



49th Tobacco Workers' Conference
Preliminary Program
(rev 30 Dec 19)

Monday, January 20, 2020 - Committee Meetings

10:30 am – 11:30 am	GAP Certification
1:00 pm – 2:00 pm	Burley and Dark Tobacco Production Guide
2:00 pm – 3:00 pm	Burley Variety
3:00 pm – 4:00 pm	Pesticide Committee
4:00 pm – 4:15 pm	Nominating Committee
4:15 pm – 4:45 pm	Session Moderators Meeting
4:15 pm – 4:30 pm	Resolutions Committee
4:30 pm – 5:00 pm	Executive Committee
6:00 pm – 7:30 pm	Welcome Reception

Tuesday, January 21, 2020 – General Session

Presiding: Bob Pearce, University of Kentucky

- 8:00 am **Welcome and Opening Remarks:** Bob Pearce, Program Chair, 49th Tobacco Workers' Conference
- 8:05 am **1. Brief History of Louisville as a Tobacco Marketing and Manufacturing Center.**
Bob Pearce; University of Kentucky, Lexington, KY USA
- 8:20 am **2. Tobacco Industry Changes: Global Outlook Panel Discussion:**
- **2a.** Darryl Jayson, Tobacco Marketing Association, Princeton Junction, NJ, USA
 - **2b.** Blake Brown, North Carolina State University, Raleigh, NC, USA
 - **2c.** Will Snell, University of Kentucky, Lexington, KY, USA
- 9:10 am **3. Potential Impacts of the Hemp Boom on The Tobacco Industry Panel Discussion:**
- **3a.** Tyler Mark, University of Kentucky, Lexington, KY, USA
 - **3b.** Eric Walker, Burley Stabilization, Springfield, TN, USA
- 10:00 am **Break**
- Tobacco Industry Changes - Local Outlook Panel Discussion:**
- 10:30 am **4. Changes in Flue-Cured Tobacco Farming in Wilson and Johnston County.** N. Harrell and B. Spivey; North Carolina Cooperative Extension, Wilson and Smithfield, NC, USA
- 10:45 am **5. Changes in Burley Tobacco Farming in Eastern Kentucky.** G. Hamilton; University of Kentucky Cooperative Extension, Mt Sterling, KY, USA
- 10:55 am **6. Changes in Burley and Dark-Air Tobacco Farming in Western Kentucky.** C. Hardy; University of Kentucky Cooperative Extension, Owensboro, KY, USA
- 11:05 am **7. Changes in Dark-Fire Tobacco Farming in Western Kentucky.** C. Judy; University of Kentucky Cooperative Extension, Elkton, KY, USA



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- 11:15 am **8. Changes in Tobacco Farming in Maryland and Pennsylvania.** Ben Beale; University of Maryland, Cooperative Extension, Leonardtown, MD, USA and Jeff Graybill, Penn State Extension, Lancaster PA USA
- 11:50 am **9. GAPC Certification 101.** J. Chadwell, A. Rochkes, L. Walker and K. White; GAP Connections. Knoxville, TN, USA
- 12:10 pm **Adjourn – Lunch**

Tuesday, January 21, 2020

	Session A	Session B
	Agronomy: Crop Management <i>Presiding: Matthew Vann</i>	Disease Council: Nematodes and Pythium <i>Presiding: Emily Pfeufer</i>
1:10	10. Analysis and Risk Assessments of Climatic Factors During the Field Period of Flue-Cured Tobacco in Iuzhou, China - A Case Study. <u>W. Aiguo</u> , A.G. Wang, B.F. Jin, L. Liu, X. Yang, Y.L. Yang; Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou China	42. Integrated Approach for Management of Nematodes on Flue-Cured Tobacco in Ontario, Canada. <u>C. Saude</u> , A.D. Shearer, M.D. Richmond; Canadian Tobacco Research Foundation, Tillsonburg, ON Canada
1:30	11. Early Experiences with Connecticut Broadleaf Cigar Wrapper Tobacco in Kentucky and Tennessee. <u>A. Bailey</u> , C. Rodgers, A. Keeney, V. Witcher; University of Kentucky, Princeton, KY USA	43. Observations on the Influence of Root-Knot Nematode Resistance Genes RK1 and RK2 on Reproduction of Meloidogyne arenaria on Flue-Cured Tobacco. <u>N. Adamo</u> , C. Johnson, D. Reed, J. Eisenback; Virginia Tech, Blackstone, VA USA
1:50	12. Economic Factors Influencing Lower-Leaf Removal Decisions. <u>C. Blalock</u> , A.B. Brown, M.C. Vann, L.R. Fisher, C.E. Finch; North Carolina State University, Raleigh, NC USA	44. Efficacy of Non-Fumigant and/or Fumigant Products for Tobacco Nematode Management in Virginia. <u>C. Johnson</u> , N. Adamo, S. Irby, L. Cogar; Virginia Tech, Blackstone, VA USA
2:10	13. Lower-Leaf Removal Programs for Flue-Cured Tobacco Production in North Carolina. <u>T. Coggins</u> , M.C. Vann, L.R. Fisher, R. Wells, A.B. Brown, C.E. Finch; North Carolina Cooperative Extension Service - Davidson County, Lexington, NC USA	45. Chemical Management of the Guava Root Knot Nematode (Meloidogyne enterolobii) in Flue-Cured Tobacco. <u>L. Thiessen</u> and Y. Rosado Rivera; NC State, Raleigh, NC USA
2:30	14. Characteristics of Main Chemical Components of Flue-Cured Tobacco Leaves and Their Relationship with Smoke Sensory Quality in Guizhou, China. <u>H.X. Dai</u> , D.S. Lv, W. Xu, S.M. Wu, Y. Liu, T.B. Liang, S.X. Zhang, Y.L. Zhang; Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou China	46. Diversity of Pythium Species Recovered from Seven Locations within Tobacco Greenhouses. <u>X. Zhang</u> , C. Johnson, D. Reed; Virginia Tech, Blackstone, VA USA



<u>Tuesday, January 21, 2020 (continued)</u>		
2:50	15. Effects of EndoMaxx Concentrated Endomycorrhizal Fungi on Dark Tobacco. <u>V. Witcher</u> , C. Rodgers, A. Keeney, A. Bailey, J. Cranmer; University of Kentucky, Princeton, KY USA	47. Assessment of Water Treatments to Control Pythium myriotylum in Tobacco Greenhouses. <u>X. Zhang</u> , C. Johnson, D. Reed; Virginia Tech, Blackstone, VA USA
3:10	Break	
	Session A Agronomy: Nutrient Management <i>Presiding: Mitchell Richmond</i>	Session B Engineering <i>Presiding: Grant Ellington</i>
3:40	16. Potassium Source and Rate Effects on Yield, Quality and Tobacco Specific Nitrosamines in Dark and Burley Tobacco. <u>A. Keeney</u> ; A. Bailey; B. Pearce, University of Kentucky, Lexington, KY USA	48. Effect of Floor Insulation on Curing Efficiency in Dark Fire-Cured Tobacco. <u>C. Rodgers</u> and A. Bailey; University of Kentucky, Princeton, KY USA
4:00	17. Preliminary Results of the Project PhoTo-Photonics for Tobacco. <u>E. Bargiacchi</u> ¹ , L. Tuccio ² , C. Biancalani ³ , G. Milli ⁴ , S. Tegli ³ , S. Miele ¹ , G. Agati ² ; ¹ Consortium INSTM, Firenze, Italy ² CNR-IFAC, Firenze Italy; ³ DISPAA, Univ., Firenze Italy; ⁴ Fattoria Autonoma Tabacchi, Citta di Castello Italy	49. A Modern Approach to Fieldnotes, Barcoding, and Electronic Data Capturing. <u>J. Machacek</u> , M.C. Vann, R. Lewis, C. Brinton, N. Hummell, K. Rathbone; North Carolina State University, Raleigh, NC USA
4:20	18. Comparisons of Nitrogen Based Fertilizer Programs in Tobacco. <u>M.M. Short</u> , M.C. Vann, J.A. Cheek, D.S. Whitely; North Carolina State University, Raleigh, NC USA	50. Assessment of a Maleic Hydrazide Spray System Attached to a Mechanical Harvester. <u>K. Bostian</u> , M.C. Vann, G.H. Ellington, J.A. Macialek; North Carolina State University, Raleigh, NC USA
4:40	19. Effects of Chloride Application to Nutrient Assimilation and Post-Harvest Measurements of Flue-Cured Tobacco. <u>M.C. Vann</u> , L.R. Fisher, D.H. Hardy, C.R. Pace; North Carolina State University, Raleigh, NC USA	51. Exhaust Air Heat Recovery System Assessment. <u>G.H. Ellington</u> , K. Bostian, J.A. Macialek; North Carolina State University, Raleigh, NC USA
5:00	20. Growth and Nutrient Uptake of Burley Tobacco Fertilized with Alternate Sources of Potassium. <u>R. Pearce</u> ; University of Kentucky, Lexington, KY USA	52. Evaluation of a Biodegradable Plastic Greenhouse Float Tray. <u>T.D. Reed</u> ; Virginia Tech, Blackstone, VA USA



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Wednesday, January 22, 2020 - Poster Session – viewing 8:00 am – 5:00 pm

- 64. Comparison of Organic Nitrogen Sources for Dark Tobacco.** A. Bailey, C Rodgers, A. Keeney, V. Witcher; University of Kentucky, Princeton, KY USA
- 65. Fitness Comparisons among *Cercospora nicotianae* of Varying Sensitivity to Azoxystrobin.** W. Barlow, E. Pfeufer, G. Walles and E. Dixon; University of Kentucky, Lexington, KY USA
- 66. Effects of Soymilk Root Irrigation on the Growth of Flue-Cured Tobacco and Bacterial Community in Soil.** H.X. Dai, J.J. Yang, J.Q. Xi, T.B. Liang, J.W. Wang, Y.C. Chen, X.H. Su; Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou China
- 67. Flue-Cured Tobacco Response to Reduced Rates of Dicamba.** M.D. Inman, M.C. Vann, L.R. Fisher, T. Gannon, D.L. Jordan; North Carolina State University, Raleigh, NC, USA
- 68. Assessment of Rimsulfuron for Use in a Flue-Cured Tobacco Herbicide Program.** M.D. Inman and M.C. Vann; North Carolina State University, Raleigh, NC USA
- 69. Effect of Nano-Selenium on Tobacco Growth and Reactive Oxygen Species Metabolism.** L. Yang, X. Meng, H. Dai, Z. Zhai, T. Liang; Zhengzhou Tobacco Research Institute of CNTC, Zhengzhou China
- 70. No-Till Flue-Cured Tobacco without Herbicides: Is it possible?** C. Machanoff, D.H. Suchoff, M.C. Vann; North Carolina State University, Raleigh, NC USA
- 71. Hyperspectral Index Development for Detection of Black Shank Occurrences in Flue-Cured Tobacco.** T.D. Reed and A. Hayes; Virginia Tech, Blackstone, VA USA
- 72. The Comprehensive Herbicide Stewardship Program at the University of Tennessee: What's next?** N. Rhodes, L. Steckel, T. Mueller, D. McIntosh; The University of Tennessee, Knoxville, TN USA
- 73. On-Farm Evaluations of Varieties Containing the Wz Genetics for Black Shank Resistance, Yield and Grade.** J. Shealey, T. Barnes, H. Anderson, J. McLemore, J.M. Moore, P. Bertrand, R.S. Lewis; University of Georgia, Statenville, GA USA
- 74. Nitrogen Fertilizer Source Selection and the Impact to Flue-Cured Tobacco Nutrient Assimilation and Yield.** M.C. Vann, A. Woodley, D.H. Suchoff, L.R. Fisher; North Carolina State University, Raleigh, NC USA
- 75. Tobacco Production Programming in the Suwannee River Valley of North Florida.** C.D. Vann, K. Wynn, D. Broughton, J.M. Moore, M.C. Vann; The University of Florida - Lafayette County Cooperative Extension Service, Mayo, FL USA
- 76. Dark Tobacco Variety Evaluation for Angular Leaf Spot Susceptibility.** Z. Hansen, E. Walker, A. Bailey, and R. Ellis; University of Tennessee, Knoxville, TN USA



77. Variety and Fungicide Program Evaluation for Black Shank Management in Flue-cured Tobacco in North Carolina. Y. Rosado-Rivera and L. Thiessen; North Carolina State University, Raleigh, NC USA

78. Potential Target Spot Fungicides for Flue-cured Tobacco in Virginia: 2017-2019 Results. S. Irby, N. Adamo, and C.S. Johnson; Virginia Tech, Southern Piedmont Agricultural Research and Extension Center, Blackstone, VA USA

79. Evaluating Nematicides for Efficacy Against Root Knot Nematode (*Meloidogyne incognita*) in Tobacco. T. Price, P. Bertrand, J. M. Moore, E. Ali, and L. Dubberly; UGA Extension, Cook County, Adel, GA USA

80. Tomato Spotted Wilt Management in Southeastern Georgia. J. M. Moore, S. Curry, J. Jacobs, B. Reeves, A. Shirley, S. Tanner, C. Tyson, and P. Bertrand; University of Georgia, Tifton, GA USA

81. Evaluation of Verimark for Tomato Spotted Wilt Management in Georgia Tobacco. J. McLemore, P. Bertrand, and J. M. Moore; University of Georgia Extension, Douglas, GA USA

82. Evaluation of Lifeguard as a Management Tool for Spotted Wilt in Tobacco. T. Barnes, J. McLemore, P. Bertrand, and J. M. Moore; University of Georgia, Pearson, GA USA

Wednesday, January 22, 2020

	Session A	Session B
	Agronomy/Entomology/Disease Council: Integrated Pest Management <i>Presiding: Andy Bailey</i>	
8:00	21. Agrochemical Use on Tobacco: Zimbabwe Continues to Go Greener. <u>S. Dimbi</u> and R. Mavuka; Tobacco Research Board, Harare Zimbabwe	
8:20	22. Efficacy of S-metolachlor Based Herbicide Programs in Flue-Cured Tobacco. <u>A. Bradley</u> , M.C. Vann, C.W. Cahoon, D.L. Jordan, M.D. Inman, A.M. Clapp; North Carolina Cooperative Extension Service - Edgecombe County, Tarboro, NC USA	
8:40	23. Evaluation of Reduced Rates of Maleic Hydrazide. <u>T.D. Reed</u> ; Virginia Tech, Blackstone, VA USA	



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9:00	24. Pelargonic Acid - The Nuclear Option for Sucker Control?? <u>M.C. Vann</u> , D.S. Whitley, J.A. Cheek, J.L. Machacek; North Carolina State University, Raleigh, NC USA	
9:20	25. Evaluation of Contact and Local-Systemic Sucker Control Products on Flue-Cured Tobacco in Canada. <u>M.D. Richmond</u> , A.D. Shearer, E. Ellenberger, C. Saude, S. Mishra, G.A. Amankwa; Canadian Tobacco Research Foundation, Tillsonburg, ON Canada	
9:40	26. Evaluation of S-metolachlor Application Timing and Rate in Flue-Cured Tobacco. <u>M.C. Vann</u> , D.S. Whitley, D.L. Jordan, C.W. Cahoon, M.D. Inman, A.M. Clapp; North Carolina State University, Raleigh, NC USA	
10:00	Break & Poster Viewing	

Wednesday, January 22, 2020 (continued)

	Session A	Session B
	Agronomy/Entomology/Disease Council: Integrated Pest Management <i>Presiding: J. Michael Moore</i>	Agronomy: Organic Tobacco Production <i>Presiding: David Reed</i>
10:30	27. Comparison of Insecticides for Flea Beetle Control in Dark Tobacco. <u>A. Bailey</u> , R. Villanueva, C. Rodgers, A. Keeney, V. Witcher; University of Kentucky, Princeton, KY USA	53. Effects of Reflective and Colored Plastic Mulches on Organic Tobacco Production. <u>C. Machanoff</u> , D.H. Suchoff, M.C. Vann, A. Woodley; North Carolina State University, Raleigh, NC USA
10:50	28. Steward® EC (indoxacarb): A New Mode of Action Insecticide from FMC in Tobacco for the Management of Tobacco Budworm and Tobacco Hornworm. <u>H.E. Portillo</u> , R.W. Williams, J. Meredith, B. Strippling, C. Leon, M. Wiggins; FMC Corporation, Newark, DE USA	54. Comparison of Organic Fertilizer Timing and Source Material on Burley Tobacco Leaf Quality and Yield. <u>D.H. Suchoff</u> , M.C. Vann, D.S. Whitley; North Carolina State University, Raleigh, NC USA



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11:10	29. Keeping the Enemy of Your Enemy closer: How Sticky Tobacco Plants Provision Stilt Bugs (<i>Jalysus wickhami</i> Van Duzee) with Food When Times are Lean. <u>C.E. Sorenson</u> , P. Nelson, H.J. Burrack; North Carolina State University, Raleigh, NC USA	55. Screening Organic Nitrogen Sources for Seedling and Field Production of Flue-Cured Tobacco. <u>N.J. Manning</u> , M.C. Vann, D.H. Suchoff, A. Woodley, M. McGinnis; North Carolina State University, Raleigh, NC USA
11:30	30. Using Large Scale Data Sets to Improve Tobacco Scouting Recommendations. <u>G.L. Zilnik</u> , H.J. Burrack; North Carolina State University, Raleigh, NC USA	56. Organic Suckercides - The Unsuccessful Search for an Alternative to Fatty Alcohol. <u>M.M. Short</u> , D.H. Suchoff, M.C. Vann, L.R. Fisher; North Carolina State University, Raleigh, NC USA
11:50	31. Envisioning Tobacco IPM: Integrating New Pesticides and Practices in a Riskier System. <u>H.J. Burrack</u> , G.L. Zilnik, J.E. Slone, T.A. Toennisson, C.E. Sorenson; North Carolina State University, Raleigh, NC USA	57. Evaluating Cover Crop Nitrogen Contributions to Flue-Cured Hilled Tobacco Production Systems in Eastern North Carolina. <u>S. Hahn</u> , A. Woodley, M.C. Vann, L.R. Fisher; North Carolina State University, Raleigh, NC USA
12:10	Recognition Lunch	
1:30	Poster Session	

Wednesday, January 22, 2020 (continued)

	Session A Agronomy/Entomology/Disease Council: Integrated Pest Management <i>Presiding: Lindsey Thiessen</i>	Session B Agronomy: Tobacco Breeding <i>Presiding: Ramsey Lewis</i>
2:00	32. The Effect of Disease Management Programs on Fungicide Residues in Shade Tobacco. <u>J. LaMondia</u> and B. Eitzer; The Connecticut Agricultural Experiment Station, Windsor, CT USA	58. Using Etridiazole and High Intensity Light to Promote Early Flowering in Flue-Cured Tobacco. <u>G.A. Amankwa</u> , S. Mishra, A.D. Shearer, E. Ellenberger, C. Saude, M.D. Richmond; Canadian Tobacco Research Foundation, Tillsonburg, ON Canada
2:20	33. Alternatives to Streptomycin for Management of Angular Leaf Spot in Dark Tobacco. <u>A. Keeney</u> , E. Pfeufer, A. Bailey; University of Kentucky, Lexington, KY USA	59. Utilizing Double Haploid Populations to Fix Nitrogen Efficiency Traits in Burley Tobacco. <u>J. Frederick</u> , M. Della Vecchia, A. Adams, B. Irving, S. Pramod; Altria Client Services, Richmond, VA USA
2:40	34. Molecular identification of azoxystrobin-resistant <i>Cercospora nicotianae</i>, the frogeye leaf spot pathogen of tobacco. <u>E. Pfeufer</u> , H. Li, W. Barlow; University of Kentucky, Lexington, KY USA	60. Trends in Flue-Cured Tobacco Breeding, 1954 – 2018. <u>A.F. Ramsey</u> , M.C. Vann, R.S. Lewis, W.R. Foote, R. Rejesus; Virginia Tech, Blacksburg, VA USA



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3:00	35. Quantitative Real-Time PCR Analysis of Tobacco Mosaic Virus (TMV) Seed Transmission in Flue-Cured Tobacco Seed and Seedlings. <u>B. Ellis</u> , M.D. Ellis, J.M. Hoak, J. A. Brown, T.L. Sit, C.A. Wilkinson, T.D. Reed, G.E. Welbaum; Virginia Tech, Blackstone, VA USA	61. Development of the Tobacco Plants with Reduced Number of Suckers. <u>S. Suzuki</u> , S. Sato, M. Arai, A. Nomura, M. Tsukahara, K. Hamano; Japan Tobacco Inc., Oyema, Tochigi Japan
3:20	36. The United Nations sustainable development goals: CORESTA contributions and opportunities. <u>Stéphane Colard</u> ; CORESTA, Paris France	62. Double Haploid Populations as a Tool for Improved Markers for Tomato Spotted Wilt Virus (TSWV) Resistance Breeding. <u>M. Della Vecchia</u> , B. Irving, J.M. Moore, S. Lahue, S. Pramod, A. Adams, J. Frederick; Altria Client Services, Richmond, VA USA
3:40		63. Characterization of Increased Partial Resistance to Black Shank Mediated by Phn15.1. <u>C. Heim</u> , J.M. Ma, M. Humphry, J.M. Nifong, R.S. Lewis; NCSU, British American Tobacco Co., Raleigh, NC USA
4:00	Break & Poster Viewing	
4:30	Section Meetings	
4:50	General Business Meeting	

Thursday, January 23, 2020

	Session A Agronomy: TSNA/Nicotine <i>Presiding: Colin Fisher</i>	Session B Disease Council
8:00	37. Simple Economics of a Nicotine Standard for Combusted Cigarettes. <u>A. F. Ramsey</u> ; Virginia Tech, Blackstone, VA USA	State Disease Updates
8:20	38. Experiments with Low Alkaloid Tobacco Genotypes Carrying Induced BBL Gene Mutations. <u>R.S. Lewis</u> , K.E. Drake-Stowe, C. Heim, T. Steede, W. Smith, and R. Dewey; North Carolina State University, Raleigh, NC USA	



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8:40	39. Molecular Genetic Strategies for Maximizing Alkaloid Production in Tobacco. <u>R. Dewey</u> , N. Chandrakanth, T. Steede, R.S. Lewis; North Carolina State University, Raleigh, NC USA	
9:00	40. Cultural Practices Impacting Nicotine Content of Flue-Cured Tobacco. <u>C. Hinkle</u> and T.D. Reed; Virginia Tech, Blackstone, VA USA	
9:20	41. The Effect on TSNAs of Stick Spacing in the Barn. <u>A. Fisher</u> , C. Fisher, J. Huihua; University of Kentucky KTDRC, Lexington, KY USA	
9:40	Break	
10:00	GAP Annual Meeting	State Disease Updates (con't)