

Dr. William A. Bailey
SCOPUS ID: 13403605200
University of Kentucky
Martin-Gatton College of Agriculture, Food and Environment
Department of Plant and Soil Sciences
2020-2024 CV

Extension Professor/Tobacco DOE: 75% Extension; 15% Research; 10% Administration

Education:

PhD. Plant Pathology, Physiology, and Weed Science, Virginia Tech, 2002
M.S. Crop Science, North Carolina State University, 1999
B.S. Agronomy, North Carolina State University, 1997

Employment History

Extension Professor, Univ. of KY, Dept of Plant & Soil Science, 2015-present
Extension Associate Professor, Univ. of KY, Dept of Plant & Soil Science, 2008-2015
Extension Assistant Professor, Univ. of KY, Dept of Plant & Soil Science, 2002-2008

Administrative Assignments

Extension Coordinator, Department of Plant & Soil Sciences. January 1, 2022 - Present

Responsibilities: Serve as editor and coordinator for all numbered extension publications for 12 Plant & Soil Science extension faculty. Organize, plan, and conduct annual departmental extension specialists' meeting. Represent the department of Plant & Soil Sciences in all extension activities at the college level. Serve on various extension committees with extension coordinators for other CAFE departments and CAFE extension administrators.

Research and Scholarship

Intellectual Contributions

* = Senior Author ~ = Corresponding Author + = Grad/Prof Student # = Post Doc ^ = Undergraduate

WOS = Web of Science JIF = Journal Impact Factor TC = Journal Total Cites
SNIP = Source Normalize Impact per Paper SJR = Scimago Journal Rank

Published

Journal Article, Academic Journal

- ~ Webb, A. B., Bailey, W. A. Date Accepted: (February, 2024). Chemical control of black shank (*Phytophthora nicotianae*) in strip-tillage dark fire-cured tobacco. *Tobacco Science*.
- ~ Perkins, C. H., Rodgers, J. C, Richmond, M. D., Ellis, R. E. Ellis, and W. A. Bailey. Evaluation of fungicides to enhance wrapper leaf production in Connecticut Broadleaf cigar wrapper tobacco. *Tobacco Science*.

*+ Webb, A. B. and W. A. Bailey. (2024). Copper Efficacy Field Trials for Control of *Pseudomonas syringae* pv. *tabaci* in *Nicotiana tabacum* Production. *Plant Health Progress*. <https://doi.org/10.1094/PHP-01-24-0007-RS>

*+ Webb, A. B. and W. A. Bailey. (2024). Chemical Efficacy Field Trials for *Pseudomonas syringae* pv. *tabaci* in *Nicotiana tabacum* L. *Plant Health Progress*. <https://doi.org/10.1094/PHP-04-24-0037-RS>.

* + Keeney, A. B., Pearce, R. C., ~ Bailey, W. A. (2023). Effect of Potassium Source and Rate on Yield, Quality, and Tobacco-specific Nitrosamines in Dark and Burley Tobacco, *Tobacco Science*, 58(1), 1-8.

* + ~ Richmond, M. D., Bailey, W. A., Pearce, R. C. (2022). The Effect of Suckercide Application Timing and Cultivar Maturity on Chemical Topping of Burley Tobacco, *Tobacco Science*, 57(1), 21-27. doi: <https://doi.org/10.3381/TOBSCI-D-20-00003>

* + Richmond, M. D., Pearce, R. C., Mark, T. B., Bailey, W. A. (2022). The Effect of Suckercide Product and Application Rate on Chemical Topping of Burley Tobacco, *Tobacco Science*, 57(1), 29-37. doi: <https://doi.org/10.3381/TOBSCI-D-22-00002>

* + Richmond, M. D., Fisher, C. R., Jack, A. M., Pearce, R. C., Bailey, W. A. (2022). Effect of Ordering Method on TSNA Content in Dark Air-Cured and Burley Tobacco, *Tobacco Science*, 57(1), 38-42. doi: <https://doi.org/10.3381/TOBSCI-D-22-00003>

Singh, S., Richmond, M. D., Pearce, R. C., Bailey, W. A., Hou, X., Pattanaik, S., * ~ Yuan, L. (2020). Maleic hydrazide elicits global transcriptomic changes in chemically topped tobacco to influence shoot bud development., *Planta*, 252(4), 64. doi: 10.1007/s00425-020-03460-9
 Author Role:
 This is a work from Yuan lab in collaboration with other UK faculty, Drs Bob Pearce and Andy Bailey. Ling Yuan is corresponding author.
 WOS Metric Year: 2021|JIF: 4.116|TC: 23776
 Scopus Metric Year: 2020|Category: Plant Science|CiteScore: 5.8|Highest Percentile: 89|Rank: 46/445|Ratio: 46/445|SNIP: 1.257|SJR: 1.253

* + Keeney, A. B., Ritchey, E. L., ~ Bailey, W. A. (2020). Soil Test Potassium Changes over Time following Potassium Application in Three Western Kentucky Soils., *Agrosystems, Geosciences, & Environment*, 3(1), 8. doi: 10.1002/agg2.20058

28 Refereed Journal Articles published prior to 2020.

Accepted

Journal Article, Academic Journal

~ Perkins, C. H., Rodgers, J. C., Richmond, M. D., Ellis, R. E. Ellis, and W. A. Bailey. Effect of lower leaf removal on cigar wrapper leaf production in Connecticut Broadleaf tobacco. *Tobacco Science*. Accepted for publication January 23, 2025.

Published Research Reports

- * + ~ Keeney, A. B., Pfeifer, E., Bailey, W. A. (2020). Streptomycin alternatives for management of angular leaf spot of dark tobacco in Princeton, KY 2019, *Plant Disease Management Reports/American Phytopathological Society*, V127(14).
- * + ~ Keeney, A. B., Pfeifer, E., Bailey, W. A. (2020). Streptomycin alternatives for management of angular leaf spot of dark tobacco in Murray, KY, 2019, *Plant Disease Management Reports/American Phytopathological Society*, V126(14).

Sponsored Projects

Closed

- Bailey W., A., Altria Evaluation, Sponsored by Altria Corporate Services Inc Submitted: May 2, 2022. Funding Dates: April 1, 2022 - March 31, 2023. | Awarded: \$25,000.00
OSPA ID: 202205021217
- Bailey W., A., Corteva SOW 2022-02, Sponsored by Pioneer Hi Bred International Inc Submitted: June 27, 2022. Funding Dates: April 30, 2022 - December 31, 2022. | Awarded: \$10,440.00
OSPA ID: 202206271428
- Bailey W., A., 2020 ALCS Tobacco & Product Applied Technology Field Studies Research Projects, Sponsored by Altria Corporate Services Inc Submitted: March 20, 2020. Funding Dates: April 1, 2020 - March 31, 2022. | Awarded: \$66,338.00
OSPA ID: 202003201004
- Bailey W., A., Further Evaluation of Corteva Corn Herbicides for Carryover to Tobacco, Sponsored by Pioneer Hi Bred International Inc Submitted: November 1, 2021. Funding Dates: April 15, 2021 - December 31, 2021. | Awarded: \$16,965.00
OSPA ID: 202111011229
- Bailey W., A., Production of Commercial Quantities of Fire- and Air-Cured Leaf from Experimental Dark Tobacco Lines, Sponsored by Altria Corporate Services Inc Submitted: March 24, 2019. Funding Dates: June 17, 2019 - December 31, 2021. | Awarded: \$14,500.00
OSPA ID: 201903241328
- Bailey W., A., Pfeifer E., Dark Tobacco Variety Trial to Evaluate Susceptibility to Angular Leaf Spot, Sponsored by University of Tennessee Submitted: August 23, 2020. Funding Dates: July 1, 2020 - June 30, 2021. | Awarded: \$6,000.00
OSPA ID: 202008230928
- Bailey W., A., Evaluation of Corteva Corn Herbicide for Carryover to Tobacco, Sponsored by Dow AgroSciences Submitted: April 7, 2020. Funding Dates: May 1, 2020 - December 31, 2020. | Awarded: \$6,525.00
OSPA ID: 202004071616

Non-Sponsored Projects

Industrial/Trade

- Bailey, W. A. Yield and quality of experimental dark tobacco lines at two locations. Altria Client Services, (March 15, 2024-December 31, 2024). Awarded: \$20,000.
- Bailey, W. A. Black shank evaluation of experimental dark tobacco lines. Altria Client Services, (March 15, 2024 – December 31, 2024). Awarded: \$10,000.

Bailey, W. A. Continuation of pesticide residue evaluation in dark fired and dark air-cured tobacco. Altria Client Services, (March 15, 2024 – December 31, 2024). Awarded: \$20,000.

Bailey, W. A. Continuation of chemical screening field trial for angular leaf spot control in dark tobacco. Altria Client Services, (March 15, 2024 – December 31, 2024). Awarded: \$5,000.

Bailey, W. A. Comparison of Low Converter and Unscreened seedlots of common dark tobacco varieties, Altria Client Services, (March 15, 2024 – December 31, 2024). Awarded: \$5,000.

Bailey, W. A. Labor reduction and improvement of labor efficiency in market preparation of dark tobacco. Altria Client Services, (March 15 – December 31, 2024). Awarded: \$2,000.

Bailey, W. A. Evaluation of ridging and topping height on sucker control and performance of dark tobacco. Altria Client Services, (March 15, 2024 – December 31, 2024). Awarded: \$8,000.

Bailey, W. A. Support of dark tobacco extension efforts: grower education events, field days, and on-farm research. Altria Client Services, (March 15, 2024 – December 31, 2024). Awarded: \$10,000.

Bailey, W.A. Continued research to increase wrapper leaf production in CT Broadleaf cigar wrapper tobacco. ITG Brands, LLC (May 15, 2024 – December 31, 2024) Awarded: \$10,000.

Bailey, W.A. Evaluation of cigar wrapper lines for yield and quality. ITG Brands, LLC (May 15, 2024 – December 31, 2024). Awarded: \$6,250.

Bailey, W. A. Evaluation of yield and quality in eleven experimental dark tobacco lines at two locations. Altria Client Services. (March 15, 2023 – December 31, 2023). Awarded: \$20,000.

Bailey, W. A. Black shank evaluation of selected dark tobacco hybrids in a Kentucky black shank nursery. Altria Client Services. (March 15, 2023 – December 31, 2023). Awarded: \$10,000.

Bailey, W. A. Evaluation of ridging and topping height on standability of dark tobacco. Altria Client Services. (March 15, 2023 – December 31, 2023). Awarded: \$5,000.

Bailey, W. A. Continued collection of pesticide residue information for dark tobacco. Altria Client Services. (March 15, 2023 – December 31, 2023). Awarded: \$20,000.

Bailey, W. A. Support of angular leaf spot chemical efficacy trials in dark tobacco. Altria Client Services. (March 15, 2023 – December 31, 2023). Awarded: \$4,000.

Bailey, W. A. Support of dark tobacco extension efforts: grower education events, field days, and on-farm research. Altria Client Services, (March 15, 2023 –

December 31, 2023). Awarded: \$8,000.

Bailey, W. A. Further evaluation of cyhalothrin residue in burley tobacco. Altria Client Services (June 1, 2023 – December 31, 2023). Awarded: \$5,000.

Bailey, W. A. Evaluation of NKS-28 as a nitrogen source for dark tobacco. UKT Chicago. (April 15, 2024 – December 31, 2024). Awarded: \$15,000.

Bailey, W. A. Support for field research trials with Connecticut Broadleaf cigar wrapper tobacco. Gallatin Redrying & Storage Co. (May 1, 2023 – December 31, 2023) Awarded: \$8,850.

Bailey, W. A. Support for field research trials with Connecticut Broadleaf cigar wrapper tobacco. Hail & Cotton, Inc. (May 1, 2023 – December 31, 2023). Awarded: \$1,350.

Bailey, W. A. Evaluation of cigar wrapper lines for black shank resistance. ITG Brands, LLC. (May 1, 2023 – December 31, 2023) Awarded: \$7,500.

Bailey, W. A. Evaluation of dark tobacco line for black shank resistance and potential for cigar wrapper production. (May 1, 2023 – December 31, 2023) Universal Leaf, NA. Awarded: \$1,000.

Bailey, W. A. Evaluation of experimental budworm insecticide in dark tobacco. UPL, NA. (July 1, 2023 - December 31, 2023) Awarded: \$2,000.

Bailey, W. A. Evaluation of insecticides for flea beetle control in tobacco and Adastrio fungicide for frogeye leaf spot control in tobacco. FMC Corporation. (May 1, 2023 – December 31, 2023). Awarded: \$15,000.

Bailey, W. A., Support for purchase of a field and plot sprayer to support pesticide residue research and general tobacco use, Altria Client Services, (October 30, 2022 - December 15, 2022). Awarded: \$20,000.
Description: Funding to be used for purchase of new sprayer

Bailey, W.A. Evaluation of Leap and Excalia fungicides for disease control in dark tobacco and phytotoxicity potential. Valent USA (May 1, 2022 – December 31, 2022) Awarded: \$15,250.

Bailey, W.A. Evaluation of laminarin (Vacciplant) plant stimulant for suppression of angular leaf spot in dark tobacco. UPL NA (May 1, 2022 – December 31, 2022) Awarded: \$1,500.

Bailey, W.A. Evaluation of insecticides for flea beetle control in dark tobacco. FMC Corporation. (May 1, 2022 – December 31, 2022) Awarded: \$3,000.

Bailey, W.A. and A.B. Keeney. Chemical screening and field observational study on angular leaf spot in dark tobacco. Altria Client Services (March 15, 2022 – December 31, 2022) Awarded: \$9,920.

Bailey, W.A. Continued support for dark tobacco pesticide residue testing program.

Altria Client Services (March 15, 2022 – December 31, 2022) Awarded: \$20,000.

Bailey, W.A. Support for applied on-farm research and extension agent training. Altria Client Services (March 15, 2022 – December 31, 2022) Awarded: \$8,000.

Bailey, W.A.and J.C. Rodgers. Evaluation of ridging and topping height on dark tobacco standability to allow over-the-top spray applications of sucker control and reduce production costs. Altria Client Services (March 15, 2022 – December 31, 2022) Awarded: \$7,000.

Bailey, W. A. (Principal), Evaluation of generic metalaxyl (Xyler) for control of black shank in dark tobacco, Vive Crop Protection, Mississauga, ON, Canada, (April 30, 2021 - April 13, 2022). Awarded: \$5000.

Description: Funding to support field research trial at black shank nursery in Hopkinsville KY

Bailey, W. A. (Principal), Evaluation of overwintering ability of angular leaf spot and effect of tillage and angular leaf spot incidence in dark tobacco, Altria Client Services, (May 1, 2021 - December 31, 2021). Awarded: \$6000.

Description: Funding used to support field trial conducted in a field the year following severe angular leaf spot infection and included blocks of conventional and no-tillage dark tobacco.

Bailey, W. A. (Principal), Evaluation of Universal Leaf experimental dark tobacco variety for leaf quality and cigar wrapper potential in dark fire-cured, dark air-cured and black shank variety trials., Universal Leaf North America, (May 1, 2021 - December 15, 2021). Awarded: \$1500.

Description: Funding used to support Universal Leaf dark tobacco entry in dark fire-cured and dark air-cured commercial variety trials, and in black shank variety screening trial

Bailey, W. A. (Principal), Evaluation of experimental fatty alcohol products for sucker control in dark tobacco, UPL North America Corporation, (April 15, 2021 - October 15, 2021). Awarded: \$7000.

Description: Funding used to support sucker control field trial

Bailey, W. A. (Principal), Evaluation of tobacco insecticides for hornworm and budworm control in dark tobacco, FMC Corporation, (April 1, 2021 - October 15, 2021).

Awarded: \$5000.

Description: Funding used to support field trial to evaluation various insecticides for hornworm and budworm control in dark tobacco.

Bailey, W. A., Evaluation of pesticide residue from applications of Dual (metolachlor), Presidio (fluopicolide), Revus (mandipromamid), and Exirel (cyantraniliprole) to dark air-cured and dark fire-cured tobacco, CORESTA (Cooperation Centre for Scientific Research Relative to Tobacco) - Paris, France, (March 15, 2021 - October 15, 2021). Awarded: \$12000.

Description: Funding used to support two field trials in 2021 to evaluate pesticide residues in cured leaf from field applications of Dual, Presidio, Revus, and Exirel to dark air-cured (1 trial) and dark fire-cured (1 trial) tobacco

Pfeufer, E. (Principal), Pearce, R. C. (Co-Investigator), Bailey, W. A. (Co-Investigator), Barlow, W. (Grad/Prof Student), Practical disease management with reduced-sensitivity tobacco pathogens: frogeye leaf spot in burley tobacco and angular leaf spot in dark tobacco., Altria, (March 2019 - February 2020). Awarded: \$12000. Description: Evaluate angular leaf spot of dark tobacco, and frogeye leaf spot of burley tobacco, under typical agrichemical management in the presence of wild-type and reduced sensitivity pathogen populations.

On-going

Bailey, W. A., Unrestricted gift to aid in recovery of tobacco research infrastructure and general UKREC infrastructure following December 2021 tornado, Syngenta Crop Protection, (December 2022 - Present). Awarded: \$31250.

Description: General unrestricted gift to aid in recovery of tobacco research infrastructure at UKREC Princeton, and general UKREC recovery efforts.

Bailey, W. A. (Principal), Evaluation of color change and smoke quality in cured burley tobacco allowed to remain hanging in curing barns from November 2022 to August 2023., Altria Client Services, (November 1, 2022 - December 30, 2022). Awarded: \$8000.

Description: Funding used to supplement two burley growers in western Kentucky to allow 200 sticks of burley tobacco to remain hanging in their barn from November 2022 to August 2023 and support sampling, sample preparation, and visual data collection every 2-3 months for 9 months.

Bailey, W. A. (Principal), Evaluation of pesticide residue from commonly used pesticides in dark tobacco: Admire Pro (imidacloprid), Assail (acetamiprid), Capture (bifenthrin), and Exirel (cyantraniliprole) in dark air-cured and dark fire-cured tobacco, Altria Client Services, (May 15, 2022 - December 15, 2022). Awarded: \$20000.

Description: Funding used to support dark air-cured and dark fire-cured pesticide residue trials in 2022.

Bailey, W. A. (Principal), Evaluation of ridging, hilling, and topping height on dark tobacco standability to allow over-the-top spray applications for sucker control to reduction production costs, Altria Client Services, (May 1, 2021 - December 15, 2022). Awarded: \$16000.

Description: Funding used to support field trials in 2021 and 2022 and to purchase equipment (disk hillier for ridging) for use in this project.

Bailey, W. A. (Principal), Support for dark tobacco extension and applied research efforts, Altria Client Services, (May 15, 2021 - December 15, 2022). Awarded: \$43000.

Description: Funding used to support extension activities, extension travel, tobacco GAP Training programs, farm visits, pesticide residue research, and on-farm trials such as dark and burley tobacco variety trials, cigar wrapper production practices, black shank fungicide and variety evaluations, and angular leaf spot management and streptomycin resistance screening.

Bailey, W. A., Unrestricted Gift from Altria Client Services to aid in recovery of tobacco research infrastructure and general UKREC infrastructure following December 2021

tornado., Altria, (December 2021 - Present). Awarded: \$300000.

Description: General unrestricted gift to aid in recovery of tobacco research infrastructure at UKREC Princeton, and for general station recovery efforts.

Bailey, W. A. (Principal), Support for tobacco pesticide residue educational efforts for tobacco growers, Altria Client Services, (October 30, 2021 - December 30, 2021). Awarded: \$5000.

Description: Used to support educational meetings to help tobacco growers make accurate, timely, and appropriate pesticide applications to avoid excessive pesticide residues in cured leaf.

Bailey, W. A. (Principal), 2020 Commercial on-farm trials to evaluate grower use of KCI in dark tobacco, American Snuff Company, (May 1, 2020 - December 31, 2020). Awarded: \$5000.

Bailey, W. A. (Principal), 2020 CORESTA Pesticide Residue Field Trials, CORESTA, (May 1, 2020 - December 31, 2020). Awarded: \$12000.

Description: Funding to support University of Kentucky participation in an international network of pesticide residue field trials coordinated by CORESTA

Bailey, W. A. (Principal), Establishment of best production practices for Connecticut Broadleaf cigar wrapper tobacco in Kentucky and Tennessee, Hail & Cotton, Inc., (May 1, 2020 - December 31, 2020). Awarded: \$7333.33.

Bailey, W. A. (Principal), Establishment of best production practices for Connecticut Broadleaf cigar wrapper tobacco in Kentucky and Tennessee, ITG Brands, LLC, (May 1, 2020 - December 31, 2020). Awarded: \$7333.33.

Bailey, W. A. (Principal), Establishment of best production practices for Connecticut Broadleaf cigar wrapper tobacco in Kentucky and Tennessee, Lancaster Leaf Tobacco Company of Pennsylvania, (May 1, 2020 - December 31, 2020). Awarded: \$8333.33.

Bailey, W. A. (Co-Investigator), Pfeifer, E. (Co-Investigator), Evaluation of SAR-pesticides for angular leaf spot control in dark tobacco, UPL (United Phosphorus, Inc.), (May 1, 2020 - December 31, 2020). Awarded: \$3500.

Bailey, W. A. (Principal), 2020 GAP Training support, GAP Connections, Inc., (January 1, 2020 - December 31, 2020). Awarded: \$4000.

Description: Funding to support 2020 tobacco grower GAP Training efforts

State

State Experiment Station

On-going

Bailey, W. A. (Principal), Reduction of tobacco-specific N-nitrosamines (TSNA) and benzo-[a]-pyrene (BaP) in dark tobaccos, (2017 - December 31, 2022).

Intellectual Property

Bailey, W. A., Method for reducing nitrosamines in tobacco, Patent/Copyright/ID Number: US20070149408A1

Presentations Given

Invited Speaker

+ = *Grad/Prof Student* # = *Post Doc* ^ = *Undergraduate*

Bailey, W. A., (January 18, 2024). Update on dark tobacco research and production. Burley & Dark Tobacco Growers Association Annual Meeting, Bowling Green, KY, Invited, National.

Bailey, W. A., (September 22, 2023). Update on current dark tobacco research and 2023 production season, FDA TPSAC update. Dark Tobacco Leaf Dealers & Exporters Conference, Isle of Palms, SC, Invited, National.

Bailey, W.A., (January 19, 2023). Update on dark tobacco research and production trends. Burley & Dark Tobacco Growers Association Annual Meeting, Bowling Green, KY, Invited, National.

Bailey, W. A., (November 17, 2022). Experiences with Conservation Tillage Systems for Tobacco Production in Kentucky Tobacco Conservation Tillage Webinar, American Farmland Trust, CT. Invited, Regional.

Bailey, W. A., (November 1, 2022). Report on 2022 Altria Research and Extension Projects Altria 1st annual research report meeting, Altria Client Services, Richmond, VA, United States. Invited, National.

Bailey, W.A., (September 23, 2022). Update on dark tobacco production and research, FDA TPSAC activities. Dark Tobacco Leaf Dealers & Exporters Conference, Savannah, GA, Invited, National.

Bailey, W. A., (March 10, 2022). Update on standard fertility practices for burley and dark tobacco in Kentucky and Tennessee Tobacco Fertility Update to Altria Grower Representatives (virtual), Altria Client Services. Invited, Regional.

Bailey, W. A., (November 9, 2021). Basics of Burley and Dark Tobacco Production in Kentucky and Tennessee USDA-RMA Tobacco Production Training (virtual), USDA-Risk Management Agency. Invited, Regional.

Bailey, W.A. (September 10, 2021). Update on current dark tobacco research and FDA TPSAC activities. Dark Tobacco Leaf Dealers & Exporters Conference, Williamsburg, VA, Invited, National.

Podium Session

+ = *Grad/Prof Student* # = *Post Doc* ^ = *Undergraduate*

+ Webb, A.B., Pearce, R.C., Vincelli, P., Wise, K., Bailey, W.A. (January 17, 2024). Environmental factors and management practices associated with angular leaf spot incidence in dark tobacco. 51st Tobacco Workers Conference, Knoxville, TN, United States. Accepted, National.

+ Bailey, W.A., Rodgers, J.C., Perkins, C.H., Webb, A.B. (January 17, 2024). Disease management practices for dark tobacco in Kentucky and Tennessee. 51st Tobacco Workers Conference, Knoxville, TN, United States. Accepted, National.

- + Webb, A.B., Pearce, R.C., Vincelli, P., Wise, K., Bailey, W.A. (January 17, 2024). Management of angular leaf spot through chemical control options in dark tobacco. 51st Tobacco Workers Conference, Knoxville, TN, United States. Accepted, National.
- + Perkins, C.H., Rodgers, J.C., Richmond, M.D, Ellis, R.L., Bailey, W.A. (January 16, 2024). Impact of lower leaf removal and fungicide application on cigar wrapper leaf production in Connecticut broadleaf tobacco. 51st Tobacco Workers Conference, Knoxville, TN, United States. Accepted, National.
- + Perkins, C.H., Rodgers, J.C., Richmond, M.D., Ellis, R.L., Bailey, W.A. (January 16, 2024). Comparison of fungicide programs for cigar wrapper leaf production in Connecticut Broadleaf tobacco. 51st Tobacco Workers Conference. Knoxville, TN, United States, Accepted, National.
- Singh, S.K., Pattanaik, S., Webb, A.B., Bailey, W.A., Pearce, R.C., Ling Yuan. (October 17, 2023). Tobacco leaf transcriptomic analysis unveils differential effects of potassium chloride and potassium sulphate on formation of tobacco-specific nitrosamines. CORESTA Agro-Phyto Conference, Cancun, Mexico. Accepted, International.
- + Webb, A.B., Bailey, W.A. (October 17, 2023). Correlation of management practices and environmental conditions on incidence of angular leaf spot in dark fire-cured tobacco. CORESTA Agro-Phyto Conference, Cancun, Mexico. Accepted, International.
- + Keeney-Webb, A. B., Bailey, W. A., Rodgers, J. C., (October 14, 2022). Chemical management strategies for angular leaf spot in dark tobacco 2022 CORESTA Congress - virtual, CORESTA. Accepted, International.
- + Keeney-Webb, A. B., Bailey, W. A., Rodgers, J. C., (October 14, 2022). Correlation between management practices and angular leaf spot of dark tobacco 2022 CORESTA Congress - virtual, CORESTA. Accepted, International.
- + Perkins, C. H., Bailey, W. A., Rodgers, J. C., + Keeney-Webb, A. B., (October 14, 2022). Evaluation of fungicide programs and lower leaf removal on wrapper leaf production in Connecticut Broadleaf cigar wrapper tobacco 2022 CORESTA Congress - virtual, CORESTA. Accepted, International.
- Bailey, W. A., Rodgers, J. C., Richmond, M. D., Ellis, R., (October 11, 2022). Effect of ridging and hillling on dark tobacco standability and sucker control 2022 CORESTA Congress - virtual, CORESTA. Accepted, International.
- # Sanjay, S., Pattanaik, S., + Keeney, A., Bailey, W. A., Pearce, R. C., Yuan, L., (September 13, 2022). Analysis of tobacco leaf transcriptomes reveals differential influences of KCl and K₂SO₄ on tobacco-specific nitrosamine (TSNA) formation. 75th Tobacco Science Research Conference, New Orleans, LA, United States. Accepted, International.
- Rodgers, J. C., Bailey, W. A., (January 26, 2022). Effect of ridging on dark tobacco standability and sucker control 50th Tobacco Workers Conference, Tobacco Workers Conference, Richmond, VA, United States. Accepted, National.
- Bailey, W. A., Witcher, V. R., Rodgers, J. C., Keeney-Webb, A. B., Perkins, C. H., (January 26, 2022). Evaluation of indoxacarb (Steward) and other insecticides for flea beetle control in dark tobacco 50th Tobacco Workers Conference, Tobacco Workers Conference, Richmond, VA, United States. Accepted.
- + Keeney-Webb, A. B., Bailey, W. A., Rodgers, J. C., (January 25, 2022). Comparison of chemical management strategies for angular leaf spot in dark tobacco 50th Tobacco Workers Conference, Tobacco Workers Conference, Richmond, VA, United States. Accepted, National.
- Hansen, Z., + Keeney-Webb, A. B., Bailey, W. A., (January 25, 2022). Dark tobacco variety evaluations for susceptibility to angular leaf spot 50th Tobacco Workers Conference, Tobacco Workers Conference, Richmond, VA, United States. Accepted, National.
- Bailey, W. A., + Perkins, C. H., + Keeney-Webb, A. B., Witcher, V. R., (January 25, 2022). Development of production recommendations for Connecticut Broadleaf cigar wrapper

tobacco in Kentucky and Tennessee 50th Tobacco Workers Conference, Tobacco Workers Conference, Richmond, VA, United States. Accepted, National.

+ Perkins, C. H., Bailey, W. A., Rodgers, J. C., + Keeney-Webb, A. B., Witcher, V. R., Richmond, M. D., Ellis, R., (January 25, 2022). Effect of fungicide programs and lower leaf removal on wrapper leaf production in Connecticut broadleaf cigar wrapper production 50th Tobacco Workers Conference, Tobacco Workers Conference, Richmond, VA, United States. Accepted, National.

+ Keeney-Webb, A. B., Bailey, W. A., Rodgers, J. C., (January 25, 2022). Field monitoring and management practices associated with angular leaf spot of dark tobacco 50th Tobacco Workers Conference, Tobacco Workers Conference, Richmond, VA, United States. Accepted, National.

Pearce, R. C., Bailey, W. A., (January 25, 2022). Impact of potassium source on growth, yield, and cured leaf chemistry on burley and dark tobacco. 50th Tobacco Workers Conference, Richmond, VA, United States. Accepted, National.

Bailey, W. A., Rodgers, J. C., + Keeney, A. B., + Perkins, C. H., Witcher, V. R., (October 15, 2021). Development of production recommendations for Connecticut Broadleaf cigar wrapper tobacco in Kentucky and Tennessee 2021 CORESTA Agro-Phyto Conference - virtual, CORESTA. Accepted, International.

+ Keeney, A. B., Bailey, W. A., (October 14, 2021). Evaluation of spray programs for control of angular leaf spot (*Pseudomonas syringae* pv. *tabaci*) in dark tobacco production 2021 CORESTA Agro-Phyto Conference - virtual, CORESTA. Accepted, International.

Bailey, W. A., + Keeney, A. B., Pearce, R. C., Richmond, M. D., (October 14, 2021). Impact of potassium source on cured leaf moisture and total TSNA in burley and dark fire-cured tobacco 2021 CORESTA Agro-Phyto Conference - virtual, CORESTA. Accepted, International.

+ Keeney, A. B., Bailey, W. A., Hansen, Z. R., (October 13, 2021). Differential susceptibility to angular leaf spot (*Pseudomonas syringae* pv. *tabaci*) in dark tobacco varieties 2021 CORESTA Agro-Phyto Conference - virtual, CORESTA. Accepted, International.

Bailey, W. A., + Keeney, A. B., Pfeufer, E., (January 21, 2020). Alternatives to streptomycin for management of angular leaf spot in dark tobacco. 49th Tobacco Workers Conference, Louisville, KY, United States. Accepted, International.

Bailey, W. A., Villanueva, R. T., Viloria, Z., Rodgers, C., + Keeney, A., Witcher, V., (January 21, 2020). Comparison of insecticides for flea beetle control in dark tobacco. 49th Tobacco Workers Conference, Tobacco Workers Conference, Louisville, KY, United States. Accepted, International.

Bailey, W. A., Rodgers, C., + Keeney, A., Witcher, V., (January 21, 2020). Early experiences with Connecticut Broadleaf cigar wrapper tobacco in Kentucky and Tennessee. 49th Tobacco Workers Conference, Tobacco Workers Conference, Louisville, KY, United States. Accepted, International.

Rodgers, C., Bailey, W. A., (January 21, 2020). Effect of floor insulation on curing efficiency in dark-fired tobacco. 49th Tobacco Workers Conference, Tobacco Workers Conference, Louisville, KY, United States. Accepted, International.

Witcher, V., Rodgers, C., + Keeney, A., Bailey, W. A., Cranmer, J., (January 21, 2020). Effects of EndoMaxx concentrated endomycorrhizal fungi on dark tobacco. 49th Tobacco Workers Conference, Tobacco Workers Conference, Louisville, KY, United States. Accepted, International.

+ Keeney, A., Bailey, W. A., Pearce, R. C., (January 21, 2020). Potassium source and rate effects on yield, quality and tobacco specific nitrosamines in dark and Burley tobacco. 49th Tobacco Workers Conference, Louisville, KY, United States. Accepted, International.

Poster Session

⁺ = *Grad/Prof Student* [#] = *Post Doc* [^] = *Undergraduate*

Bailey, W. A., Rodgers, C., + Keeney, A., Witcher, V., (January 22, 2020). Evaluation of Organic Nitrogen Sources for Dark Tobacco. 49th Tobacco Workers Conference, Tobacco Workers Conference, Louisville, KY, United States. Accepted, International.

Extension

Extension Publications & Media

^{*} = *Senior Author* [~] = *Corresponding Author* ⁺ = *Grad/Prof Student* [#] = *Post Doc* [^] = *Undergraduate*

Published

Non Peer-Reviewed Creative Work

Videotape

Pearce, R. C., Bailey, W. A., Richmond, M.D., Rochkes, A. (2024). 2024 Tobacco GAP Training. Distance training recorded for later use by agents to train tobacco growers

Bailey, W.A. (2024). Angular leaf spot update. Tobacco GAP Training video module.

Bailey, W.A. (2024). Fleabeetle management update. Tobacco GAP Training video module.

Pearce, R. C., Bailey, W. A., Richmond, M.D., Rochkes, A. (2023). 2023 Tobacco GAP Training. Distance training recorded for later use by agents to train tobacco growers.

Bailey, W.A. (2023). Air-curing management. Tobacco GAP Training video module.

Bailey, W.A. (2023). High-volume fire curing. Tobacco GAP Training video module.

Pearce, R. C., Bailey, W. A., Richmond, M.D., Rochkes, A. (2022). 2022 Tobacco GAP Training. Distance training recorded for later use by agents to train tobacco growers.

Pearce, R. C., Bailey, W. A., Richmond, M.D., Rochkes, A. (2021). 2021 Tobacco GAP Training. Distance training recorded for later use by agents to train tobacco growers.

Bailey, W.A. (2021). Update on angular leaf spot research in dark tobacco. Tobacco GAP Training video module.

Bailey, W.A. (2021). Basics of angular leaf spot disease in tobacco. Tobacco GAP Training video module.

Pearce, R. C., Stalion, D., Bailey, W. A., Sanderson, W. T. (2020). Farm Safely During COVID 19 Pandemic.

Pearce, R. C., Bailey, W. A., Rochkes, A. (2020). 2020 Tobacco GAP Training. Distance training recorded for later use by agents to train tobacco growers. 86 Growers trained with this resource according to GAP Connections records.

Peer-Reviewed Research Publications

Extension Publication- Numbered, Original Content

Richmond, M., Bailey, A. (2022). AGR-269: Barn Management for Curing Connecticut Broadleaf Cigar Wrapper Tobacco, 3.

Author Role:

Joint publication between the University of Kentucky and the University of Tennessee (Univ. of TN publication W 1113)

* Richmond, M. D., Bailey, A., Pearce, B. (2022). AGR-267: Ordering/Casing Burley and Dark Tobacco - Post-Curing Management Practices, 3.

Author Role:Joint publication of the University of Kentucky and the University of Tennessee

* ~ Richmond, M., Bailey, A., Pearce, B. (2022). AGR-266 Chemical Topping of Burley Tobacco, 3.

Author Role:

Joint publication between the University of Kentucky and the University of Tennessee

* ~ Bailey, W. A., Pearce, R. C., Vann, M. (2021). Cigar Wrapper Tobacco Production 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 71-74.

* ~ Bailey, W. A., Pearce, R. C. (2020). AGR-258: Production of Connecticut Broadleaf Cigar Wrapper Tobacco in Kentucky and Tennessee. Lexington, KY, *University of Kentucky, Cooperative Extension Service*(AGR-258).

* ~ Velandia, M., Wszelaki, A., Fulcher, A., Bailey, W. A., Chadwell, J. (2020). Information to Protect Farmworkers and Their Employers in the Midst of COVID-19. Knoxville, TN, *University of Tennessee, Department of Agricultural and Resource Economics*(D100), 6 pages.

Author Role:

Collect information on H2A farmworker housing requirements and regulations and how these regulations interface with new COVID-19 guidelines.

Extension Publication- Numbered, Revised Content

Bailey, W., Pearce, R., Bush, L., Green, J., Ritchey, E., Snell, W., Bessin, R., Sanderson, W., A., Raymond, M., Brown, S., Reed, D., Zeng, Y., Vann, M. (2023). REVISION- 2023-2024 Burley and Dark Tobacco Production Guide (joint pub with UT, VT, NCSU), *University of Kentucky Cooperative Extension Service*, 80.

* ~ Bailey, W. A. (2021). Facilities and Curing 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 54-60.

* ~ Bailey, W. A., Pearce, R. C. (2021). Harvest Management for Burley and Dark Tobacco 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 53-54.

* ~ Bailey, W. A., * Pearce, R. C., Jack, A. M., Bush, L. P., Green, J. D., Miller, R. D., Ritchey, E. L., Pfeifer, E., Snell, W. M., Bessin, R. T., Sanderson, W. T., Rhodes, N., Hansen, Z., Reed, D., Johnson, C., Vann, M., Whitley, S., Burrack, H., Thiessen, L. (2021). ID-160: 2021-2022 Burley and Dark Tobacco Production Guide Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160).

Author Role: Bailey: Lead editor on this publication. Coordinated revisions of all chapters with authors from multiple states (Kentucky, Tennessee, Virginia, North Carolina). Was lead author or co-author on 10 chapters. Did overall proofing and submission of each revised chapter in document and overall proofing of final document.

Pearce: Co-editor of this publication. Was author or co-author on eight chapters. Assisted in overall proofing of final document.

Jack: Was lead author on 1 chapter.

Bush: co-authored one chapter.

Green: Lead author on one chapter.

Miller: Co-author on two chapters.

Ritchey: Co-authored two chapters.

Pfeifer: Co-authored two chapters.

Snell: Authored one chapter.

Bessin: Authored one chapter.

Sanderson: Co-authored one chapter.

Rhodes: Co-authored one chapter.

Hansen: Co-authored one chapter

Reed: Co-authored four chapters.

Johnson: Co-authored two chapters.

Vann: Co-authored four chapters.

Whitley: Co-authored one chapter.

Burrack: Authored one-chapter.

Thiessen: Co-authored two chapters.

* ~ Bailey, W. A. (2021). Information Summary Table for Tobacco Pesticides 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 79-84.

* ~ Pearce, R. C., * ~ Bailey, W. A. (2021). Introduction 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 2.

* ~ Pearce, R. C., Bailey, W. A., Reed, D., Vann, M., Johnson, C., Pfeifer, E., Thiessen, L., Burrack, H. (2021). Management of Tobacco Float Systems. 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 11-22.

* ~ Bailey, W. A., Miller, R. D. (2021). Selecting Dark Tobacco Varieties 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 7-11.

* ~ Bailey, W. A., Pearce, R. C. (2021). Stripping and Preparation of Tobacco for Market 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 61-65.

- * ~ Bailey, W. A., Reed, D., Pearce, R. C. (2021). Topping and Sucker Control. 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 46-52.
- * ~ Jack, A. M., Bush, L. P., Bailey, W. A. (2021). TSNAs in Burley and Dark Tobacco 2021-2022 *Burley and Dark Tobacco Production Guide* Lexington, KY, *University of Kentucky, Cooperative Extension Service*(ID-160), 65-70.

Non Peer-Reviewed Decision Tools

Decision Tool

- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W., Griffin, T. (2024). REVISION-Burley Tobacco Budget (2024).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W., Griffin, T. (2024). REVISION-Dark Air Cured Tobacco Budget (2024).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W., Griffin, T. (2024). REVISION-Dark Air Wrapper Tobacco Budget (2024).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W., Griffin, T. (2024). REVISION-Dark Fired Tobacco Budget (2024).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W., Griffin, T. (2024). REVISION-Dark Fired Wrapper Tobacco Budget (2024).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W. (2023). REVISION-Burley Tobacco Budget (2023).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W. (2023). REVISION-Dark Air Cured Tobacco Budget (2023).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W. (2023). REVISION-Dark Air Wrapper Tobacco Budget (2023).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W. (2023). REVISION-Dark Fired Tobacco Budget (2023).
- Galloway, A. Richmond, M., Bailey, A., Pearce, B., Snell, W. (2023). REVISION-Dark Fired Wrapper Tobacco Budget (2023).
- Galloway, A., Richmond, M., Bailey, A., Pearce, B., Snell, W. (2022). Dark Air Wrapper Tobacco Budget (2022).
- Galloway, A., Richmond, M., Bailey, A., Pearce, B., Snell, W. (2022). Dark Fired Wrapper Tobacco Budget (2022).
- Galloway, A., Richmond, M., Bailey, A., Pearce, B., Snell, W. (2022). REVISION- Burley Tobacco Budget (2022).
- Galloway, A., Richmond, M., Bailey, A., Pearce, B., Snell, W. (2022). REVISION- Dark Air Cured Tobacco Budget (2022).
- Galloway, A., Richmond, M., Bailey, A., Pearce, B., Snell, W. (2022). REVISION- Dark Fired Tobacco Budget (2022).

Galloway, A., Bailey, A., Pearce, B., Snell, W. (2021). Burley Tobacco Budget (2021).

Galloway, A., Bailey, A., Pearce, B., Snell, W. (2021). Dark Air Cured Tobacco Budget (2021).

Galloway, A., Bailey, A., Pearce, B., Snell, W. (2021). Dark Fired Tobacco Budget (2021).

Extension Education & Training Programs

County Agent In-Service Training

Multiple roles (describe in description box). New Agent Orientation. (October 29, 2023). Scope: State. Counties: 12. Participants: 26 County agents/ specialists. Number of Times Given: 1 Description: New agent orientation for county ANR agents that have been hired for 18-months or less. Served as coordinator of new agent orientation for Plant & Soil Science department. Also presented 40-minute tobacco update session.

Invited speaker. West ANR Update. (November 3, 2022). Scope: State. Counties: 35. Participants: 35 County agents/ specialists. Number of Times Given: 1 Description: Presented Tobacco Update to County Agents

Facilitator. 2022 KY/TN Tobacco Agent Training. (March 2, 2022). Scope: Multi-state. Counties: 16. States: 2. Participants: 16 County agents/ specialists. Description: annual tobacco agent training

Facilitator. 2021 KY/TN Tobacco Agent Training. (April 9, 2021). Scope: Multi-state. Counties: 15. States: 2. Participants: 17 County agents/ specialists. Description: 2021 KY/TN Tobacco Agent Training. This training will provide updates on current research for burley, dark, and cigar wrapper tobacco.

Multiple roles (describe in description box). KY-TN Tobacco Agent Training. (January 1, 2019 - December 31, 2020). Scope: Multi-state. Counties: 24. States: 2. Participants: 35 County agents/ specialists. Description: Two annual agent trainings for county agents with tobacco responsibilities in Kentucky and Tennessee. One training is held in the west KY/northwest TN dark tobacco production area and another training is held in the east TN burley production area at the UT Tobacco Research Station in Greeneville TN. I coordinated the trainings with Eric Walker (UT/UK burley tobacco specialist) in 2019 and coordinated it myself in 2020, and made several presentations at both trainings.

County Office Presentation

Invited speaker. Tobacco Production Meetings. (January 1, 2021 - April 31, 2024). Scope: Multi-county. Counties: 4. States: 2. Participants: 247 Industry professionals. Number of Times Given: 12 Description: Present current tobacco research results and tobacco production information to tobacco growers.

Field Day Presentation

Accepted speaker. 2023 Dark Tobacco Twilight Tour. (August 10, 2023). Scope: Multi-county. Counties: 7. States: 2. Participants: 56 General public. Number of Times

Given: 2

Description: Provide latest tobacco research results and general tobacco production information to dark tobacco growers in KY and TN.

Accepted speaker. 2023 Corn, Soybean, & Tobacco Field Day. (July 25, 2023). Scope: Multi-county. Counties: 8. States: 2. Participants: 48 General public. Number of Times Given: 2

Description: Provide updates of latest tobacco research results and general tobacco production information to tobacco growers in KY and TN.

Accepted speaker. 2023 Tobacco, Beef & More Field Day. (June 29, 2023). Scope: Multi-county. Counties: 12. States: 2. Participants: 83 General public. Number of Times Given: 2

Description: Provide latest research results and tobacco production information to tobacco growers in TN and KY.

Multiple roles (describe in description box). UK Dark Tobacco Twilight Tour. (August 12, 2021 - August 11, 2022). Scope: Multi-county. Counties: 8. States: 2. Participants: 100 Industry professionals.

Description: Organizer and speaker for annual Dark Tobacco Twilight Tour held first week of August on the West Farm of Murray State University in Murray KY.

Multiple roles (describe in description box). UT Tobacco, Beef, and More Field Day. (June 24, 2021 - June 30, 2022). Scope: Multi-county. Counties: 23. States: 2. Participants: 160 Industry professionals.

Description: Organizing committee and invited speaker for the annual UT Tobacco, Beef, and More Field Day held annually on the third Thursday in June at the UT Highland Rim Research & Education Center in Springfield TN. Event not held in 2021 due to COVID-19.

Multiple roles (describe in description box). UK Corn, Soybean, Tobacco Field Day. (July 27, 2021). Scope: Multi-state. Counties: 40. States: 4. Participants: 85 Industry professionals.

Description: Organizing committee, tobacco tour leader, and speaker for annual UK Corn, Soybean, Tobacco Field Day held in late July at the UKREC in Princeton KY. Event not held in 2022 due to site destruction from December 2021 tornado at Princeton.

Multi-County Presentation

Accepted speaker. 2023 KY-TN Tobacco GAP Trainings. (January 2023 - April 2023). Scope: Multi-state. Counties: 24. States: 2. Participants: 550 Industry professionals. Number of Times Given: 16

Description: Administered crop and environmental portions of annual 2023 GAP Training for tobacco growers in KY and TN

Accepted speaker. 2023 Tobacco Production Meetings. (January 2023). Scope: Multi-county. Counties: 2. States: 2. Participants: 46 General public. Number of Times Given: 2

Description: Provided annual updates of latest tobacco research results to dark tobacco growers in the region.

Multiple roles (describe in description box). Tobacco GAP Trainings. (January 1, 2021 - December 31, 2022). Scope: Multi-state. Counties: 23. States: 2. Participants: 2100 Industry professionals. Number of Times Given: 36

Description: Facilitate, organize, coordinate, and speak at GAP Training meetings in multiple counties in Kentucky and Tennessee.

Facilitator. 2022 Burley and Dark Tobacco Virtual Production Meeting. (February 25, 2022). Scope: Multi-state. Participants: 33 Industry professionals.

Description: 1 hour burley and dark tobacco production information for tobacco growers

Multiple roles (describe in description box). 2022 TN-KY Tobacco Expo. (February 1, 2022). Scope: Multi-county. Counties: 23. States: 2. Participants: 240 Industry professionals.

Description: Organizing committee and invited speaker for 2022 TN-KY Tobacco Expo held annually on the first Tuesday in February in Springfield TN (event not held in 2021 due to COVID-19).

Facilitator. 2021 Burley and Dark Tobacco Virtual Production Meetings and GAP Trainings. (January 19, 2021 - February 23, 2021). Scope: Multi-state. Counties: 27. States: 2. Participants: 334 Industry professionals. Number of Times Given: 2

Description: 1 hour production information followed by 1 hour labor management information and annual GAP Connections update.

Seminar

Invited speaker. Best Management Practices for Tobacco and Tobacco Crop Insurance Fraud. (June 27, 2023). Scope: National. Participants: 44 Industry professionals. Number of Times Given: 1

Description: Provided discussion of tobacco best management practices and production recommendations and discussed potential abuse of federal crop insurance programs for tobacco.

Invited speaker. 2023 PA Tobacco GAP Trainings. (March 21, 2023 - March 22, 2023). Scope: State. Counties: 4. Participants: 52 Industry professionals. Number of Times Given: 2

Description: Provided portions of crop management and environmental management sections of annual GAP Training for tobacco growers in Pennsylvania.

Accepted speaker. 2023 TN-KY Tobacco Expo. (February 7, 2023). Scope: Multi-state. Counties: 16. States: 2. Participants: 194 Industry professionals. Number of Times Given: 1

Description: Annual update of tobacco research results and GAP Training

Invited speaker. Cigar tobacco production and research update. (September 23, 2022). Scope: National. States: 6. Participants: 31 Industry professionals.

Description: Present update on research relative to dark tobacco and cigar tobacco at 2022 Annual meeting of the Dark Leaf Dealers and Exporters Association. Savannah GA.

Invited speaker. Dark Tobacco Production and Research Update. (September 10, 2021). Scope: National. States: 6. Participants: 32 Industry professionals. Number of Times Given: 1

Description: Present seminar to update leaf dealers on research projects related to dark tobacco and cigar tobacco. 2021 Annual meeting of Dark Leaf Dealers and Exporters. Williamsburg VA.

Extension Related Consulting

Business and Industry, Pennsylvania Tobacco Growers. (March 20, 2021 - Present). Description: Conduct 4 to 6 live GAP Training sessions in one week in areas around Lancaster PA to Amish tobacco growers. Provide consultation on production questions for burley, Connecticut Broadleaf cigar tobacco, and dark air-cured tobacco.

Business and Industry, Canadian Dark Tobacco Growers, Canada. (January 1, 2021 - Present).

Description: Phone consultations to address questions from dark fired and dark air-cured tobacco growers in western Ontario, Canada.

Business and Industry, U.S. Department of Agriculture, Risk Management Agency (RMA), United States. (2017 - Present).

Description: Frequent phone consultation, in-person consultation, and field visits with RMA officials and crop insurance adjustors to evaluate potential crop insurance fraud. Also, organized and conducted 4 trainings for RMA officials: One 2-day in-person training on August 17-18, 2019 at UKREC in Princeton KY; a half-day virtual training in August 2021, and two half-day in-person trainings on August 24, 2022 at UKREC in Princeton KY, and September 9, 2022 at a black shank research site in Clark Co. KY.

Business and Industry, Wisconsin Leaf Tobacco Dealers and Growers Association, Sloughton, WI, United States. (July 1, 2015 - Present).

Description: Phone consultations with Wisconsin tobacco growers on various agronomic issues such as angular leafspot management and pesticide application.

Business and Industry, Missouri Burley Tobacco Growers Association, Weston, MO, United States. (May 10, 2013 - Present).

Description: Phone consultation on specific agronomic problems affecting burley tobacco in northwest Missouri, such as poor curing.

Business and Industry, Dark tobacco growers in Tennessee, United States. (September 16, 2002 - Present).

Description: Very frequent consultations to directly interact with TN tobacco growers through phone calls and farm visits to evaluate production problems and provide solutions, or provide educational information to help growers avoid these same problems in subsequent years. Although I no longer have a formal appointment with the University of Tennessee, I still conduct some on-farm research with growers in TN as well as continue to do field research at the UT Highland Rim REC in Springfield, TN. I want to continue to provide service to TN tobacco growers.

Professional Service

Editor

Burley and Dark Tobacco Production Guide, Editor of ID-160: Burley and Dark Tobacco Production Guide, (January 1, 2020 - Present).

Public Service

consultant/expert for tobacco diagnosis

UKREC Plant Diagnostic Lab, Diagnosis and consultation of tobacco plant samples, (January 1, 2021 - December 31, 2022).

Extension Media Summary

Type of Media	Dates	Faculty Member's Role	Description	Evidence of Reach
CORESTA TSNA Sub-Group website	January 1, 2008 - Present	Editor/Co-Editor	Manage reports of activities of CORESTA TSNA Sub-Group	
Dark Tobacco Webpage	January 1, 2003 - Present	Editor/Co-Editor	Website provides dark tobacco production information, calendar of upcoming dark tobacco educational events, GAP resources for tobacco growers, and summaries of current and archived dark tobacco research results.	
Popular Press-Newspaper	January 1, 2021 - December 31, 2022	Contributor	4 articles written in 2021-2022 for The Banner, a local Caldwell County newspaper published twice weekly. Articles were meant to give the local community a better understanding of what goes on at UKREC in Princeton and our role in supporting local agriculture.	
Dark Tobacco Facebook Page - Dark Tobacco in Kentucky and Tennessee	January 1, 2017 - 2022	Editor/Co-Editor	Dark Tobacco in Kentucky and Tennessee Facebook page provides a portal for current information and reminders to tobacco growers about current problems and upcoming events.	639 followers

Media Contributions

Newspaper

"Times-Leader, Princeton KY." (2023). I have written a series of 5 articles during 2022-2023 in the local newspaper updating our local clientele on our progress in rebuilding our research station following the December 2021 tornado destruction, with special emphasis on how this changed tobacco research, and rebuilding progress of tobacco infrastructure. Princeton, KY, United States.

Radio

"WKMS National Public Radio, Murray KY." (May 2022). Was interviewed twice by Liam Niemeyer of WKMS radio to discuss tornado recovery efforts at UKREC at 6 months following the December 2021 tornado (1st interview). Second interview was to discuss

research projects that were moved to Murray KY in 2022 following tornado at Princeton. Murray, KY.

TV

"WPSD-TV, Paducah KY." (March 2022). Interviewed twice by WPSD-TV to discussed destruction caused by December 2021 tornado and how it has impacted my tobacco research and extension program at UKREC. Paducah.

Extension Field & Community-Based Research

Pfeufer, Emily, Bailey, William, Keeney, Andrea. Streptomycin alternatives for angular leaf spot management in dark tobacco. (May 2019 - Present). 3 Princeton, Murray, and Murray, KY. 1 participants. Altria Fellowship.

Description: Product evaluations to identify alternative solutions to angular leaf spot management, the most important foliar disease of dark tobacco.

Knight, Joey, Barron, Ronnie. Evaluation of Yield and Quality Potential of Commercial Dark Fire-Cured Tobacco Varieties. (March 15, 2019 - Present). 2 Knight Farms, Cheatham County, Joelton TN.

Description: Dark fire-cured tobacco on-farm variety trials

Boyd, Kent, Stone, Jay. Evaluation of Black Shank Resistance in Commercial and Experimental Dark Tobacco Varieties. (March 15, 2017 - Present). 1 Tobacco Way Farms, Christian County, Hopkinsville KY. Altria Client Services.

Description: Annual, replicated variety trial to establish black shank resistance levels in commercial and experimental dark tobacco varieties grown in an established black shank-infested field site.

Boyd, Kent, Stone, Jay. Evaluation of Fungicide Programs for Black Shank Control. (March 15, 2017 - Present). 1 Tobacco Way Farms, Christian County, Hopkinsville KY. Altria Client Services.

Description: Annual, replicated field trial to test efficacy of black shank control in registered and experimental fungicide programs in an established black shank-infested field site.

Edge, Mike, Hardy, Clint. Evaluation of Yield and Quality Potential of Commercial Dark Air-Cured Tobacco Varieties. (March 15, 2017 - Present). 1 Edge Farms, Daviess County, Owensboro KY. None.

Description: Annual, replicated trial to evaluate yield and quality potential of commercial dark air-cured tobacco varieties.

Bailey, William. 2023 Burley Commercial Variety Trial. (March 15, 2023 - December 31, 2023). 1 Owensboro KY. 3 participants. Altria.

Description: On-farm burley variety trial to provide information on performance of new burley tobacco varieties compared to standard varieties. This trial has been conducted

at on-farm locations in 2022 and 2023 due to lack of curing barns following 2021 tornado at UKREC in Princeton.

Bailey, William. 2023 Connecticut Broadleaf Research Project. (March 15, 2023 - December 31, 2023). 3 Mayfield KY; Springfield TN; Joelton TN. 5 participants. ITG Brands: Hail & Cotton, Inc.; Lancaster Leaf; Gallatin Redrying & Storage.

Description: Research to evaluate the effects of fungicide use and effect of lower leaf removal on production of cigar wrapper leaf to support the production of Connecticut Broadleaf cigar tobacco in Kentucky and Tennessee.

Bailey, William. Evaluation of Black Shank Resistance in Experimental Dark Tobacco Varieties. (March 15, 2022 - December 31, 2023). 1 Hopkinsville KY. Altria.

Description: Experimental dark tobacco lines were evaluated for black shank resistance and yield potential under black shank infestation in an established black shank nursery near Hopkinsville KY.

Bailey, William. Effect of Extended Air-Curing Periods on Cured Leaf Quality of Burley Tobacco. (November 15, 2022 - July 15, 2023). 2 Princeton KY; Oak Grove KY. 3 participants. Altria.

Description: Fall 2022 brought an extremely dry curing season to the burley tobacco belt of Kentucky and Tennessee. Dry conditions during curing result in light colors or mixed colors in cured leaf that is generally undesirable for the burley tobacco industry. Burley tobacco buyers were interested in the effects of extending the curing season past the end of the marketing season (end of February). Two burley tobacco growers from western Kentucky participated in an experiment where they left burley tobacco hanging in their barns from November 2022 to July 2023, and allowed us to visually evaluate the tobacco and take bi-monthly samples to evaluate leaf and smoke quality. Visual quality dramatically improved by late March/April, but began to deteriorate by late May/June. Smoke quality results from leaf samples are still pending.

A Bailey, William, Rodgers, James. Effect of ridging on dark tobacco standability and sucker control. (March 1, 2021 - December 31, 2022). 1 Hickory KY. 4 participants. Altria.

Description: On-farm location for ridging trials in 2021 and 2022

Bailey, William. Connecticut Broadleaf cigar wrapper on-farm research. (May 15, 2021 - December 12, 2022). 1 Knight Farms, Joelton TN. 4 participants. Leaf Dealers.

Description: Conduct small fungicide trial in 2021
Conduct small lower leaf removal trial in 2022

Bailey, William. 2022 Burley Commercial Variety Trial. (June 10, 2022 - December 5, 2022). 1 Owensboro KY. 5 participants. Altria.

Description: Conduct annual Burley Commercial Variety trial at private on-farm location due to lack of barns at UKREC following tornado

A Bailey, William, Rodgers, James. Connecticut Broadleaf research project. (March 15, 2022 - October 15, 2022). 1 Hickory KY. 5 participants. Leaf Dealers.

Description: Conduct fungicide and lower leaf removal trials for Caleb Perkins M.S. project on private farm in Graves Co. KY due to no tobacco barns at UKREC following tornado.

Teaching

Graduate Faculty Appointments

Full, Science Translation and Outreach, 2020 - Present

Full, Integrated Plant and Soil Science, 2016 - Present

Theses and Dissertations

Dissertation Committee Chair

Andrea Keeney-Webb, Integrated Plant & Soil Science, "Evaluation of chemical control and environmental and management factors associated with angular leaf spot incidence in dark tobacco, *Pseudomonas syringae* pv. *tabaci*," Status: Completed April 31, 2023. (May 1, 2019 - May 15, 2023).

Master's Thesis Committee Chair

Caleb Perkins, Integrated Plant & Soil Science, "Effect of fungicide application and lower leaf removal on cigar wrapper production in Connecticut Broadleaf tobacco in Kentucky and Tennessee," Status: Completed April 31, 2023.

Advising

2 graduate students advised in 2020-2023, 4 undergraduate students advised in 2022-2024.

Service

Department Service

Debris Cleanup on UKREC following December 10, 2021 tornado, (January 20, 2022 - March 3, 2022).

Description: Helped pick up debris left across parts of 1600 acres of UKREC property following EF4 tornado

UKREC Ad Hoc Rebuild Planning Committee, (January 1, 2022 - January 31, 2022).

Description: Co-chaired committee with Kiersten Wise to get initial input from all UKREC faculty and staff on how to plan for rebuilding UKREC following December 10, 2021 tornado

Committee Chair

UKREC Storage Oversight Committee, (January 2023 - Present).

Description: Coordinate storage spaces at UKREC, including climate-controlled storage, seed storage, fertilizer storage, and outdoor equipment storage. Also includes oversight of storage in future field processing building and crop protection complex (in collaboration with pesticide committee).

UKREC Ad Hoc Field Processing Lab Use Space committee, (December 1, 2022 - January 31, 2023).

Description: Solicit input from all UKREC faculty on how new field processing building should be best utilized for storage and shared work space

UKREC Ad Hoc Common Use Space Committee, (September 1, 2021 - December 1, 2021).

Description: Coordinate planning of common use lab and growth chamber areas in UKREC main building

UKREC Ad-Hoc Infrastructure Planning Committee, Chair, (January 2020 - July 2020).

Description: Plan UKREC external building construction and site planning

Committee Member

UKREC Land Use Committee, (January 1, 2024 - Present).

Description: Assist in planning and assigning land use for research at UKREC.

AGR-1 Committee, (January 1, 2012 - Present).

Description: Establish, review, and publish lime and fertilizer recommendations. Maintain data used to establish those recommendations.

UKREC Advisory Committee, (2019 - 2023).

Description: Advise UKREC director on UKREC matters.

College Service Committee Member

Extension Publications Review Committee, (January 1, 2022 - Present).

Description: Serve on Extension Publications Review Committee along with two other departmental extension coordinators, as well as 4H and FCS faculty that coordinate extension publications in their areas to develop a standardized review form.

Tobacco Variety Review Committee, (2003 - Present).

Description: Review data reports to determine potential commercial release of new tobacco varieties

Appointment, Promotion & Tenure Committee, (July 1, 2023 - June 30, 2025).

Description: Evaluate faculty members for appointment, promotion, and tenure

County Extension Review Committee, (March 2023 - May 2023).

Description: assist in extension program review of Meade, Breckinridge, and Mason counties.

Professional Service

Committee Member

CORESTA Sub-Group TSNA in Air-Cured and Fire-Cured Tobacco, Sub-Group TSNA in Air-Cured and Fire-Cured Tobacco, (January 1, 2018 - Present).

Description: serve on committee to determine focus areas for collaborative research to reduce TSNA in air-cured and fire-cured tobacco

United States Food & Drug Administration, Tobacco Products Scientific Advisory Committee, Tobacco Products Scientific Advisory Committee Representative for all U.S. Tobacco Growers, (January 1, 2017 - January 1, 2021).

Description: Serve as representative for all U.S. tobacco growers on FDA Tobacco Products Scientific Advisory Committee

Program Coordinator

CORESTA Sub-Group Pesticide Residue Field Trials, Sub-Group Pesticide Residue Field Trials, (January 1, 2012 - Present).

Description: Coordinate annual dark fire-cured and dark air-cured pesticide residue trials in Kentucky based on CORESTA residue field trial protocols and specifications.

CORESTA Sub-Group Integrated Pest Management, Sub-Group Integrated Pest Management, (January 1, 2007 - Present).

Description: I am editor/coordinate of the weed management section of a large tobacco IPM publication that will be published by this CORESTA subgroup.

Reviewer, External Program

Southern Illinois University - Carbondale, M.S. program in Plant, Soil, and Agricultural Systems, M.S. program review, (September 1, 2020 - November 20, 2020).

Reviewer, Journal Article

Crop, Forage, and Turfgrass Journal, Journal Article Reviewer, (2012 - Present).

Agronomy Journal, Journal Article Review, (2010 - Present).

Tobacco Science Journal, Journal Article Review, (2005 - Present).

Description: Review journal article manuscripts to determine suitability for publication in Tobacco Science journal

Weed Technology Journal, journal article reviewer, (2003 - Present).

Description: Review journal article manuscripts to determine suitability for publication in Weed Technology journal

Public Service

Administrative Committee, Member

Kentucky Farm Bureau Tobacco Advisory Board, Serve on Kentucky Farm Bureau Tobacco advisory board to decide focus areas for overall burley and dark tobacco programs in Kentucky, (January 1, 2014 - Present).

Description: meet annually to decide major focal points for Kentucky Farm Bureau regarding burley and dark tobacco production in Kentucky

Hopkinsville Community College Agriculture Program Advisory Board, Serve on Hopkinsville Community College Agriculture Advisory Board to assist in development of Agriculture Associate degree program there, with interest in recruiting students for internships at University of Kentucky Research & Education Center., (January 1, 2010 - Present).

Description: Attend twice annual advisory committee meeting each spring and fall and comment on progress and direction of program.

Kentucky Farm Bureau Dark Tobacco Advisory Board, Meet annually to discuss current areas of concern for Kentucky Dark Tobacco Growers, (January 1, 2010 - Present).

Description: Assist in development of focus efforts for Kentucky Farm Bureau regarding issues of concern for Kentucky dark tobacco growers.

Tobacco Judge

Kentucky State Fair, Tobacco Judge, Burley and Dark Tobacco Divisions, (August 15, 2003 - Present).

Description: Judge FFA, 4H, and Open Divisions for green plant, green stick, and cured burley and dark tobacco entries at annual state fair competition.

Tobacco Grading Team, Coach

Coached Caldwell County High School FFA Tobacco Judging Team in 2024 Regional Competition at Murray State University, Murray, KY. 1st Place Team.

Professional Development

Professional Memberships

Tobacco Workers Conference. International. (January 1, 2004 - Present).

CORESTA - Cooperative Center for Scientific Research Relative to Tobacco. International. (January 1, 2003 - Present).

Development Activities Attended

Conference Attendance

2021 State Extension Conference. (December 6, 2021 - December 8, 2021). University of Kentucky, Cooperative Extension Service. State. Lexington, KY.

Attended 2021 State Extension Conference to attend sessions on county extension programming and new technology to learn how my extension program can better interact with overall county extension programming efforts.

Continuing Education Program

Responsible Conduct of Research (Basic Course) (Stage 2, Refresher). (March 16, 2022). UK Office of Research Integrity.

Awards and Honors

United States Food & Drug Administration, Center for Tobacco Products, Tobacco Products Scientific Advisory Committee, Representative for all U.S. Tobacco Growers, United States Food & Drug Administration. Leadership, Tobacco Grower Representative on Advisory Committee to FDA, National. (January 31, 2021 - January 31, 2025).

2022 Research Extension Impact Award, University of Kentucky, College of Agriculture. Scholarship/Research/Creative, Recognition Award, College. (January 1, 2022 - December 31, 2022).

United States Food & Drug Administration, Center for Tobacco Products, Tobacco Products Scientific Advisory Committee, Representative for all U.S. Tobacco Growers, United States Food & Drug Administration. Leadership, Tobacco Grower Representative on Advisory Committee to FDA, National. (January 31, 2017 - January 31, 2021).

External Reviewer for Southern Illinois University-Carbondale (SIUC)'s Plant, Soil, and Agricultural Systems Master of Science Program. Service, Professional, External Reviewer, Regional. (September 1, 2020 - November 20, 2020).

Licensures and Certifications

Licensure

Kentucky Class A Commercial Drivers License, Number: B02-843-028, Kentucky Department of Motor Vehicles, KY, United States. (August 14, 2018 - September 14, 2030).

Category 10 Research & Demonstration Pesticide License, Number: 62076, Kentucky Department of Agriculture, KY, United States.