance to Gray Leaf Spot in Ryegrass: Consistency of QTL Between Two Mapping Populations.** J. Curley\*, UW-Madison, S.C. Sim, UW-Madison, S. Warnke, US National Arboretum, Washington, D.C., R. Barker, USDA-ARS, Corvallis, OR, S. Leong, UW-Madison, G. Jung, UW-Madison.
- 7:45 **Determining Dollar Spot Fungicide Resistance in Tennessee and Northern Mississippi.** P.R. Baird\*, Univ. of Tennessee, A. Windham, Univ. of Tennessee Extension, Nashville, TN, J. Sorochan, Univ. of Tennessee, Knoxville, TN, R. Triggiano, Univ. of Tennessee, Knoxville, TN, M. Windham, Univ. of Tennessee, Knoxville, TN, T. Samples, Univ. of Tennessee, Knoxville, TN.
- 8:00 **Development of Effective Fungicide Programs for Spring Dead Spot Control in Bermudagrass.** E.L. Butler\*, NC State Univ., L.P. Tredway, NC State Univ.
- 8:15 **Impact of Nitrogen, Plant Growth Regulators, and Verticillium on the Severity of Anthracnose on an Annual Bluegrass Green.** J.C. Inguagiato\*, Rutgers Univ., J.A. Murphy, Rutgers Univ., T.J. Lawson, Rutgers Univ., B.S. Park, Rutgers Univ., B.B. Clarke, Rutgers Univ.
- 8:30 **Early Detection of Turf Disease Through Direct Sensing of a Creeping Bentgrass Canopy.** Z. Anderson\*, Univ. of Illinois, T.W. Fermanian, Univ. of Illinois, H.T. Wilkinson, Univ. of Illinois.
- 8:45 **Discussion.**
- 8:50 **Recess.**
- 9:00 **Comparative Genetic Dissection of Resistance to Crown Rust (*Puccinia coronata* f.sp. *lolii*) in Ryegrass and among the Poaceae Species using DNA Markers.** S. Sim\*, Univ. of Wisconsin-Madison, A. Hamblin, Univ. of Illinois-Urbana/Champaign, L. Nelson, Texas A&M Univ. AREC-Overton, G. Jung, Univ. of Wisconsin-Madison.
- 9:15 **Evidence for a change in species designation for *Colletotrichum graminicola*.** J.A. Crouch\*, Rutgers Univ., B.B. Clarke, Rutgers Univ., B.I. Hillman, Rutgers Univ.
- 9:30 **Optimal Timing for Annual Bluegrass Seedhead Suppression with ethephon plus Trinexapac-ethyl.** W.L. Barker\*, Virginia Tech, J.B. Willis, Virginia Tech, Blacksburg, VA, J.B. Beam, Virginia Tech, Blacksburg, VA, S.D. Askew, Virginia Tech, Blacksburg, VA, D.R. Spak, Bayer Environmental Science, New Holland, PA.
- 9:45 **Seasonal Effects on Annual Bluegrass Control in Creeping Bentgrass with Bispyribac.** D.W. Lycan\*, Rutgers Univ., S.E. Hart, Rutgers Univ.
- 10:00 **Converting Established Putting Greens to Glyphosate-Resistant Creeping Bentgrass.** D.B. Ricker\*, Virginia Tech, J.B. Beam, Virginia Tech, Blacksburg, VA, W.L. Barker, Virginia Tech, Blacksburg, VA, J.B. Willis, Virginia Tech, Blacksburg, VA, S.D. Askew, Virginia Tech, Blacksburg, VA.

- 10:15 **Discussion.**
- 10:20 **Recess.**
- 10:30 **Techniques for Conversion of Putting Greens to Roundup Ready Creeping Bentgrass.** L.A.D. Dant\*, Iowa State Univ., N.E.C. Christians, Iowa State Univ. Ames, IA, S.F. Fei, Iowa State Univ. Ames, IA.
- 10:45 **Poa annua infestation into an Agrostis palustris putting green as affected by cultivar and quantified foot traffic.** A.D. Hathaway\*, Michigan State Univ., D.D. Buhler, Michigan State Univ., East Lansing, MI, T.A. Nikolai, Michigan State Univ., East Lansing, MI, K.W. Frank, Michigan State Univ., East Lansing, MI, J.M. Vargas, Michigan State Univ., East Lansing, MI, R.N. Calhoun, Michigan State Univ., East Lansing, MI.
- 11:00 **Selective Removal of Creeping Bentgrass from Kentucky Bluegrass.** M.A.J. Jones\*, Iowa State Univ., N.E.C. Christians, Iowa State Univ. Ames, IA.
- 11:15 **Spatial Factors Affecting the Distribution of Dallisgrass and Bahiagrass on Golf Courses.** G.M. Henry\*, North Carolina State Univ., M.G. Burton, North Carolina State Univ., F.H. Yelverton, North Carolina State Univ.
- 11:30 **Impact of Fipronil Residues on Mole Cricket Behavior and Mortality in Bermudagrass.** H.D. Cummings\*, NC State Univ., R.L. Brandenburg, NCSU, F.H. Yelverton, NCSU, R.B. Leidy, NCSU.
- 11:45 **Discussion.**
- 11:50 **Adjourn.**

TUESDAY

**Div. C-5—Turfgrass Science**

**SESSION 8—CONVENTION CENTER, ROOM 609,  
SIXTH FLOOR**

*Presiding: Shawn Askew, Virginia Tech*

**Management, Soil Physical Properties,  
Nutrient Fate, and Diseases**

AM

- 7:55 **Introductory Remarks.**
- 8:00 **Converting Cool-Season Golf Fairways to Seeded Bermudagrass.** S.D. Askew\*, Virginia Tech, M. Goatley, Virginia Tech, J.B. Willis, Virginia Tech, W.L. Barker, Virginia Tech, D.B. Ricker, Virginia Tech.
- 8:15 **Antioxidant enzyme activities over time after mowing.** M.J. Howieson, Iowa State Univ., Ames, IA, N.E. Christians, Iowa State Univ., Ames, IA.
- 8:30 **Frequent High Rate Overseeding Reduces Weed Population and Improves Sports Turf Quality.** F.S. Rossi\*, Cornell Univ.
- 8:45 **Discussion.**
- 8:50 **Recess.**

## DIV. C-5 — TUESDAY, NOV. 2

- TUESDAY**
- 9:00 **Soil porosity of residential prairie plantings relative to age since establishment.** M.R. Johnston\*, Univ. of Wisconsin, N.J. Balster, Univ. of Wisconsin, Madison, WI.
- 9:15 **BRD of Sea Isle 2000 Paspalum in Response to Surface Soil Cultivation Techniques.** D.M. Kopec\*, Univ. Az, J.J. Gilbert, Univ. Az., M. Pessearkli, Univ. Az., J. Walworth, Univ. Az., P.W. Brown, Univ. Az.
- 9:30 **Evaluation of Creeping Bentgrass Root Structure and Development on Golf Greens of Varying Soil Depth.** B.A. Frazer\*, Penn State Univ., A.S. McNitt, Penn State University, University Park, PA, M.J. Schlossberg, Penn State Univ., University Park, PA, W. Uddin, Penn State University, University Park, PA, D.M. Petrunak, Penn State University, Univ. Park, PA, E.M. Lyons, Penn State Univ., Univ. Park, PA.
- 9:45 **Nutrient Mobility and Filtering in Sand-Capped Golf Course Fairways.** E.D. Miltner\*, Washington State Univ., G.K. Stahnke, Washington State Univ., G.J. Rinehart, Washington State Univ.
- 10:00 **Nitrogen and Phosphorus Leaching in a Simulated USGA Putting Green as Influenced by Surfactant-Modified Soil Amendments.** T.W. Shaddox\*, Univ. of Florida, J.B. Sartain, Univ. of Florida, P. Nkedi-Kizza, Univ. of Florida, D.A. Graetz, Univ. of Florida, G.L. Miller, Univ. of Florida, J.L. Bonczek, Univ. of Florida.
- 10:15 **Discussion.**
- 10:20 **Recess.**
- 10:30 **RAPD Characterization of Pyricularia Grisea causing Gray Leaf Spot of Perennial Ryegrass.** Y. Han\*, Rutgers Univ., S.A. Bonos, Rutgers Univ., B.B. Clarke, Rutgers Univ., W.A. Meyer, Rutgers Univ.
- 10:45 **Distribution of Turfgrass Anthracnose Sensitivities to Sterol Biosynthesis Inhibiting Fungicides.** F.P. Wong\*, Univ. of California, S. Midland, Univ. of California.
- 11:00 **Cool Season Turfgrass Response to Rapid Blight Disease.** D.M. Kopec\*, Univ. Az., M.O. Olsen, Univ. Az, J.J. Gilbert, Univ. Az, M. Pessarakli, Univ. Az.
- 11:15 **Discussion.**
- 11:20 **Adjourn.**

### Div. C-5—Turfgrass Science

#### SESSION 9—CONVENTION CENTER, ROOM 608, SIXTH FLOOR

*Presiding: Mark Carroll, Univ. of Maryland*

#### Graduate Student Oral Competition: III. Environmental Stresses

PM

- 12:55 **Introductory Remarks.**
- 1:00 **Spectroscopy analysis of salinity stressed tall fescue.** Y. Ikemura\*, New Mexico State Univ.
- 1:15 **Temperature Effects on Single-Leaf Carbon Exchange Rates of Trinexapac-ethyl and Paclobutrazol Treated Kentucky Bluegrass.** J.S. Beasley\*, Univ. of Illinois, B.E. Branham, Univ. of Illinois.

- 1:30 **Hormone Metabolism and Growth Characteristics Associated with Survival and Recovery from Drought in Three Bentgrass Species.** B. Huang, Rutgers University, New Brunswick, NJ, M. DaCosta\*, Rutgers Univ.
- 1:45 **Physiological Responses of Warm-Season Turfgrasses to Deficit Irrigation.** J.H. Lee\*, Univ. of Florida, L.E. Trenholm, Univ. of Florida, J.B. Unruh, Univ. of Florida.
- 2:00 **Regulation of Tidwarf Bermudagrass Phenotype by Light and Temperature.** S.D. Abernathy\*, Texas A&M Univ., R. Stanford, Texas A&M Univ., R.H. White, Texas A&M Univ., J. Krausz, Texas A&M Univ.
- 2:15 **Analysis of Transgenic Creeping Bentgrass Under Various Light Conditions.** J. Yan\*, The Ohio State Univ., K. Dannerberger, The Ohio State Univ., D. Gardner, The Ohio State Univ., L. Lee, The Scotts Company, B. Harriman, The Scotts Company.
- 2:30 **Discussion.**
- 2:35 **Adjourn.**

**Div. C-5—Turfgrass Science**

**SESSION 10—CONVENTION CENTER, ROOM 609,  
SIXTH FLOOR**

*Presiding: Mike Fidanza, Penn State Univ.*

**Drought and Salinity**

PM

12:55 **Introductory Remarks.**

- 1:00 **Conserving Water on Turfgrasses Using Systematic Injection of Wetting Agents.** S. Mitra\*, California State Polytechnic Univ., Pomona, A. Chavez, California State Polytechnic Univ., Pomona, S. Kostka, Aquatrols Corp., M. Franklin, Aquatrols Corp.
- 1:15 **Broad-band Spectral Reflectance Models for Monitoring Drought Stress in Different Turfgrass Species.** Y. Jiang\*, The Univ. of Georgia, Griffin, GA, R.N. Carrow, The Univ. of Georgia, Griffin, GA, R.R. Duncan, Turf Ecosystems, LLC., San Antonio, TX.
- 1:30 **Effects of Trinexapac-Ethyl on the Salinity Tolerance of Two Ultradwarf Bermudagrass Cultivars.** C.M. Baldwin\*, Clemson Univ., H. Liu, Clemson Univ., Clemson, SC, L.B. McCarty, Clemson Univ., Clemson, SC, W.L. Bauerle, Clemson Univ., Clemson, SC, J.E. Toler, Clemson Univ., Clemson, SC.
- 1:45 **Irrigation water quality survey for golf courses in South-eastern Pennsylvania.** M.A. Fidanza\*, Pennsylvania State Univ., L. Stowell, PACE Turfgrass Research Institute, W. Gelterter, PACE Turfgrass Research Institute, S.D. Davis, Bayer Environmental Science.

2:00 **Discussion.**

2:05 **Recess.**

## DIV. C-5 — TUESDAY, NOV. 2

- 2:15 **Response of creeping bentgrass to salinity and mowing management.** J.M. Fu\*, Colorado State Univ., Y.Q. Qian, Colorado State Univ.
- 2:30 **The Comparison of Water Budgets from Two Contrasting Residential Landscapes in South Florida.** J. Cisar\*, Univ. of Florida, D. Park, Univ. of Florida, G. Snyder, Univ. of Florida, K. Williams, Univ. of Florida.
- 2:45 **Urban landscape irrigation with recycled wastewater in Colorado: water quality assessment and soil and plant responses.** Y. Qian\*, Colorado State Univ.
- 3:00 **Discussion.**
- 3:05 **Adjourn.**

### Div. C-5—Turfgrass Science

#### SESSION 11—CONVENTION CENTER, EXHIBIT HALL 4ABC, FOURTH FLOOR

Posters on Display 8:00 am–6:00 pm

Authors Present 1:00–3:00 pm

#### Turfgrass Establishment and Management

Poster

no.

- 1301 **Tall fescue seedling growth in response to phosphorus fertilization.** M. Carroll\*, Univ. of Maryland, T. Ngo, Univ. of Maryland, J. Krouse, Univ. of Maryland.
- 1302 **A Strip Seeder for Converting Cool-Season Turf Stands to Warm-Season Grasses.** J. Fry\*, Kansas State Univ., R. Taylor, Kansas State Univ., B. Wolf, Kansas State Univ., D. Stuntz, Alvarado Country Club, Lawrence, KS, A. Zuk, Kansas State Univ.
- 1303 **Kentucky bluegrass establishment on a sand-based rootzone.** R.M. Goss\*, Univ. of Nebraska-Lincoln, R.E. Gaussoin, Univ. of Nebraska-Lincoln.
- 1304 **Transition date and performance of turf-type annual ryegrass and perennial ryegrass overseeded on a Bermuda-grass sod.** L.R. Nelson\*, Texas A&M Univ., D.R. Chalmers, Texas A&M Univ. at College Station.
- 1305 **Managing Colonial Bentgrasses for Midwestern Golf Course Fairways.** T. Voigt, Univ. of Illinois, G. Eifert\*, Univ. of Illinois.
- 1306 **Environmental Impact of Using Type 1 Recycled Water to Irrigate Turf Over an Aquifer Recharge Zone.** J.C. Thomas\*, Texas A&M Univ., R.H. White, Texas A&M Univ., J.T. Vorheis, CHZM HILL, San Antonio, TX, H.G. Harris, CHZM HILL, Austin, TX, K. Diehl, San Antonio Water System.
- 1307 **Preemergence Herbicides Influence Dwarf Bermudagrass Root Growth.** P.E. McCullough, Rutgers Univ., T. Whitwell, Clemson Univ., L.B. McCarty, Clemson Univ., H. Liu\*, Clemson Univ.
- 1308 **Field Evaluation of BIOSOL MIX for Golf Course Greens.** H. Liu\*, Clemson Univ., C.M. Baldwin, Clemson Univ., P.J. Brown, Clemson Univ., L.B. McCarty, Clemson Univ.

- 1309 **Fate of Fertilizer 15N in Simulated Putting Greens Supporting Various Annual Bluegrass and Bentgrass Genotypes.** K. Pare\*, Washington State Univ., M.H. Chantigny, Agric. & Agri-Food Canada, K. Carey, Univ. of Guelph, W.J. Johnston, Washington State Univ., J. Dionne, Royal Canadian Golf Association.
- 1310 **Reclamation of Municipal Wastewater with Soil-Turf Filters in Tropical Climate.** G. Wiecko\*, Univ. of Guam, P. Wall, Univ. of Guam.
- 1311 **Using the Illinois Soil N Test for Predicting Nitrogen Fertility Requirements in Turfgrass.** D. Gardner\*, The Ohio State Univ., B.P. Horgan, Univ. of Minnesota, J.R. Street, The Ohio State Univ., D.D. Holdren, The Ohio State Univ.
- 1312 **Poultry Litter Sand as a Source for Putting Green Construction.** E.A. Guertal\*, Auburn Univ., J.B. Hess, Auburn Univ., J.P. Blake, Auburn Univ., S.F. Bilgili, Auburn Univ., R.A. Norton, Auburn Univ., K.S. Macklin, Auburn Univ.
- 1314 **Why Landscapers Don't Adopt Integrated Pest Management.** J.C. Stier\*, Univ. of Wisconsin-Madison, M. Ingram, Univ. of Wisconsin-Madison, E.A. Bird, Univ. of Wisconsin-Madison, K. MacKendrick, Univ. of Wisconsin-Madison, K. Mischuk, Univ. of Wisconsin-Madison.
- 1401 **Evaluation of commercially available sands for golf course bunker use.** C. Bigelow\*, Purdue Univ., G.A. Hardebeck, Purdue Univ., West Lafayette.
- 1402 **Kentucky Bluegrass Response to Three Autumn Applied Urea Sources.** C.A. Bigelow\*, Purdue Univ., K.S. Walker, Purdue Univ., West Lafayette, G.A. Hardebeck, Purdue Univ., West Lafayette.
- 1403 **Sod Production Using improved Seeded Bermudagrass.** J.H. McCalla Jr.\*, Univ. of Arkansas, M.D. Richardson, Univ. of Arkansas, Fayetteville, AR, J.W. Boyd, Univ. of Arkansas, Little Rock, AR, D.E. Karcher, Univ. of Arkansas, Fayetteville, AR, J.W. Landreth, Univ. Of Arkansas, Fayetteville, AR.
- 1404 **Managing Localized Dry Spot with Wetting Agents and Fungicide.** D.Y. Han\*, Auburn Univ., Auburn, AL, S.D. Davis, Bayer Environmental Science, Gulf Breeze, FL, M.A. Franklin, Aquatrols, Atlanta, GA, J. Olemann, Grand National Golf Club, Opelika, AL.
- 1405 **Response of TifEagle Bermudagrass to Verticutting and Nitrogen Levels.** W. Hanna\*, Univ. of Georgia.
- 1409 **Summer Tolerance to DMI Fungicides on 'Tifeagle' Bermudagrass Putting Greens.** D.Y. Han\*, Auburn Univ., J.B. Unruh, Univ. of Florida, Jay, FL.
- 1410 **Evaluation of root-zone amendments in sand-based annual bluegrass sod production.** D. Green II\*, California Polytechnic State Univ., M. Deuel, Sherwood Country Club, Thousand Oaks, CA, R. Cenell, Crane Creek Country Club, Boise, ID, M. Facciuto, California Polytechnic State Univ.
- 1411 **Nitrogen Fate in Kentucky Bluegrass Turf Fertilized in the Summer.** Z. Jiang\*, State Univ. of New York-Cobleskill.
- 1412 **Determining Nitrogen and Phosphorus Recommendations for Turfgrass Grown on a Phosphorus Deficient Soil.** S.K. Lee\*, Michigan State Univ., K.W. Frank, Michigan State Univ., J.M. Bryan, Michigan State Univ., J.R. Crum, Michigan State Univ.
- 1501 **Pesticide and Nutrient Runoff on Pacific Northwest Golf Courses.** E.D. Miltner\*, Washington State Univ., M.S. Hindahl, Links Analytical, G.K. Stahnke, Washington State Univ.
- 1502 **Phosphorus Movement and Uptake in Bermudagrass Putting Greens.** E.A. Guertal\*, Auburn Univ., W.H. Bryce, Auburn Univ.

## DIV. C-5/C-6—TUESDAY, NOV. 2

- 1503 Establishment Rate, Traffic Tolerance and Recuperative Potential of Tall Fescue.** P.J. Sherratt\*, The Ohio State Univ., J.R. Street, The Ohio State Univ., T.K. Danneberger, The Ohio State Univ.
- 1504 Long-Term Management Effects on Quality of Buffalograss Turf.** A.J. Koski\*, Colorado State Univ., S.J. Wilhelm, Colorado State Univ., Y. Qian, Colorado State Univ.
- 1505 Handling Characteristics of Perennial Ryegrass Overseeded Bermudagrass Sod.** B.R. Stewart\*, Mississippi State Univ., H.W. Phillely, Mississippi State Univ., D.W. Wells, Mississippi State Univ., V.L. Maddox, Mississippi State Univ., J.M. Goatley, Virginia Tech.
- 1506 Cemetery Cultivar Trial for Mississippi.** H.W. Phillely\*, Mississippi State Univ., B.R. Stewart, Mississippi State Univ., G.C. Munshaw, Mississippi State Univ., D.W. Wells, Mississippi State Univ., V.L. Maddox, Mississippi State Univ., J.M. Goatley, Jr., VPI & SU.
- 1507 Optimizing Production and P Export through Manure-Grown Turfgrass Sod.** B.T. McDonald, Texas A&M Univ., R.H. White, Texas A&M Univ., T.L. Provin, Texas A&M Univ., C.L. Munster, Texas A&M Univ.
- 1508 Environment and Sensor Configuration Effects on Image Sensor Performance for Turfgrass Data Collection.** T. Fermanian, Univ. of Illinois, M. Schmidt\*, John Deere, J. Reid, John Deere.
- 1509 Evaluation of Compost as a Topdressing to Multi-Use Athletic Fields.** J. Brosnan, Penn State Univ., A.S. McNitt\*, Penn State Univ., D.M. Petrunak, Penn State Univ., M.J. Schlossberg, Penn State Univ.
- 1510 Creeping Bentgrass Fairway Divot Recovery as Affected by Irrigation Frequency, Cultivar and Divot Mixture Seed Additions.** K.S. Walker\*, Purdue Univ., C.A. Bigelow, Purdue Univ., West Lafayette, G.A. Hardebeck, Purdue Univ., West Lafayette.
- 1511 Lawn Maintenance Survey of Homeowners along the Sauk River (St. Cloud, MN).** M.R. Bender\*, St. Cloud State Univ., S.M. Sewell, St. Cloud State Univ.
- 1512 The Effect of Core Aeration on Soil Compaction of Sand-Based Putting Greens.** P. Sorokovsky\*, Univ. of B.C.

### Div. C-6—Forage and Grazing Lands

#### SESSION 8—CONVENTION CENTER, ROOM 310, THIRD FLOOR

*Presiding: Lynn E. Sollenberger, Univ. of Florida*

#### **Symposium—Grazing Research and Education: Continuous, Rotational, or Terminal?**

AM

7:55 **Introductory Remarks.**

8:00 **In Pursuit of The Cutting Edge: An Historical Perspective.**  
J.C. Burns\*, USDA-ARS and NC State Univ., Raleigh, NC,

## AGRONOMIC DIVISIONS

Div. A-1—Resident Education

Div. C-5—Turfgrass Science

SESSION 6—CONVENTION CENTER, ROOM 204,  
SECOND FLOOR

*Presiding: N. Christians, Iowa State Univ.*

### Symposium—Student-Centered Learning: I.

AM

- 7:55 **Introductory Remarks.**
- 8:00 **A review of teaching methods and learning styles.** M.A. Fidanza\*, Pennsylvania State Univ., D.L. Sanford, Pennsylvania State Univ., I.A. Shibley, Pennsylvania State Univ.
- 8:30 **Student-centered Learning: Success Stories from our First Turfgrass Nutrition Laboratory.** P.J. Cook, Penn State Univ., M.J. Schlossberg\*, Penn State Univ., A.S. McNitt, Penn State Univ., P.J. Landschoot, Penn State Univ.
- 8:45 **Shared Learning: Creating New Student-Teacher Interactions.** M.S. McIntosh\*, Univ. of Maryland.
- 9:00 **Recess.**
- 9:15 **Turfgrass Associate and Baccalaureate Degree Programs at State Univ. of New York-Cobleskill.** Z. Jiang\*, State Univ. of New York-Cobleskill, R.D. Emmons, State Univ. of New York-Cobleskill.
- 9:30 **Using Magic in the Classroom.** K. Karnok\*, Univ. of Georgia.
- 9:45 **Basic GAPS: A student modeling tool for understanding soil-vegetation-atmosphere interactions.** E.R. Levine\*, NASA/GSFC, J. Robin, SSAI, Greenbelt MD, S. Riha, Cornell Univ., Ithaca NY, J. Melkonian, Cornell University, Ithaca NY.
- 10:00 **Teaching GIS to Undergraduate Students in Environmental and Soil Sciences.** J. Logan\*, Univ. of Tennessee.
- 10:15 **A Two Year National Survey of Turf Internship Program Among Turf Students.** H. Liu\*, Clemson Univ., T. Whitwell, Clemson Univ., D.C. Garrett, Clemson Univ.
- 10:30 **Academic Performance as Influenced by Work Experience for Turfgrass Students.** P.E. McCullough, Rutgers Univ., H. Liu\*, Clemson Univ., L.B. McCarty, Clemson Univ.
- 10:45 **Discussion.**

**Div. C-5—Turfgrass Science**

**SESSION 12—CONVENTION CENTER, ROOM 611-612,  
SIXTH FLOOR**

*Presiding: Phil Busey, Univ. of Florida*

**Symposium—Winter Injury**

AM

- 7:55 **Introductory Remarks.**
- 8:00 **Evolution in Understanding the Components of Turfgrass Winter Injury.** J.B. Beard\*, International Sports Turf Institute.
- 8:20 **Physiological Basis of Adaptation to Harsh Winters.** J. Dionne\*, Royal Canadian Golf Association, Y. Castonguay, Agriculture Agri-Food Canada, Sainte-Foy, Quebec, P. Rochette, Agriculture Agri-Food Canada, Sainte-Foy, Quebec.
- 8:40 **Overview of Variation for Low Temperature Tolerance.** D.R. Huff\*, Pennsylvania State Univ., A.J. Palazzo, ERDC-CRREL.
- 9:00 **Breeding and Evaluation for Cold Tolerance.** C.M. Taliaferro\*, Oklahoma State Univ., J.A. Anderson, Oklahoma State Univ., M.P. Anderson, Oklahoma State Univ., D.L. Martin, Oklahoma State Univ.
- 9:20 **Recess.**
- 9:30 **Interaction Between Ophiosphaerella spp. and Low Temperatures on Development of Spring Dead Spot in Bermudagrass.** N.A. Tisserat\*, Kansas State Univ., F.B. Iriarte, Univ. of Florida, J.D. Fry, Kansas State Univ., D.L. Martin, Oklahoma State Univ., H.C. Wetzell, Syngenta.
- 9:50 **Biological control of turfgrass snow molds.** T. Hsiang\*, Univ. of Guelph.
- 10:10 **The Consequences of Extending the Growing Season of Bermudagrass.** J.M. Goatley, Jr.\*, Virginia Tech, E.H. Ervin, Virginia Tech, H.W. Philley, Mississippi State Univ., G.C. Munshaw, Mississippi State Univ., M.D. Richardson, Univ. of Arkansas.
- 10:30 **Discussion.**
- 11:00 **Adjourn.**

**Div. C-5—Turfgrass Science**

**SESSION 13—CONVENTION CENTER, ROOM 609,  
SIXTH FLOOR**

*Presiding: Stacy Bonos, Rutgers Univ.,  
Dept. of Plant Science*

**Turfgrass Breeding and Biotechnology**

PM

- 12:55 **Introductory Remarks.**
- 1:00 **Molecular Markers Predict Adult Growth Habit in Ryegrass.** R.E. Barker\*, USDA-ARS-NFSPRC, Corvallis, OR,

## DIV. C-5 — WEDNESDAY, NOV. 3

S.E. Warnke, USDA-ARS, Washington, DC, R.N. Brown, Oregon State Univ., Corvallis.

- 1:15 **Genetic diversity and characteristics of *Poa pratensis* ecotypes in Korea and their uses for hybridization.** B.J. Ahn\*, Dankook Univ., Korea, J.S. Lee, Dankook Univ., Korea, S.J. Hyun, Dankook Univ., Korea, S.R. Shim, Cheongju Univ., Korea.
- 1:30 **Microsatellite Marker Analysis in Allotetraploid Creeping Bentgrass.** S. Bonos\*, Rutgers Univ., C. Kubik, Rutgers Univ., J. Honig, Rutgers Univ., R. Wu, Univ. of Florida.
- 1:45 **Identification of PCR Based Molecular Markers for Buffalo grass.** H. Budak\*, Univ. of Nebraska-Lincoln, R.C. Shearman, Univ. of Nebraska-Lincoln, I. Dweikat, Univ. of Nebraska-Lincoln.
- 2:00 **Discussion.**
- 2:05 **Recess.**
- 2:15 **Characterization of the mode of Inheritance in Tetraploid Creeping Bentgrass Using AFLP Mapping.** S.E. Warnke\*, USDA-ARS, Washington, DC, G. Jung, Univ. of Wisconsin, Madison, WI, N. Chakraborty, Univ. of Wisconsin, Madison, WI.
- 2:30 **Bermudagrass Breeding by gamma-Ray Radiation and Somaclonal Variation.** Z. Guo\*, South China Agri. Univ., S. Lu, South China Agri. Univ., Y. Niu, South China Agri. Univ.
- 2:45 **Employing Statistical Tools for Improving Selection Efficiency in Buffalo grass Breeding.** H. Budak\*, Univ. of Nebraska-Lincoln, R.C. Shearman, Univ. of Nebraska-Lincoln.
- 3:00 **Discussion.**
- 3:05 **Adjourn.**

WEDNESDAY

### Div. C-5—Turfgrass Science

#### SESSION 14—CONVENTION CENTER, ROOM 611-612, SIXTH FLOOR

*Presiding: Chris Forth, Tru-Green Chemlawn*

#### **What's New in the Turfgrass Industry?**

PM

- 2:55 **Introductory Remarks.**
- 3:00 **What is New in the Turfgrass Industry?** C. Forth\*, Tru-Green-ChemLawn, D. Mosdell, Syngenta, J. Breuninger, Dow AgroSciences, D. Floyd, Pickseed West, J. Frielich, The Scotts Company, M. Mahady, M. Mahady & Associates, C. Olsen, Bayer, M. Schmidt, John Deere.
- 3:15 **Discussion.**
- 4:15 **Adjourn.**

## Div. C-5—Turfgrass Science

SESSION 15—CONVENTION CENTER,  
EXHIBIT HALL 4ABC, FOURTH FLOOR

Posters on Display 8:00 am–6:00 pm

Authors Present 4:00–6:00 pm

Turfgrass Science, Breeding,  
and BiotechnologyPoster  
no.

- 1315 **The Reflectance, Transmittance, and Absorbance of Turfgrass Leaf Tissue.** K. Koh\*, Oklahoma State Univ., G.E. Bell, Oklahoma State Univ., M.L. Stone, Oklahoma State Univ., J.B. Solie, Oklahoma State Univ.
- 1316 **Comparative Responses of Bermudagrass, Seashore Paspalum, and Saltgrass to Salinity Stress.** M. Pessaraki\*, Univ. of Arizona, D.M. Kopec, Univ. of Arizona, A.J. Koski, Colorado State Univ.
- 1317 **Response of 10 Warm Season Turfgrasses to Aluminum Toxicity.** C.M. Baldwin\*, Clemson Univ., H. Liu, Clemson Univ., Clemson, SC, L.B. McCarty, Clemson Univ., Clemson, SC, W.L. Bauerle, Clemson Univ., Clemson, SC, J.E. Toler, Clemson Univ., Clemson, SC.
- 1318 **Changes in Amino Acids, Protein, and Protease Associated with Leaf Senescence for Creeping Bentgrass Under Heat Stress.** Y. He\*, Rutgers Univ., X. Liu, Rutgers Univ., B. Huang, Rutgers Univ.
- 1319 **Impact of Traffic on Turfgrass with a Green Waste Compost Amended Rootzone.** S.B. Ries\*, Univ of California-Riverside, S.T. Cockerham, Univ of California-Riverside, J.S. Hartin, Univ of California-Coop. Ext., V.A. Gibeault, Univ of California-Riverside, R.A. Khan, Univ of California-Riverside.
- 1320 **PCNB in Leachate from a Sand-Based Golf Green.** W.J. Johnston\*, Washington State Univ., C.T. Golob, Washington State Univ.
- 1321 **Breeding with sterile polyploid St. Augustinegrasses by embryo rescue.** A.D. Genovesi\*, Texas A & M Univ., M.C. Engelke, Texas A&M Univ., D.R. Huff, Penn State Univ.
- 1322 **The Impacts of Soil Organic Amendments on Tall Fescue Drought Tolerance.** X. Zhang\*, VPI&SU, C. Sherony, VPI&SU, E.H. Ervin, VPI&SU, G. Evanylo, VPI&SU.
- 1323 **Influence of CO<sub>2</sub> on Turf Quality.** S.K. Chong\*, Southern Illinois Univ., R. Boniak, Southern Illinois Univ., Carbondale, IL, S. Indorante, USDA-NCRS, Carbondale, IL, C.H. Ok, Univ. of Missouri, Columbia, MO, D. Buschschulte, Belk Park Golf Course, Wood River, IL.
- 1413 **Bentgrass Responses on Sand Mixes Under Different Irrigation Practices.** R. Boniak\*, Southern Illinois Univ., Y. Huang, Fujian Agriculture and Forestry Univ., China, A. Zhang, Southern Illinois Univ., Carbondale, IL, T.K. Boniak, Southern Illinois Univ., Carbondale, IL, S.K. Chong, Southern Illinois Univ., Carbondale, IL.
- 1414 **Ksat of Golf Green Rooting Mixes.** A. Zhang\*, Southern Illinois Univ., S.K. Chong, Southern Illinois Univ., Carbondale, IL, R. Boniak, Southern Illinois Univ., Carbondale, IL, Y. Huang, Fujian Agri. and Forestry Univ., Fujian, China.
- 1415 **Low Temperature Stress Affects Bermudagrass Cultivars Differently.** J.M. Rutledge\*, North Carolina State Univ., C.H.

- Peacock, North Carolina State Univ. (Raleigh, NC), A. Bruneau, North Carolina State Univ. (Raleigh, NC), R.J. Cooper, North Carolina State Univ. (Raleigh, NC).
- 1416 **Desorbed Nitrate from Anion Exchange Membranes as a Predictor of Nitrate Leaching and Turfgrass Color.** S.S. Mangiafico\*, Univ. of Connecticut, K. Guillard, Univ. of Connecticut.
- 1417 **Evaluation of morphological and physiological aspects of *Lolium perenne* cultivars associated with wear tolerance.** J. Den Haan\*, RUTERS Univ., W.A. Meyer, Rutgers Univ., B. Huang, Rutgers Univ., S.A. Bonos, Rutgers Univ., E. Lyons, Rutgers Univ., M. DaCosta, Rutgers Univ., D.A. Smith, Rutgers Univ., J. French, Rutgers Univ., J.A. Murphy, Rutgers Univ., R. Cesped-Ruiz, Rutgers Univ.
- 1419 **Drought Resistance in Diverse Water Use Genotypes of Kentucky Bluegrass.** J.S. Ebdon\*, Univ. of Massachusetts.
- 1420 **Nitrous Oxide Fluxes in Turfgrass: Effects of Irrigation and Nitrogen Fertilization Rates.** D.J. Bremer\*, Kansas State Univ.
- 1421 **Development of a greenhouse method of screening for salt tolerance in turfgrass species.** P. Raymer\*, Univ. of Georgia.
- 1422 **St. Augustinegrass Breeding for Cold Tolerance and Finer Leave Texture.** R. Li, NCSU, R. Qu\*, North Carolina State Univ., A.H. Bruneau, NCSU, D.P. Livingston, USDA-ARS, NCSU.
- 1423 **Growth and physiological responses of Kentucky bluegrass to localized salinity.** J.M. Fu\*, Colorado State Univ., Y.Q. Qian, Colorado State Univ.
- 1424 **Identification of a Gene Present in Creeping Bentgrass But Not in Related *Agrostis* Species.** H.M. Li\*, Rutgers Univ., D. Rotter, Rutgers Univ., New Brunswick, NJ, S.A. Bonos, Rutgers Univ., New Brunswick, NJ, W.A. Meyer, Rutgers Univ., New Brunswick, NJ, F.C. Belanger, Rutgers Univ., New Brunswick, NJ.
- 1513 **Linkage Mapping of QTLs for Morphological Traits in Ryegrass.** R.N. Brown\*, Oregon State Univ., Corvallis, OR, R.E. Barker, USDA-ARS-NFSPRC, Corvallis, OR, S.E. Warnke, USDA-ARS, Washington, DC, G. Jung, Univ. of Wisconsin, Madison, S.C. Sim, Univ. of Wisconsin, Madison, M.A.R. Mian, Noble Foundation, Ardmore, OK.
- 1514 **Identification of Heat-Inducible and Heat-Tolerance Genes in Bentgrass.** J. Xu\*, Rutgers Univ., B. Huang, Rutgers Univ., F. Belanger, Rutgers Univ.
- 1515 **Further Improvement of Elite Kentucky Bluegrass Cultivars by Means of Somaclonal Variation.** G. Zhang\*, Rutgers Univ.-New Brunswick, NJ, T.A. Chen, Rutgers Univ., R.C. Funk, Rutgers Univ., W.A. Meyer, Rutgers Univ.
- 1516 **Predicting Moisture Status in Turfgrass Using Reflectance.** V.W. Cline, Toro Company, T.D. Carson\*, Toro Company, B.P. Horgan, Univ. of Minnesota.
- 1517 **A modified hydroponic system for turfgrass research.** Y. Ikemura\*, New Mexico State Univ.
- 1518 **Root Antioxidant Biochemistry in Turf-type and Geothermal *Agrostis* Species.** J. Pote\*, Rutgers Univ., B. Huang, Rutgers Univ.
- 1520 **Genes Differentially Expressed In Colonial x Creeping Bentgrass Interspecific Hybrids.** D. Rotter\*, Rutgers Univ., New Brunswick, NJ, H.M. Li, Rutgers Univ., New Brunswick, NJ, S.A. Bonos, Rutgers Univ., New Brunswick, NJ, W.A. Meyer, Rutgers Univ., New Brunswick, NJ, F.C. Belanger, Rutgers Univ., New Brunswick, NJ.

- 1521 **Variable Ambient Illumination Effects on Turfgrass Reflectance.** M. Schmidt\*, John Deere, T. Fermanian, Univ. of Illinois, J. Reid, John Deere.
- 1522 **Drought Tolerance of Six Bermudagrass Cultivars.** C.M. Baldwin\*, Clemson Univ., H. Liu, Clemson Univ., Clemson, SC, L.B. McCarty, Clemson Univ., Clemson, SC, W.L. Bauerle, Clemson Univ., Clemson, SC, J.E. Toler, Clemson Univ., Clemson, SC.
- 1523 **Gene Flow From *Poa pratensis* to Other *Poa* Species Under Field Conditions.** P. Johnson\*, Utah State Univ., S.R. Larson, USDA-ARS, Logan, UT, J.T. Patterson, Washington State Univ.
- 1524 **Analysis of Genetic Diversity in Colonial Bentgrasses by Using RAPD Markers.** S. Rajasekar, Iowa State Univ., N. Christians, Iowa State Univ., S. Fei\*, Iowa State Univ.

**Div. C-6—Forage and Grazing Lands**

**Div. C-1—Crop Breeding, Genetics & Cytology**

**SESSION 12—CONVENTION CENTER, ROOM 310,  
THIRD FLOOR**

*Presiding: Gerald R. Smith, Texas A&M Univ.*

**Symposium—Forage Breeding:  
Is there a Future?**

AM

- 7:55 **Introductory Remarks.**
- 8:00 **Forage Yield Improvements: Mirages and Realities.** M. Casler\*, USDA-ARS, Madison, WI.
- 8:30 **Breeding for Economic Value.** J. Bouton\*, Univ. of Georgia.
- 9:00 **Breeding for Plant Defense Mechanisms.** M. McCaslin\*, Forage Genetics, Prior Lake, MN.
- 9:30 **Recess.**
- 9:45 **Offensive Breeding: Breaking the Pasture Feed Barrier.** D. Woodfield\*, AgResearch Grasslands.
- 10:15 **Where are the hybrids?** K.P. Vogel\*, USDA-ARS, Lincoln, NE.
- 10:45 **Biotechnology in Forage Crops: Let's Be Real.** C. Brummer\*, Iowa State Univ.
- 11:15 **Discussion.**
- 11:30 **Adjourn.**

- nipeg, Canada, P.R. Bullock, Univ. of Manitoba, Winnipeg, Canada, S.V. Angadi, Univ. of Manitoba, Winnipeg, Canada.
- 10:45 **Growing Season Weather Impacts on Bread-making Quality of CWRS Wheat from Producer Fields in western Canada.** C.K. Jarvis\*, Univ. of Manitoba, Winnipeg, H.D. Sapirstein, Univ. of Manitoba, Winnipeg, P.R. Bullock, Univ. of Manitoba, Winnipeg, S.V. Angadi, Univ. of Manitoba, Winnipeg, H. Naeem, Univ. of Manitoba, Winnipeg, M. Wang, Univ. of Manitoba, Winnipeg, A. Hussain, Univ. of Manitoba, Winnipeg.
- 11:00 **Field Inoculation of Wheat and Maize with a Liquid Formulation of Azospirillum brasilense in the Pampas, Argentina.** M. Diaz-Zorita\*, Nitragin Argentina and Univ. Buenos Aires, R.M. Balina, Nitragin Argentina, Pilar, BA, Argentina, M.V. Fernandez-Canigia, Indep., BA, Argentina, C. Penna, Nitragin Argentina, Pilar, BA, Argentina, A. Peticari, IMyZA-INTA Castelar, BA, Argentina.
- 11:15 **Winter Canola Hybrids Outyield Open-Pollinated Check Cultivar By 30 Per Cent.** D.J. Hume\*, Univ. of Guelph, J.A. Omielan, Univ. of Guelph, Guelph ON, G. Chu, Univ. of Guelph, Guelph ON.
- 11:30 **Growing Location and Genotype Effects on White Lupin Forage Yield and Quality.** H.L. Bhardwaj\*, Virginia State Univ., D.E. Starner, Virginia Tech, E. Van Santen, Auburn Univ., S. Noffsinger, Auburn Univ.
- 11:45 **Adjourn.**

**Div. C-5—Turfgrass Science**

**SESSION 16—CONVENTION CENTER, ROOM 606,  
SIXTH FLOOR**

*Presiding: Max Schlossberg, Penn State Univ.*

**Turfgrass Nutrition**

AM

- 7:55 **Introductory Remarks.**
- 8:00 **Evaluation of Liquid vs. Granular Nitrogen in Turfgrass.** F.W. Totten\*, Clemson Univ., L.B. McCarty, Clemson Univ.
- 8:15 **Bioassay Assessment, Fractionation, and High Performance Liquid Chromatography (LC/MS) Analysis of Macro-Sorb Foliar.** G.L. Kauffman III\*, The Pennsylvania State Univ., D.A. Jones, The Pennsylvania State Univ., T.L. Watschke, The Pennsylvania State Univ.
- 8:30 **Growth Responses of Bermudagrass and Seashore Paspalum Influenced by FerroGrow, Multi-Nutrient Fertilizer.** M. Pessaraki\*, Univ. of Arizona, D.M. Kopec, Univ. of Arizona, J.J. Gilbert, Univ. of Arizona.
- 8:45 **Using soil content of plant-available nitrogen as a tool for diagnosing turfgrass damage.** W.D. Gelernter\*, PACE Turfgrass Research Inst., San Diego, CA, L.J. Stowell, PACE Turfgrass Research Inst., San Diego, CA.
- 9:00 **Post Grow-in Performance of Bentgrass Grown on Root Zones Varying in Sand Size.** J.A. Murphy\*, Rutgers-NJAES,

H. Samaranayake, Rutgers-NJAES, T.J. Lawson, Rutgers-NJAES, D. Gimenez, Rutgers-NJAES.

- 9:15 **Discussion.**
- 9:20 **Recess.**
- 9:30 **Chloride Content of Golf Course Turfgrass Soils: Survey Results.** L.J. Stowell\*, PACE Turfgrass Research Inst., San Diego, CA, W.D. Gelernter, PACE Turfgrass Research Inst.
- 9:45 **Turfgrass Nutrient Demand: Evidence and Implications.** W.R. Kussow\*, Univ. of Wisconsin, S.M. Houlihan\*, Univ. of Wisconsin.
- 10:00 **Use of Anion Exchange Membranes to Estimate Turfgrass Growth and Quality.** S.S. Mangiafico\*, Univ. of Connecticut, K. Guillard, Univ. of Connecticut.
- 10:15 **Soil Acidity and Aluminum Availability in Golf Course Soils.** A. Harivandi\*, Univ. of California Coop. Ext., Alameda, CA, L.J. Stowell, PACE Turfgrass Research Inst., San Diego, CA, W.D. Gelernter, PACE Turfgrass Research Inst., San Diego, CA.
- 10:30 **Discussion.**
- 10:35 **Adjourn.**

#### Div. C-5—Turfgrass Science

#### SESSION 17—CONVENTION CENTER, ROOM 607, SIXTH FLOOR

*Presiding: Erik Ervin, Virginia Tech, Dept. CSES*

#### Environmental Stresses and Physiology

AM

- 7:55 **Introductory Remarks.**
- 8:00 **Influence of Trinexapac ethyl on Leaf Cytokinin, Nitrogen, and Carbohydrate Status of Three Turfgrass Species.** E. Ervin\*, VPI&SU, X. Zhang, VPI&SU.
- 8:15 **Growth Responses of Zoysiagrass Influenced by Soil Solution One Plant Growth Stimulant.** M.M. Pessaraki\*, Univ. of Arizona, J.I. Walworth, Univ. of Arizona.
- 8:30 **Changes in Photosynthetic Activities Associated with Heat Acclimation in Creeping Bentgrass.** B. Huang\*, Rutgers Univ., X. Liu, Rutgers Univ.
- 8:45 **The Energy Balance of Creeping Bentgrass and a Thermophilic Bentgrass in Response to High Soil Temperatures.** E.M. Lyons\*, Rutgers Univ., J. Pote, Rutgers Univ., B. Huang, Rutgers Univ.
- 9:00 **Influence of Late-season Jasmonic Acid and Sodium Chloride Treatments on Seeded Bermudagrass Cold Hardiness.** X. Zhang\*, VPI&SU, G.C. Munshaw, Mississippi State Univ., E.H. Ervin, VPI&SU.
- 9:15 **Discussion.**
- 9:20 **Recess.**
- 9:30 **Root Physiology in Turf-type and Geothermal Agrostis Species.** J. Pote\*, Rutgers Univ., B. Huang, Rutgers Univ.

- 9:45 **Impacts of One Biostimulant on the Heat Tolerance of Perennial Ryegrass (*Lolium Perenne* L.).** G.L. Kauffman III\*, The Pennsylvania State Univ., D.P. Knievel, The Pennsylvania State Univ., M.S. Schlossberg, The Pennsylvania State Univ., T.L. Watschke, The Pennsylvania State Univ.
- 10:00 **Protein Induction and Degradation During Heat Acclimation and Heat Stress for Creeping Bentgrass.** Y. He\*, Rutgers Univ., X. Liu, Rutgers Univ., New Brunswick, NJ, B. Huang, Rutgers Univ., New Brunswick, NJ.
- 10:15 **Quantification of Thatch in Turf by Chemical and Physical Properties.** D. Li\*, North Dakota State Univ., D.D. Minner, Iowa State Univ.
- 10:30 **Effects of Nitrogen and Potassium Fertilization on Low Temperature Tolerance in Perennial Ryegrass During Deacclimation.** D.E. Webster, Univ. of Massachusetts, J.S. Ebdon\*, Univ. of Massachusetts.
- 10:45 **Discussion.**
- 10:50 **Adjourn.**

**Div. C-7—Genomics, Molecular Genetics & Biotechnology**

**SESSION 10—CONVENTION CENTER, ROOM 609, SIXTH FLOOR**

*Presiding: Alexander Kahler, Univ. of Minnesota*

**Molecular Markers/Mapping**

AM

- 8:40 **Introductory Remarks.**
- 8:45 **Development of a Full Set of Molecular Genetic Markers for Assessment of Germplasm Genetic Diversity and Protection of Cultivar Patent Right of Turfgrass.** M.L. Wang\*, USDA-ARS, Griffin, GA, Z.B. Chen, Crop and Soil Sciences Department, UGA, N.A. Barkley, USDA-ARS, Griffin, GA, M.L. Newman, USDA-ARS, Griffin, GA, R.E. Dean, PGRCU, UGA, Griffin, GA, K. Kim, Crop and Soil Sciences Department, UGA, P. Raymer, Crop and Soil Sciences Department, UGA, G.A. Pederson, USDA-ARS, Griffin, GA.
- 9:00 **Integrative Physical Mapping of the Cotton Genome and Its Synteny with *Arabidopsis*.** J.Z. Yu\*, USDA-ARS, College Station, TX, R.J. Kohel, USDA-ARS, College Station, TX, H.B. Zhang, Texas A&M Univ., College Station, TX, Z. Xu, USDA-ARS, College Station, TX, J. Dong, USDA-ARS, College Station, TX, M. Lee, Texas A&M Univ., College Station, TX, P. Cui, USDA-ARS, College Station, TX, L. Covalada, USDA-ARS/Texas A&M Univ., College Station, TX.
- 9:15 **Genetic diversity and gene flow among seashore paspalum population revealed by AFLP and SSRs.** Z. Chen\*, Univ. of Georgia, M. Newman, PGRCU, USDA-ARS, W. Kim, Univ. of Georgia, M. Wang, PGRCU, USDA-ARS, P. Raymer, Univ. of Georgia.
- 9:30 **Recess.**