44th ANNUAL MEETING

of the

AMERICAN PEANUT RESEARCH AND EDUCATION SOCIETY

Sheraton Raleigh Hotel
Raleigh, North Carolina
July 10-12, 2012
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Special Activities

Bayer CropScience/BASF – Wednesday Dinner Oak Forest Ballroom
Dow AgroSciences – Thursday Awards Reception Oak Forest Ballroom

Ice Cream Social
Hannover Ballroom I & II

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V-C Peanut Alumni Luncheon

North Carolina Cooperative Extension Service
North Carolina Peanut Growers Association, Inc.

APRES Peanut Plot Tour

North Carolina Cooperative Extension Service
44th ANNUAL MEETING of the
AMERICAN PEANUT RESEARCH AND EDUCATION SOCIETY
Raleigh, North Carolina
July 10-12, 2012

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  Jack Davis
  Rick Brandenburg

Spouses’ Program
  Helene Stalker, Chair
  Jennifer Davis
  Jack Davis
Monday, July 9

1:00-8:30 pm  APRES Peanut Plot Tour ................................................................. Main Lobby Departure

5:00-7:00 pm  Peanut Genomics Initiative ................................................................. Capital

Tuesday, July 10

Committee and Other Meetings

8:00-10:00  Seed Summit ......................................................................................... Hanover III

10:00-Noon  Crop Germplasm Committee ................................................................. Hanover III

Noon-6:00  APRES Registration ................................................................................ Esplanade

1:30-4:30  Spouses’ Hospitality Room (Open) .......................................................... Magnolia II
1:30-2:30  Associate Editors, Peanut Science ........................................................ Oak Forest Ballroom
1:30-2:30  Fellows Committee ................................................................................ Oak Forest Ballroom
1:30-2:30  Joe Sugg Graduate Student Competition ............................................... Oak Forest Ballroom
1:30-2:30  Membership Ad hoc Committee ............................................................. Oak Forest Ballroom
1:30-2:30  Nominating Committee ........................................................................ Oak Forest Ballroom
1:30-2:30  Site Selection Committee ....................................................................... Oak Forest Ballroom
2:30-3:30  Bailey Award Committee ........................................................................ Oak Forest Ballroom
2:30-3:30  Coyt T. Wilson Distinguished Service Award Committee ..................... Oak Forest Ballroom
2:30-3:30  Dow AgroSciences Awards Committee ................................................ Oak Forest Ballroom
2:30-3:30  Grower Advisory Committee ................................................................ Oak Forest Ballroom
2:30-3:30  Publications and Editorials Committee .................................................. Oak Forest Ballroom
2:30-3:30  Public Relations Committee .................................................................. Oak Forest Ballroom
3:30-4:30  Finance Committee ................................................................................ Oak Forest Ballroom
3:30-4:30  Program Committee (Local Arr. & Technical) ......................................... Oak Forest Ballroom
3:30-4:30  Peanut Quality Committee ..................................................................... Oak Forest Ballroom
3:30-4:30  By-Laws Ad hoc Committee .................................................................. Oak Forest Ballroom
3:30-4:30  Presentation Uploading (Wednesday and Thursday presentations) ........... Esplanade

3:30-4:30  Board of Directors .................................................................................. Capital

7:00-9:00  ‘Welcome to Raleigh, North Carolina’ Ice Cream Social ......................... Hannover Ballroom I & II
Wednesday, July 11

Morning

8:00-4:00 APRES Registration ................................................. Esplanade
8:00-9:30 Spouses’ Hospitality Room (Staffed)................................. Magnolia II
9:30-4:00 Spouses’ Hospitality Room (Open).................................... Magnolia II
7:00-8:00 Poster Setup........................................................................ The Atrium
8:00-9:15 General Session................................................................. Oak Forest Ballroom
9:15-9:30 BREAK .............................................................................. The Atrium
9:30-12:00 Presentation Uploading (Thursday presentations)........ Esplanade
9:30-12:15 Breeding, Biotechnology and Genetics............................. Hanover I
9:30-12:15 Production Technology, Physiology and Seed Technology Hannover II & III
9:30-12:15 Poster Session (displayed)*.............................................. The Atrium

Afternoon and Evening

1:15-3:30 Joe Sugg Graduate Student Competition.............................. Oak Forest Ballroom
3:30-3:45 BREAK .............................................................................. The Atrium
3:45-5:15 Joe Sugg Graduate Student Competition (cont.)................. Oak Forest Ballroom
5:30-6:30 Peanut CRSP ....................................................................... Capital
7:00-9:00 Evening Meal and Entertainment “Carolina Lightning”......... Oak Forest Ballroom

*Poster presentations open all day
Thursday, July 12

Morning

6:00-8:00  APRES Fun Run/Walk................................................................. Hotel Lobby

8:00-Noon  APRES Registration ................................................................. Esplanade

8:00-9:30  Spouses’ Hospitality Room (Staffed)............................................ Magnolia II

9:30-4:00  Spouses’ Hospitality Room (Open)............................................... Magnolia II

8:00-Noon  Poster Session (authors present 8:00-9:00 am).......................... The Atrium

8:15-9:45  Weed Science............................................................................. Governors I & II

8:15-10:00 Bayer Excellence in Extension and Extension Techniques........... Hannover I

8:15-10:00 Plant Pathology, Nematology and Entomology............................ Hannover II & III

10:00-10:30  BREAK .................................................................................. The Atrium

10:30-11:00 Economics ............................................................................. Governors I & II

10:30-11:30 Bayer Excellence in Extension and Extension Techniques (cont.) Hannover I

10:30-12:00 Plant Pathology, Nematology and Entomology (cont.)............. Hannover II & III

11:45-1:15  Virginia-Carolina Peanut Alumni Luncheon............................... Oak Forest A

Afternoon

1:00-3:55  Symposium ‘THE ORPHAN LEGUME GENOME WHO’S TIME HAS COME’.... Governors I & II

1:15-3:30  Harvest, Processing and Utilization............................................. Hannover I

3:45-4:00  BREAK .................................................................................. Hanover Prefunction

4:00-4:30  APRES Business Meeting ......................................................... Hannover II & III

4:30-5:00  Dow AgroSciences Awards Presentation ..................................... Hannover II & III

4:45-6:00  Dow AgroSciences Awards Reception ........................................ Oak Forest Ballroom
Wednesday, July 11 – Morning

GENERAL SESSION

**Moderator:** Ames Herbert, APRES President Elect

**Meeting Room:** Oak Forest Ballroom

8:00 Call to order .......................................................... Todd Baumann

APRES President

8:05 Welcome to North Carolina ........................................ W. David Smith

Associate Dean and Director, North Carolina

Agricultural Research Service

8:20 National Peanut Board Update ................................... Lauren Highfill Williams

NPB Marketing & Communications Associate

8:35 NPB George Washington Carver Award Presentation .................................. Cindy Belch

Chairman & North Carolina Delegate

8:40 Nitrogen: The Key to Past and Future Cropping Systems ................................ Tom Sinclair

Professor, North Carolina State University

9:10 Announcements .......................................................... Maria Balota

Chair, Technical Program

9:15 BREAK
Morning

BREEDING, BIOTECHNOLOGY, AND GENETICS

**Moderator:** Tom Stalker, North Carolina State University

**Meeting Room:** Hanover I

9:30 (1) Development of High-Yielding, High-Oleic Valencia Peanuts. M.D. BUROW* and J.L. AYERS, Texas AgriLife Research, Texas A&M System, Lubbock, TX 79403, and Texas Tech University, Department of Plant and Soil Science, Lubbock, TX 79409; A. MUITIA, Department of Plant and Soil Sciences, Texas Tech University, Lubbock, TX 79409; A.M. SCHUBERT, Y. LÓPEZ, Texas AgriLife Research, Texas A&M System, Lubbock, TX 79403; C.E. SIMPSON, Texas AgriLife Research, Texas A&M System, Stephenville, TX 79403; N. PUPPALA, Agricultural Sciences Center, New Mexico State University, Clovis, NM 88001; and M.R. BARING, Texas AgriLife Research, Texas A&M System, College Station, TX 77843.

9:45 (2) Impact of Crossing Conditions on the Success of Artificial Hybridization of *Arachis hypogaea* L. Y. CHU*, C.L. WU, P. OZIAS-AKINS, Department of Horticulture, The University of Georgia Tifton Campus, Tifton, GA 31793; and C. C. HOLBROOK, USDA-ARS, Tifton, GA 31793.


10:30 (5) Expression of Putative AhMFT in Peanut Lines with Contrasting Seed Dormancy and Preharvest Sprouting. Z. LIU*, S. FENG, A. CULBREATH, Department of Plant Pathology, The University of Georgia, Tifton, GA; C.C. HOLBROOK, USDA-ARS, Crop Genetics and Breeding Research Unit, Tifton, GA; M.L. WANG, USDA-ARS, Plant Genetics Resources Conservation Unit, Griffin, GA; and Baozhu GUO, USDA-ARS, Crop Protection and Management Research Unit, Tifton, GA.

11:00  (7) Sources of Disease Resistance in Recent Virginia-type Cultivar Releases. S.P. TALLURY*, S.C. COPELAND, and T.G. ISLEIB, Department of Crop Science, N.C. State University, Raleigh, NC 27695-7629, and B. B. SHEW, Department of Plant Pathology, N.C. State University, Raleigh, NC 27695-7903.


11:30  (9) Utilizing NIR to Predict Total Oil, Sugars, Fatty Acids and Tocopherols in Whole Peanut Seeds. B.L. TILLMAN* and G. PERSON, University of Florida, North Florida REC, 3925 Hwy 71, Marianna, FL 32446-7906; and K.W. HENDRIX, L.L. DEAN, and T.H. SANDERS, USDA-ARS, Market Handling and Quality Research Unit, 236 Schaub Hall, N.C. State University, Raleigh, NC 27695.

11:45  (10) Tilling by Sequencing to Discover Rare Mutations for Stress Related Genes in Peanut (Arachis hypogaea). Y. GUO*, Department of Horticulture, The University of Georgia Tifton Campus, Tifton, GA 31793; B. ABERNATHY, Department of Crop and Soil Sciences, The University of Georgia, Athens, GA 30602; and P. OZIAS-AKINS, Department of Horticulture, The University of Georgia Tifton Campus, Tifton, GA 31793.

12:00  (11) Germination and Emergence Effects on Peanut Seed Planted Directly from Cold Storage. J.M. CASON*, B.D. BENNETT, C.E. SIMPSON, Texas AgrilLife Research, Texas A&M University System, Stephenville, TX 76401; J.N. WILSON, Soil and Crop Science Department, Texas A&M University, College Station, TX 77843; and B.G. MULLINEX, Texas AgrilLife Research, Texas A&M University System, Lubbock, TX 79403.
Technical Sessions

PRODUCTION TECHNOLOGY, PHYSIOLOGY, AND SEED TECHNOLOGY

Moderator: Scott Monfort, Clemson University
Meeting Room: Hannover II & III

9:30 (12) No-Fungicide and No-Insecticide Yield Tests in Peanut. W.D. BRANCH*, Dept. of Crop and Soil Sciences, and A.K. CULBREATH, Dept. of Plant Pathology, University of Georgia, Coastal Plain Experiment Station, Tifton, GA 31793-5766.


10:00 (14) Crop Response to Tillage and Rotation Under Non-Irrigated and Sub-Surface Drip Irrigation Systems. D.L. JORDAN* and P.D. JOHNSON, North Carolina State University, Raleigh, NC 27695; and T. CORBETT and S. BARNES, North Carolina Department of Agriculture and Consumer Services, Lewiston-Woodville, NC 27849.

10:15 (15) Effect of Cultivar, Irrigation, and Soil Calcium on Runner Peanut Response to Gypsum. J.A. HOWE*, R.J. FLORENCE, E. VAN SANTEN, Agronomy and Soils Department, Auburn University, Auburn, AL 36849; and G. HARRIS and J. BEASLEY, Crop and Soil Sciences Department, The University of Georgia, Tifton, GA 31793-0748.


10:45 (17) Seed Treatment and Seeding Rate Interactions in Peanut Production. R.S. TUBBS*, and J.P. BEASLEY, JR., Department of Crop and Soil Sciences, University of Georgia, Tifton, GA 31793.

11:00 (18) The Effect of Cultivar, Maturity, and Curing Conditions on Seed and Milling Quality. C.L. BUTTS*, M.C. Lamb, USDA-ARS, National Peanut Research Laboratory, Dawson, GA 39842; and W.H. FAIRCLOTH, Syngenta, 149 Fairthorne Dr., Leesburg, GA 31763.
11:15 (19) **Differential Transpiration Response to Aquaporin Inhibitors and Leaf Aquaporin Expression in Peanut Genotypes.** M.J. DEVI*, T.R. SINCLAIR, Department of Crop Science, North Carolina State University, Raleigh, NC 27695; M. JAIN and M. GALLO, Agronomy Department, University of Florida, Gainesville, FL 32611-0500.

11:30 (20) **Variability of Fatty Acid Profiles in Peanut Seed.** L. O. DEAN*, K. M. PRICE, J. P. DAVIS, and T. H. SANDERS, Market Quality and Handling Research Unit, USDA, ARS, Raleigh, NC 27695-7624.

11:45 (21) **Oleic/Linoleic (O/L) Acid Ratios of Red River Runner Peanut at Three Digging Dates.** H. MELOUK*1, R. MADDEN1, JACK DILLWITH2, C. GODSEY2, and K. CHAMBERLIN3. 1Department of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK 74078; 2Department of Soil Science, Oklahoma State University; 3USDA-ARS, Stillwater, OK 74075.

POSTER SESSIONS

Facilitator:  Rick Brandenburg, North Carolina State University
Meeting Room:  The Atrium

Wednesday 8:00 am-5:00 pm, Thursday 8:00 am - 3:00 pm
Authors Present Wednesday from 8:00-9:00 am

(23)  Diallel Analysis of Oil Content in Peanut.  M.R. BARING*, J.N. WILSON, Texas AgriLife Research, College Station, TX 77843; M.D. BUROW, Texas AgriLife Research, Lubbock, TX 79403; W.L. ROONEY, Texas AgriLife Research, College Station, TX 77843; C.E. SIMPSON, Texas AgriLife Research, Stephenville, TX 76401; J.L. STARR, Department of Plant Pathology, Texas A&M University, College Station, TX 77843.

(24)  Two Putative TSWV Resistance Gene-specific Markers Linked to a Genetic Linkage Group in Peanut.  S. FENG*, X. CHEN, M.K. PANDEY, Z. LIU, A. CULBREATH, Department of Plant Pathology, The University of Georgia, Tifton, GA; C.C. HOLBROOK, USDA-ARS, Crop Genetics and Breeding Research Unit, Tifton, GA; and B. GUO, USDA-ARS, Crop Protection and Management Research Unit, Tifton, GA.

(25)  Peanut Cultivar Response to Flumioxazin Applied Preemergence and Imazapic Applied Postemergence.  W.J. GRICHAR*, Texas AgriLife Research, 10345 State Hwy 44, Corpus Christi, TX 78406, P.A. DOTRAY, Texas AgriLife Research, Texas AgriLife Extension, and Texas Tech Univ., 1102 E FM 1294, Lubbock, TX 79403; and M. R. BARING, Texas AgriLife Research, Soil and Crop Science Dept., College Station, TX 77843.

(26)  Characterization of Expressed Resistance Gene Analogs (RGAs) from Peanut (Arachis hypogaea L.) Expressed Sequence Tags (ESTs).  B. GUO*, USDA-ARS, Crop Protection and Management Research Unit, Tifton, GA; Z. LIU, S. FENG, M.K. PANDEY, and A. CULBREATH, Department of Plant Pathology, the University of Georgia, Tifton, GA.


(29) **Comparing Three Methods Used to Determine the Oleic/Linoleic Acid Ratio in a Single Peanut Seed.** K.D. CHAMBERLIN*, USDA-ARS, Wheat, Peanut and other Field Crops Research Unit, 1301 N. Western, Stillwater, OK 74075; N. BARKLEY, USDA-ARS, 1109 Experiment Street, Griffin, GA; and B. TILLMAN, University of Florida, NFREC, 3925 HWY 71, Marianna, FL 32446-7906.

(30) **Stand Delays Associated with In-Furrow Liquid Acephate Applications.** S. MALONE*, D.A. HERBERT, JR., Department of Entomology, Virginia Tech Tidewater Agricultural Research and Extension Center, Suffolk, VA 23437; M. BALOTA, Department of Plant Pathology, Physiology, and Weed Science, Virginia Tech Tidewater Agricultural Research and Extension Center, Suffolk, VA 23437; and D. JORDAN, Department of Crop Science, North Carolina State University, Raleigh, NC 27695.

(31) **Saturation of Genetic Maps for Identification of QTLs Controlling Biotic Resistance, Morphological Descriptors and Oil Quality in Tetraploid Peanut (Arachis hypogaea L.).** M.K. PANDEY*, S. FENG, and A. CULBREATH, Department of Plant Pathology, the University of Georgia, Tifton, GA; M.K. PANDEY, R.K. VARSHNEY, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, India; M.L. WANG and N.A. BARKLEY, USDA-ARS, Plant Genetics Resources Conservation Unit, Griffin, GA; C.C. HOLBROOK, USDA-ARS, Crop Genetics and Breeding Research Unit, Tifton, GA; and B. GUO, USDA-ARS, Crop Protection and Management Research Unit, Tifton, GA.

(32) **Rooting Traits of Peanut Genotypes with Different Yield Response to Terminal Drought.** R. KOOLACHART*, S. JOGLOY, N. VORASOOT, A. PATANOTHAI, Department of Plant Science and Agricultural Resources, Khon Kaen University, Khon Kaen 40002, Thailand; S.WONGKAEW, School of Crop Production Technology, Institute of Agricultural Technology, Suranaree University of Technology, NakhonRatchasima, 30000, Thailand; and C.C. HOLBROOK, USDA-ARS, Coastal Plain Experiment Station, Tifton, GA 31794.

(33) **Preliminary Studies in Peanuts Organic Fertilization with Vermicompost.** S. SANCHEZ-DOMINGUEZ* and A. CHONG-ESLAVA, Departamento de Fitotecnia, Universidad Autonoma Chapingo, Chapingo Méx. 56230.

(34) **Reducing Peanut Allergens by High Pressure Combined with Polyphenol Oxidase.** S.-Y. CHUNG*, S. REED, Southern Regional Research Center, USDA-ARS, New Orleans, LA 70124; and M. HOUSKA, Department of Food Engineering, Food Research Institute Prague, Prague 10, Czech Republic.
(35) Weed Control in Peanut (*Arachis hypogaea*) Comparing POST alone or in Combination with Classic (chlorimuron) LPOST. T.L. GREY and F.S. TURPIN*, Crop and Soil Sciences Department, University of Georgia, Tifton, GA 31793-5737.

(36) Anti-inflammatory Effects of Peanut Skin Extracts on COX-2 in Raw 264.7 Cells. G.K. HARRIS and W. LEWIS*, Food, Bioprocessing and Nutrition Sciences Department, North Carolina State University, Raleigh, NC 27965-7694; and L. O. DEAN, Market Quality and Handling Research Unit, USDA-ARS, Raleigh, NC 27695-7694.

(37) Evaluation of Thrips Abundance and Injury to Plants and Incidence of Tomato Spotted Wilt Virus in Virginia Market-Type Peanut Lines. C.R. PHILIPS*, D.A. HERBERT, JR., and S. MALONE, Department of Entomology, Virginia Tech, Suffolk, VA 23437; and M. BALOTA, Department of Plant Pathology, Physiology, and Weed Science, Virginia Tech, Suffolk, VA 23437.


(39) Physiological Response of Peanut at Different Drought Stress Periods. C.Y. CHEN*, Department of Agronomy and Soils, Auburn University, 201 Funchess Hall, Auburn, AL 36849; P. DANG, R. SORENSEN, and M. LAMB, USDA-ARS, National Peanut Research Laboratory, Dawson, GA 39842; and C. HOLBROOK, USDA-ARS, Crop Genetics and Breeding Research Unit, Tifton, GA 31793.

(40) Molecular Genetic Variation in Cultivated Peanut Cultivars and Breeding Lines Revealed by Highly Informative SSR Markers. B. HUANG*, X. ZHANG, Henan Academy of Agricultural Sciences, China; L. QIAO, Z. LIU, M.K. PANDEY, A. CULBREATH, Department of Plant Pathology, The University of Georgia, Tifton, GA; M.K. PANDEY, and R.K. VARSHNEY, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, India; K. MOORE, AgResearch Consultants, Sumner, GA; and B. GUO, USDA-ARS, Crop Protection and Management Research Unit, Tifton, GA 31793.

(41) Characterization of β-1,3-glucanase Gene in Peanut (*Arachis hypogaea* L.) by Cloning and Genetic Transformation. L. QIAO*, X. DING, H. WANG, J. SUI, and J. WANG, Qingdao Agriculture University, China; L. QIAO, University of Georgia, Tifton, GA; S. YU, Shandong Academy of Agricultural Sciences Peanut Research Institute, China; and B. GUO, USDA-ARS, Crop Protection and Management Research Unit, Tifton, GA 31793.

(42) Genetic Diversity of Valencia Peanut Genotypes for Traits Associated with Nitrogen Fixation. S. JOGLOY, N. VORASOOT, S. MAHAKOSEE, Department of Plant Science and Agricultural Resources, Faculty of Agriculture, Khon Kaen University, Muang, Khon Kaen, Thailand, 40002; T. MOEE, State Agricultural Science, Yezin Agricultural University, Nay Pyi Daw, Myanmar; N. PUPPALA*, Agricultural Science Center at Clovis, New Mexico State University, Clovis, New Mexico, USA, 88101.
Afternoon

JOE SUGG GRADUATE STUDENT COMPETITION

**Moderator:** Bob Kemerait, University of Georgia

**Meeting Room:** Oak Forest Ballroom

1:15  
**Miniature Inverted Repeat Transposable Element Based Sequence Capture for Next Generation Sequencing and Marker Development in Peanut (Arachis hypogaea L.).** M. CHANDRAN*, J.A. CONNER, and P. OZIAS-AKINS, Department of Horticulture, University of Georgia Tifton Campus, Tifton, GA 31793.

1:30  
**Reversal of Atherosclerotic Indicators During Peanut Consumption in Hamsters.** A.M. STEPHENS*, Food, Bioprocessing, and Nutrition Sciences Department, North Carolina State University, Raleigh, NC 27695-7624; and T.H. SANDERS, USDA-ARS Market Quality and Handling Research Unit, Raleigh, NC 27695-7624.

1:45  
**Physico-Chemical and Textural Properties of Peanut Pancakes as Affected by Roast and Reheating Time.** S. CHINTAGARI* and Y-C. HUNG, Department of Food Science and Technology, University of Georgia, Griffin, GA 30223.

2:00  
**Peanut Based Farming Systems in the Rupununi Region of Guyana.** A. CHO*, G. MACDONALD, B. TILLMAN Agronomy Department, The University of Florida, Gainesville, FL 32611-0300; R. KEMERAIT and I. POWER. Plant Pathology Department, University of Georgia, Tifton, GA 31793-0748.

2:15  
**Physiological and Metabolic Responses of Virginia-Type Peanut to Drought and Heat Stress.** D. SINGH*, M. BALOTA, and E. COLLAKOVA, Plant Pathology, Physiology, and Weed Science, Virginia Tech, Blacksburg, VA 24061; G. WELBAUM, Horticulture Department, Virginia Tech, Blacksburg, VA 24061; and T. ISLEIB, Department of Crop Science, North Carolina State University, Raleigh, NC 27695.

2:30  
**Differentiating the Epidemics of Early and Late Leaf Spot to Determine Implications for Prescription Fungicide Programs.** A.M. FULMER*¹, H. SANDERS¹, M. BOUDREAU² and R.C. KEMERAIT, JR.¹, ¹Department of Plant Pathology, the University of Georgia, Tifton, GA 31693, and, ²Department of Biological and Agricultural Engineering, the University of Georgia, Athens, GA 30605.
2:45  (49) Peanut Response to Simulated Drift Rates of 2,4-D.  R.M. MERCHANT*, E.P.PROSTKO, and P.M. EURE, Department of Crop & Soil Sciences, The University of Georgia, Tifton, GA 31793-5737; and T.M. WEBSTER, USDA-ARS, Tifton, GA 31793-5737.

3:00  (50) Yield Response of New Runner-Type Peanut Cultivars to Fungicide Inputs for Leaf Spot Control.  P.A. NAVIA GINE*, A.K. CULBREATH, Dept. of Plant Pathology, Univ. of Georgia, Tifton, GA 31793-5766; B.L. TILLMAN, North Florida REC, Agronomy Dept., Univ. of Florida, Marianna, FL 32446; C.C. HOLBROOK, USDA-ARS, Crop Genetics and Breeding Research Unit, Tifton, GA 31793; W.D. BRANCH, Dept. of Crop and Soil Sciences, University of Georgia, Tifton, GA 31793; and N.B. SMITH, Dept. of Agricultural and Applied Economics, Univ. of Georgia, Tifton, GA 31793.

3:15  (51) Peanut Survival and Recovery from Soil Drying.  P. R. ANDERSON*, T. R. SINCLAIR, T. G. ISLEIB, S. P. TALLURY, Department of Crop Science, North Carolina State University, Raleigh, NC 27695-7620; and M. BALOTA, Department of Plant Pathology, Physiology, and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0331.

3:30  BREAK

3:45  (52) Comparison of Methods for Late Leaf Spot Phenotyping in Peanut.  R. GILL*, Institute of Plant Breeding Genetics and Genomics, The University of Georgia Tifton Campus; A.K. CULBREATH, Department of Plant Pathology, The University of Georgia Tifton Campus; C.C. HOLBROOK, Crop Genetics and Breeding Research Unit, USDA-ARS Tifton; and P. OZIAS-AKINS, Department of Horticulture, The University of Georgia Tifton Campus, Tifton, GA 31793.

4:00  (53) The Use of Strip Tillage to Increase Yield in Peanut.  J. THOMPSON*, D. ROWLAND, B. TILLMAN, and D. WRIGHT, Agronomy Department, The University of Florida, Gainesville, FL 32611-0300; and J. BEASLEY, Crop and Soil Sciences, The University of Georgia, Tifton, GA 31793-0748.

4:15  (54) Seed Calcium, Field Emergence, and Late Leaf Spot Resistance in Late Maturing Lines of Peanut.  S. THORNTON*and M. GALLO, Agronomy Department, University of Florida, Gainesville, FL 32611-0300; and B. TILLMAN, Agronomy Department, North Florida Research and Education Center, University of Florida, Marianna FL 32446-8091.
4:30  (55) **Generation Means Analysis of Oil and Fatty Acid Content in Peanut.** J.N. WILSON*, M.R. BARING, Texas AgriLife Research, College Station, TX 77843; M.D. BUROW, Texas AgriLife Research, Lubbock, TX 79403; W.L. ROONEY, Texas AgriLife Research, College Station, TX 77843; C.E. SIMPSON, Texas AgriLife Research, Stephenville, TX 76401; J.L. STARR, Department of Plant Pathology, Texas A&M University, College Station, TX 77843; and J.C. CHAGOYA, Texas AgriLife Research, Lubbock, TX 79403.

4:45  (56) **The Potential of Enzymatic Hydrolysis to Improve Immunotherapy and Ingredient Applications of peanut flour.** X. SHI*, S. TAO, Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, Raleigh, NC 27695; R. GUO, M. KULIS, and A.W. BURKS, Department of Pediatrics, University of North Carolina School of Medicine, Chapel Hill, NC 27514; B.L. WHITE, USDA ARS, Market Quality and Handling Research Unit, Raleigh, NC 27695; and T.H.SANDERS, J.P.DAVIS, USDA ARS, Market Quality and Handling Research Unit, Raleigh, NC 27695.


5:15  (58) **Assessment and Characterization of Oil from Roasted Peanut Skins.** C.S. HATHORN*, Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, Raleigh, NC 27695; L.O. DEAN and T.H. SANDERS, USDA ARS, Market Quality Handling Research Unit, Raleigh, NC 27695.
Morning

WEED SCIENCE

Moderator: Mike Marshall, Clemson University
Meeting Room: Governors I & II

8:15 (59) Effect of Paraquat Timing on Yield and Grade of Four Peanut Cultivars. B. BRECKE*, West Florida Research and Education Center, Jay, FL 32565; and J. FERRELL, Agronomy Department, University of Florida, Gainesville, FL 32611.

8:30 (60) Peanut Tolerance and Weed Control with Warrant. P.A. DOTRAY*, Texas Tech University, Texas AgriLife Research, and Texas AgriLife Extension Service, Lubbock, TX 79409-2122; W.J. GRICHAR, Texas AgriLife Research, Beeville, TX 78102; and L.V. GILBERT, Texas AgriLife Research, Lubbock, TX 79403.

8:45 (61) Peanut Response to Foliar Applied Pyroxasulfone Tank-Mixtures. P.M. EURE*, E.P. PROSTKO, and R.M. MERCHANT, Department of Crop & Soil Sciences, University of Georgia, Tifton, GA 31793-5737.

9:00 (62) Weed Control Systems in Peanut (Arachis hypogaea) with Warrant (Acetochlor). T.L. GREY* and E.P. PROSTKO, Crop and Soil Sciences Department, University of Georgia, Tifton, GA 31793-5737; and D.L. JORDAN, Department of Crop Science, North Carolina State University, Raleigh, NC 27695-7620.


9:30 (64) Peanut Response to Warrant (Acetochlor). E.P. PROSTKO* and T.L. GREY, Department of Crop & Soil Sciences, The University of Georgia, Tifton, GA 31793-5737; and D.L. JORDAN, Department of Crop Science, North Carolina State University, Raleigh, NC 27695-7620.

9:45 BREAK
ECONOMICS

Moderator: Gary Bullen, North Carolina State University
Meeting Room: Governors I & II

10:30 (65) Economics of Seed Treatment and Seeding Rate in Georgia. A. R. SMITH* and N. B. SMITH, Department of Agricultural and Applied Economics, and R. S. TUBBS, Department of Crop and Soil Sciences, The University of Georgia, Tifton, GA 31793.

**BAYER EXCELLENCE IN EXTENSION AND EXTENSION TECHNIQUES**

*Moderator:* Keith Rucker, Bayer CropScience  
*Meeting Room:* Hannover I

*Indicates Cooperative Extension Agent supported by Bayer CropScience

8:15* (67) **Extension’s Role in the Development of the Peanut Industry in Northeast Mississippi.** C. Stokes*, Extension Department, 517 Hwy. 145 N. Ste.1, Aberdeen, MS 39730; and M. Howell, Extension Department, P.O. Box 193, Poplarville, MS 39470.

8:30* (68) **Managing Tobacco Thrips in Peanut with Alternatives to Aldicarb.** C. Ellison*, North Carolina Cooperative Extension Service, Jackson, NC 27845; and D.L. Jordan, R.L. Brandenburg, and B.B. Shew, North Carolina State University, Raleigh, NC 27695.

8:45* (69) **Extension Peanut Program Development in Southampton County, Virginia-Perspective of a New Agent.** C.S. Drake*, Virginia Cooperative Extension, Southampton County, Courtland, VA 23837; M. Balota, Department of Plant Pathology, Physiology and Weed Science; and D.A. Herbert, Department of Entomology, Virginia Tech Tidewater Agricultural Research and Extension Center, Suffolk, VA 23437.

9:00* (70) **Impact of Prothioconazole Applications with Provost or Artisan/Initiate Fungicides on Severity of Soilborne Diseases of Peanut.** W.G. Tyson*, University of Georgia Cooperative Extension, Effingham County, Springfield, GA 31329; and R. C. Kemait, University of Georgia, Department of Plant Pathology, 4604 Research Way, Tifton, GA 31794.

9:15 (71) **Design, Use, and Advantages of a GPS Controlled Spraying System for Research Plots.** J. S. Thomas*, Y.J. Han, A. Khalilian, and J.W. Chapin, School of Agricultural, Forest, and Environmental Sciences, Clemson University, Edisto REC, 64 Research Road, Blackville, SC 29817.

9:45  (73) Assessment of Early Emergent Fungicide Applications for Improving White Mold Control. P. M. CROSBY*, Emanuel County Extension, University of Georgia, Swainsboro, GA 30401, and R. C. KEMERAIT, Department of Plant Pathology, University of Georgia, Tifton, GA 31793

10:00  BREAK


11:00  (76) Evaluation of Tamrun OL11 under Varying Field Conditions. J.E. WOODWARD*, Texas AgriLIFE Extension Service and Texas Tech University, Lubbock, TX 79403; C.E. SIMPSON, Soil and Crop Sciences Dept. Texas AgriLIFE Research, Stephenville, TX 76401; M.R. BARING, Soil and Crop Sciences Dept. Texas AgriLIFE Research, College Station, TX 77843; and T.A. BAUGHMAN, Institute of Agricultural Biosciences, Oklahoma State University, Ardmore, OK 73401.


PLANT PATHOLOGY, NEMATOLOGY, AND ENTOMOLOGY

Moderator: Barbara Shew, North Carolina State University
Meeting Room: Hannover II and III


8:30 (80) Evaluation of Insecticide Seed Treatments for Management of Thrips and Tomato Spotted Wilt Virus in Peanuts. D.A. HERBERT, JR.*, S. MALONE, Department of Entomology, Virginia Tech Tidewater Agricultural Research and Extension Center, Suffolk, VA 23437; R.L. BRANDENBURG, B.M. ROYALS, Department of Entomology, North Carolina State University, Raleigh, NC 27695; and D. JORDAN, Department of Crop Science, North Carolina State University, Raleigh, NC 27695.

8:45 (81) Thrips Injury Impact on Yield and Grade of Peanut Cultivars. J.P. BEASLEY, JR.*,1, D.B. ADAMS2, S.L. BROWN2, and J.E. PAULK, III1; 1Crop and Soil Science Department, The University of Georgia, Tifton, GA 31793-5766; and 2Department of Entomology, The University of Georgia, Tifton, GA 31793-5766.

9:00 (82) Evaluation of Sampling Techniques and Influence of Tillage on Three Cornered Alfalfa Hoppers in Peanuts. M.S. HOWELL*, Mississippi State University Extension Service, Poplarville, MS 39470; and F. MUSSER, Biochemistry, Molecular Biology, Entomology and Plant Pathology, Mississippi State University, MS 39762.


9:30 (84) Evaluation of the Experimental Fungicides Penthiopyrad and Flutriafol for Control of Foliar and Soilborne Diseases of Peanut in Oklahoma. J.P. DAMICONE* and T.J. PIERSO, Department of Entomology and Plant Pathology, and C.B. GODSEY, Department of Plant and Soil Sciences, Oklahoma State University, Stillwater, OK 74078.
9:45  Disease, Nematode Activity and Yield Response of a Peanut Root Knot Resistant and Susceptible Peanut Cultivar as Influenced by Crop Rotation. A.K. HAGAN*, H.C. CAMPBELL, and K.L. BOWEN. Auburn University, AL 36849; and L. WELLS, Wiregrass Research and Extension Center, Headland, AL 36849.

10:00  BREAK

10:30  Performance of Disease Management Programs and How Fontelis (penthiopyrad) Fits into Such Programs Under South Carolina Conditions. J.W. CHAPIN*, J.S. THOMAS, and W.S. MONFORT, School of Agricultural, Forestry, and Environmental Sciences, Clemson University, Edisto REC, 64 Research Road, Blackville, SC 29817.

10:45  A Survey of Aflatoxin Contamination from Peanuts Affected by Nematodes and Burrower Bugs. R.C. KEMERAIT, JR.*, F.H. SANDERS1, J.M. LUIS1, K. BOWEN2, and J.P. BEASLEY3. 1Department of Plant Pathology, the University of Georgia, Tifton, GA 31793; 2Department of Entomology and Plant Pathology, Auburn University, Auburn, AL 36849, 3Department of Crop and Soil Science, the University of Georgia, Tifton, GA 31793.


11:15  Spray Volume and Timing Evaluations for Early Emergence Applications of Proline for Peanut Stem Rot Management. T. B. BRENNEMAN1*, and K. RUCKER2, 1Department of Plant Pathology, University of Georgia, 2Bayer Crop Science, Tifton, GA 31794.


11:45  Comparison of Calendar versus Threshold-Base Fungicide Applications for Management of Pod Rot. T.A. WHEELER*, Texas AgriLife Research, Lubbock, TX 79403-6653; S.A. RUSSELL, Texas AgriLife Extension Service, Brownfield, TX 79316-4307; M.G. ANDERSON, Texas AgriLife Extension Service, Seminole, TX 79360-4341; and J.E. WOODWARD, Texas AgriLife Extension Service, Lubbock, TX 79403-6653.
Afternoon and Evening

SYMPOSIUM
“THE ORPHAN LEGUME GENOME WHO’S TIME HAS COME”

Moderator: Peggy Ozias-Akins, University of Georgia
Meeting Room: Governors I & II

1:00 (92) Genome Sequences in *Arachis*. S.A. JACKSON*, Center for Applied Genetic Technologies, University of Georgia, Athens, GA 30621.

1:25 (93) Development and Phenotyping of Recombinant Inbred Line (RIL) Populations. C.C. HOLBROOK¹*, T.G. ISLEIB², P. OZIAS-AKINS³, Y. CHU³, S.J. KNAPP⁴, B. TILLMAN⁵, C.L. WU³, B. GUO⁶, R. GILL⁷, and M.D. BURROW³. ¹USDA-ARS, Tifton, GA 31793; ²North Carolina State Univ., Raleigh, NC; ³Univ. of Georgia, Tifton, GA; ⁴Monsanto, Woodland, CA; ⁵University of Florida, Marianna, FL; ⁶USDA-ARS, Tifton, GA; ⁷Institute of Plant Breeding and Genetics and Genomics, The University of Georgia Tifton Campus; ⁸Texas A&M, Lubbock, TX.

1:50 (94) Bioinformatics Resources for Crop Improvement in Peanut and Across the Legumes. S.B. CANNON*, USDA-ARS and Department of Agronomy, Iowa State University, Ames, IA 50011.

2:15 (95) The Value of Diploid Peanut Relatives for Breeding and Genomics. H.T. STALKER* and S.P. TALLURY, Department of Crop Science, North Carolina State University, Raleigh, NC 27695; P. OZIAS-AKINS, Department of Horticulture, The University of Georgia Tifton Campus, Tifton, GA 31793-0748; D.A. Bertioli, Catholic University of Brasília, Campus II, SGAN 916, CEP 70.790-160, Brasilia, DF, Brazil; and S.C.M. LEAL-BERTIOLI, EMBRAPA Genetic Resources and Biotechnology, C.P. 02372, CEP 70.770-900, Brasília, DF, Brazil.

2:40 (96) Recent Advances in Molecular Genetic Linkage Maps of Cultivated Peanut (*Arachis hypogaea L*). B.Z. GUO¹*, M.K. PANDEY¹,²,³, A.K. CULBREATH², R.K. VARSHNEY³. ¹USDA-ARS, Tifton, GA 31793; ²University of Georgia, Department of Plant Pathology, Tifton, GA; ³International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru, India.

Generation of Ultra-Dense Genetic Maps for the A and B Genomes of Peanut. L. FROENICKE*, C. BEITEL, D. SCAGLIONE, and R.W. MICHELMORE, Genome Center, University of California Davis, Davis, CA 95616; D. BERTIOLI, Catholic University of Brasilia, Brasilia, DF, Brazil; M.C. MORETZSOHN, P. GUIMARAES, and S.C.M. LEAL-BERTIOLI, Embrapa Recursos Genéticos e Biotecnologia, Brasilia, DF, Brazil; and M. PANDEY and H.D. UPADHYAYA, R.K. Varshney, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad, India.
HARVESTING, PROCESSING, AND UTILIZATION

Moderator: Jack Davis, USDA-ARS Market Quality and Handling Research Unit
Meeting Room: Hannover I

1:15 (99) Changes in Seed Sugar Pools during Roasting of Different Peanut Genotypes. D.A. SMYTH* and A.A. CARDONA, Kraft Foods, Research & Development, 200 DeForest Ave., East Hanover, NJ 07936; and M. SILVENT, Reading Scientific Ltd., Reading Science Center, Pepper Lane, Reading RG6 6LA.

1:30 (100) Value Added Processing of Aflatoxin Contaminated Peanut Meal. B.L. WHITE, A.J. OAKES, USDA ARS, Market Quality and Handling Research Unit, Raleigh, NC 27695; X. SHI, Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, Raleigh, NC 27695; M. LAMB, V. SOBOLEV, USDA ARS, National Peanut Research Laboratory, Dawson, GA 39842; T.H. SANDERS J.P. DAVIS* USDA ARS, Market Quality and Handling Research Unit, Raleigh, NC 27695.

1:45 (101) Near Infrared Reflectance Spectroscopic Method to Determine Moisture Content and Fatty Acid Composition in In-Shell Peanuts. C.V.K. KANDALA*, National Peanut Research Laboratory, USDA, ARS, Dawson, GA 39842; J. SUNDARAM, Russell Research Center, Athens, GA 30605; and N. PUPPALA, New Mexico State University, Clovis, NM 88101.

2:00 (102) Development of Oral Immunotherapy (OIT) and Sublingual Immunotherapy (SLIT) for the Treatment of Peanut Allergy. M.D. KULIS* and A.W. BURKS, University of North Carolina Children’s Hospital, Chapel Hill, NC 27514.


2:30 (104) Hypoallergenic Edible Peanut Protein Matrix to Enable Novel Functional Food & Immunotherapy Applications. M.H. GRACE, M.A. LILA, Plants for Human Health Institute, Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, Kannapolis, NC 28081; B.L. WHITE*, K.M. PRICE, T.H. SANDERS, J.P. DAVIS, Market Quality and Handling Research Unit, USDA ARS, North Carolina State University, Raleigh, NC 27695; and M. KULIS, A.W. BURKS, Department of Pediatrics, University of North Carolina School of Medicine, Chapel Hill, NC 27514.
2:45  (105) Immunity Enhancement and Characterization of Bioactive Peanut Sprout Powder and Purified Peanut Arachidin-1. S. M. LIN¹, W. C. KO¹, J. C. CHANG², F. L. HUANG¹, B. B. C. WENG², S. H. WANG¹, and R. Y. Y. CHIOU¹*, ¹Department of Food Science, National Chiayi University, Chiayi 60051, Taiwan, ROC.; and ²Department of Microbiology, Immunology and Biopharmaceuticals, National Chiayi University, Chiayi, Taiwan, ROC.

3:00  (106) Phytoestrogenic Activity of Resveratrol and Peanut Arachidin-1. B. B. C. WENG¹*, W. H. Lin¹, C. W. HU¹, S. M. LIN², J. C. CHANG², and R. Y. Y. CHIOU², ¹Department of Microbiology, Immunology and Biopharmaceuticals, National Chiayi University, Chiayi 60051, Taiwan, ROC.; and ²Department of Food Science, National Chiayi University, Chiayi 60051, Taiwan, ROC.

3:15  (107) RTK GPS and Automatic Steering for Peanut Digging. G. ROBERSON* and D. JORDAN, North Carolina State University, Raleigh, NC 27695.

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