

James Wayne Baier

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ACADEMIA

- 2022 – present **Assistant Dean**, College of Agriculture and Human Ecology
Tennessee Technological University, Cookeville, TN.
- 2022 – present **Interim Director**, School of Agriculture
College of Agriculture and Human Ecology
Tennessee Technological University, Cookeville, TN.
- 2004 – present **Assistant Professor**, Agricultural Engineering Technology,
School of Agriculture in the College of Agriculture and Human Ecology,
Tennessee Technological University. Cookeville, TN.
- 1997 – 2004 **Assistant Professor**, Department of Biosystems Engineering,
College of Agriculture. Auburn University, Auburn, AL.

EDUCATION

- Ph.D: Biosystems and Agricultural Engineering, 1997
University of Kentucky, Lexington, Kentucky
- M.S.: Agricultural Engineering, 1991
University of Kentucky, Lexington, Kentucky
- B.S.: Agricultural Engineering, 1987
University of Kentucky, Lexington, Kentucky

TEACHING AND RELATED ACTIVITIES

TEACHING (TENNESSEE TECHNOLOGICAL UNIVERSITY)

Spring Semester, Odd Years

YEAR	AGET 3110 Eng. Tech. in Ag. II (Natural Resource Systems/2011)	AGET 3115 Natural Resource Systems Lab (2 Sections)	AGET 3320 Small Power Equipment (Lecture Lab Split 2013)	AGET 3325 Small Power Equipment Lab	AGET 4720 Ag Systems Tech (Ag Processing 2011)	AGET 4950 Agricultural Engineering Tech Topics	AGR 2920 Work Experience	AGR 3950 Advanced Internship	AGR 4920 Senior Problem	HEC 2440 CAD of Residences (06 & 07 only)
	3 (2) hrs	1 hr	3 (2) hrs	1 hr	3 hrs	3 hrs	3 hrs	3 hrs	3 hrs	3 hrs
2005	35	-	29	-	18	1	-	-	0	-
2007	37	-	30	-	17	4	-	1	0	16
2009	35	-	34	-	20	7	2	2	2	-
2011	44	-	48	-	22	2	-	3	2	-
2013	50	50	44	44	28	4	-	3	0	-
2015	39	37	40	39	27	2	-	1	-	-
2017	56	57	36	36	13	2	-	2	-	-
2019	45	45	25	25	13	1	1	-	-	-
2021	33	32	24	24	-	-	-	1	-	-
2023	32	31	18	18	-	2	-	-	-	-

Spring Semester, Even Years

YEAR	AGET 3110 Eng. Tech. in Ag. II (Natural Resource Systems/2011)	AGET 3115 Natural Resource Systems Lab (2 Sections)	AGET 4220 Agri. Machinery/Tractors (Lecture Lab Split 2011)	AGET 4225 Agricultural Machinery/Tractors Lab	AGET 4620 Agricultural Structures	AGET 4950 Agricultural Engineering Tech Topics	AGR 2920 Work Experience	AGR 3950 Advanced Internship	AGR 4920 Senior Problem	HEC 2440 CAD of Residences (06 & 07 only)
	3 (2) hrs	1 hr	3 (2) hrs	1 hr	3 hrs	3 hrs	3 hrs	3 hrs	3 hrs	3 hrs
2006	25	-	26	-	11	1	-	1	1	18
2008	46	-	-	-	22	31	-	-	1	-
2010	38	-	41	-	14	13	2	4	1	-
2012	52	52	34	34	25	2	-	-	-	-
2014	43	42	29	29	26	-	1	4	-	-
2016	56	56	39	39	15	-	-	-	-	-
2018	37	38	-	-	23	3	-	1	-	-
2020	47	46	-	-	18	2	-	1	-	-
2022	24	23	24	24	-	1	-	-	-	-
2024	38	38	-	-	-	2	-	-	-	-

Fall Semester, Odd Years

YEAR	AGET 2110 Eng. Tech. in Ag. i (Natural Resource Systems/2011)	AGET 2115 Natural Resource Systems Lab (2 Sections)	AGET 3620 Computer Aided Design in Agriculture	AGET 4610 Greenhouse Structures & Landscape Equip.	AGET 4940 Agricultural Engineering Tech Topics	AGET 4940 Agricultural Engineering Tech Topics	AGR 4940 Agricultural Engineering Tech Topics	AGR 2910 Work Experience	AGR 3940 Advanced Internship	AGR 4920 Senior Problem
	3 (2) hrs	1 hr	3 hrs	3 hr	2 hrs	3 hrs	4 hrs	3 hrs	3 hrs	3 hrs
2005	37	-	17	11	-	-	-	-	4	3
2007	42	-	19	22	1	1	-	-	2	1
2009	43	-	17	14	-	3	1	1	5	4
2011	48	48	44	22	-	-	-	-	10	-
2013	61	60	36	18	-	28	1	-	9	-
2015	59	59	26	12	-	22	-	-	1	-
2017	56	54	37	18	-	3	-	-	3	-
2019	70	72	27	19	-	3	-	-	2	-
2021	27	27	17	24	-	-	-	-	2	-
2023	50	51	9	-	-	-	-	-	1	-

Fall Semester, Even Years

YEAR	AGET 2110 Eng. Tech. in Ag. I (Natural Resource Systems/2011)	AGET 2115 Natural Resource Systems Lab (2 Sections)	AGET 3560 Turf Systems Irr. Design (Lecture Lab Split 2011)	AGET 3565 Turf Systems Irr. Design Lab	AGET 3620 Computer Aided Design in Agriculture	AGET 4610 Greenhouse Structures/Landscape Equip.	AGR 4940 Ag Engineering Tech Topics	AGR 4940 Ag Engineering Tech Topics	AGR 3940 Advanced Internship	AGR 4920 Senior Problem
	3 (2) hrs	1 hr	3 (2) hrs	1 hr	3 hrs	3 hrs	3 hrs	4 hrs	3 hrs	3 hrs
2004	38	-	-	-	8	-	-	-	4	3
2006	31	-	-	-	19	1	-	-	2	1
2008	45	-	-	-	22	3	1	1	5	4
2010	47	-	22	-	-	-	-	-	10	-
2012	56	56	34	34	-	28	1	-	9	-
2014	70	68	18	19	-	22	-	-	1	-
2016	58	56	13	13	-	3	-	-	3	-
2018	67	68	15	15	-	-	-	-	-	-
2020	55	55	6	6	-	-	-	-	-	-
2022	51	50	14	14	-	-	-	-	-	-
2024	45	45	14	14	-	-	1	-	1	-

TEACHING (AUBURN UNIVERSITY)

COURSE NUMBER	DESCRIPTION	CREDIT HOURS	ENROLLMENT						
			98	99	00	01	02	03	04
ENGR 1110	Introduction to Biosystems Engineering	1	-	-	-	-	-	11	17
AN 350	Soil and Water Technology	3	32	30	-	-	-	-	-
BSEN 3560	Turf Irrigation Design	3	27	35	90	54	55	47	-
BSEN 4210	Irrigation Design	3	5	7	11	5	7	10	-
BSEN 6220	Intro. to Spatial Tech. for Biosystems Eng.	3	-	-	-	17	22	24	30

STUDENT ADVISING

	Ag. Eng. Technology		AGET Club	Alpha Gamma Sigma	(Co) Delta Tau Alpha	Ducks Unlimited
2004	Spr		12			
	Fall	39				
2005	S	32	18	15		
	F	30				
2006	S	33	17	18	24	
	F	36				
2007	S	39	25	11	22	
	F	43				
2008	S	42	36	18	26	
	F	50				
2009	S	49	48	20	30	
	F	53				
2010	S	49	45	24	42	
	F	60				
2011	S	53	36	16	36	
	F	58				
2012	S	56	30	12	33	
	F	72				
2013	S	64	30	10	35	
	F	68				
2014	S	63	20	12	30	First Year as Advisor
	F	61				
2015	S	55	18	10	28	15
	F	53				
2016	S	53	17	16	25	13
	F	50				
2017	S	47	15	12	26	13
	F	48				
2018	S	37	12	10	24	12
	F	31				
2019	S	29	8	8	25	11
	F	34				
2020	S	34	5	6	18	8
	F	24				
2021	S	20	4	6	19	10
	F	13				
2022	S	26	4	8	20	12
	F	19				
2023	S	37	5	14	26	14
	F	52				
2024	S	59	18	14	24	18
	F	48				

HONORS AND AWARDS

2021	Wings of Kindness Award
2018	National Delta Tau Alpha Outstanding Advisor Award
2017	College of Agriculture and Human Ecology Outstanding Teaching Award
2016	NACTA Teaching Award of Merit
2016	School of Agriculture Outstanding Faculty Member - Tennessee Tech University
2013	School of Agriculture Outstanding Faculty Member - Tennessee Tech University
2011	Tennessee Tech University Outstanding Teaching Award
2010	Nominated for the AASCARR Distinguished Educator Award
2010	Nominated for the QEP Excellence Award - Tennessee Tech University
2010	School of Agriculture Outstanding Faculty Member - Tennessee Tech University
2006 – 2007	Selected as a Tablet Initiate Fellow - Tennessee Tech University
2007	School of Agriculture Outstanding Faculty Member - Tennessee Tech University
2005	School of Agriculture Outstanding Faculty Member - Tennessee Tech University
2002 – 2003	Biosystems Eng. Outstanding Teacher, College of Engineering - Auburn Univ.
2001 – 2002	Biosystems Eng. Outstanding Teacher, College of Engineering - Auburn Univ.
2000 – 2001	Mortar Board Favorite Teacher Award - Auburn University
1998 – 1999	Biosystems Eng. Outstanding Teacher College of Engineering - Auburn Univ.

SERVICE ACTIVITIES

INSTITUTIONAL SERVICE

School of Agriculture Service

2011 - present	Member of Information Technology Meeting,
2007 – present	Coordinator of Agriculture Graduation Breakfast
2006 - present	Coordinator of Agriculture Exit Exam
2005 – 2011	Member of Scholarship and Awards Committee
	2005 – 2007 Chair
2005 – 2017	Member of Recruitment Committee
2005 – 2007	Member of Career Placement Day Committee
2004 - 2017	Co-coordinator of the Agriculture Quiz Bowl Committee

College of Agriculture and Human Ecology Service

2022 – Present	Member of the Diversity Committee
2019 – Present	Member of the Academic Misconduct Committee
2021	Member of the Tenure and Promotion Guidelines Committee
2015 – present	Member of the Academic Misconduct Committee
2015 – present	Member of the Facilities & Technology Committee
2007 – 2015	Member of the Faculty Policy Committee

University Service

2021 – present	Member of the Academic Advising Council
2021 – present	Member of the All - University Recruitment Committee
2018 – present	Member of the University Institutional Animal Care and Use Committee
2011 - present	Member of the University Judicial Council
2006 - 2010, 2013 - 2017	Member of the University Faculty Senate
2013 – 2017	Member of the University Administrative Council

2011 - 2017	Member of the University Committee on Commencements and Academic Ceremonies
2011 – 2012	Member of the University Student Affairs Committee
2011	Chair of the University Outstanding Faculty Award Committee
2010 – 2014	Member the UNIV 1020 Awards Committee
2010 – 2014	Member the University QEP Committee
2010 – 2012	Mentor for Ag/HEC Teaching Quality Initiative
2010	Member the University Space Utilization Committee
2006 – 2010	Member the University Academic Council

PROFESSIONAL SERVICE

Professional Organizations

American Society of Agricultural Engineers
 Soil and Water Conservation Society
 National Association of Sweet Sorghum Producers and Processors Association-NSSPPA
 Sigma Xi
 North American Colleges and Teachers of Agriculture (NACTA)

Professional Appointments

NSSPPA Executive Secretary 2011

Attendance at Professional Meetings

2009 – 2017 National Sweet Sorghum Producers and Processors Association Conference
 2015 Annual NACTA Conference, Athens, GA. June 16-20
 2013 Annual NACTA Conference, Blacksburg, VA. June 25-29
 2010 Annual NACTA Conference, State College, PA. June 22-26

GRANT ACTIVITY

Grants Awarded

Authors (PI)	Title	Source	Duration	Amount
<u>B. Leckie</u> J.W. Baier	Enhancing student learning outcomes in greenhouse courses through installation of a season extension heater, industry standard sensors, and industry standard controller technologies	Tennessee Tech University - Quality Enhancement Plan	6/17-12/18	\$9,000
<u>J. Plant</u> J.W. Baier	Hybrid Computer and Mobile Access Lab, South Hall 128	Tennessee Tech University – Technology Access Funds	6/14 – 5/15	\$34,600
<u>M. Anderson</u> , S. Tomas, D. Fennewald, J.W. Baier, M. Swafford	Use of Senior Colloquium as an active learning project to improve Critical Thinking Skills	Tennessee Tech University - Quality Enhancement Plan	6/14 – 5/15	\$2,000

<u>J.W. Baier</u>	Sweet Sorghum Processing QEP Project	Tennessee Tech University - Quality Enhancement Plan	6/12 – 5/13	\$2,750
<u>J.W. Baier</u> B.B. Greene	Study of effect of genetic variability and the use of an organically approved miticide for control of <i>Varroa</i> in honey bees	Tennessee Tech University – Faculty Development Grant	06/10 – 05/11	\$9,562
<u>G.K. Stearman</u> M. Best J.W. Baier J. Branson J. Young B.B. Greene	Compost and Drip Irrigation Effects on Soil and Water Quality, Soil Carbon/Nitrogen Ratios, Earthworms and Crop Yield in Organic Vegetable Plots	USDA – CSREEC Managed Ecosystems	08/08 – 07/10	\$99,940
<u>G.K. Stearman</u> M. Best J.W. Baier J. Branson J. Young B.B. Greene	Waters Organic Farm Setup	TN Department of Agriculture	1/08 – 1/09	\$186,900
<u>J.W. Baier</u>	Turf Irrigation Design Course QEP Project	Tennessee Tech University	08/07-07/08	\$2,750
<u>J.W. Baier</u>	A Programmable, Solenoid-Operated, Variable Intensity Rainfall Simulator For Investigating Runoff And Erosion	Tennessee Tech University – Faculty Development Grant		\$3,991
<u>J. W. Baier,</u> <u>T. McDonald,</u> <u>S. Taylor,</u> <u>R. Tufts</u>	Erosion and Recreational Trails: Construction and Maintenance Practices to Minimize Watershed Impacts	Auburn University Environmental Institute	04/03 to 04/05	\$99,600
<u>J.W. Baier,</u> <u>J. Shaw</u> <u>R. Raper</u> <u>P. Mask</u> <u>C. Burmester</u> <u>L. Curtis</u> <u>S. Taylor</u> <u>B. Norris</u> <u>D. Harkins</u>	Evaluation of Integrated Technologies including Pressure Compensating Subsurface Drip Irrigation (SDI), Precision Vehicle Guidance, Field Mapping and Yield Monitoring for Minimum Till Row Crop Production on Rolling Irregular Terrain	Alabama Agricultural Experiment Station Foundation Grant Program For Agriculture And Related Research	05/03 to 05/06	\$118,430
<u>J.W. Baier</u>	Environmental and Economic Impacts of Biomass Reduction	USDA -US Forest Service	06/03 to 12/04	\$44,309

<u>L. Curtis</u> <u>J.W. Baier</u> <u>J. Shaw</u> <u>R. Raper</u> <u>C. Burmester</u> <u>B. Norris</u> <u>D. Harkins</u>	Evaluation of Pressure Compensating Subsurface Drip (SDI) on Rolling Terrain for Cotton Production	Alabama Cotton Commission	05/03 to 05/04	\$12,500
<u>L. Curtis</u> <u>P. Mask</u> <u>J. Shaw</u> <u>J.W. Baier</u> <u>C. Burmester</u> <u>R. Raper</u> <u>B. Norris</u> <u>D. Harkins</u>	Irrigated Corn Production Utilizing Subsurface Drip Irrigation (SDI) with Fertility Rate and Fertility Management Variables on Rolling Terrain	Alabama Wheat, Feed and Grain	05/03 to 05/04	\$12,000
<u>J.W. Baier and</u> <u>S.E. Taylor</u>	Utilizing Polyacrylamide (PAM) for Surface Water Sediment Control (Faculty Mentoring)	AU Vice President for Research	01/01/01 to 12/30/01	\$4,000
<u>J.W. Baier and</u> <u>S.E. Taylor</u>	Geographic Information System Development for Managing Rural Water Systems	Southeast Technical Assistance Center for Small Public Water Systems	05/01/02 to 04/31/03	\$10,796
<u>J.W. Baier,</u> <u>D. Hartzog,</u> <u>K. Balkom,</u> <u>J. Adams,</u> <u>L. Curtis,</u> <u>W. Birdsong,</u> <u>J. Weeks,</u> <u>A. Hagan,</u> <u>T. Hewitt,</u> <u>R. Sorenson,</u> <u>J. Beasley</u>	Improving Peanut Competitiveness through Water Management By Drip Irrigation Using Twin And Single Rows In A Two Year Cotton Rotation	National Peanut Board - Southeastern Peanut Research Initiative	12/00 to 12/03	\$128,950

Grants Not Awarded

Authors (PI)	Title	Source	Duration	Amount
<u>J.W. Baier</u> <u>B.B. Greene</u>	Effects of Potassium on Sweet Sorghum Syrup Color and Crystallization	Tennessee Tech University – Faculty Development Grant	6/15 – 5/16	\$9,912
<u>J.W. Baier</u> <u>D. Fennewald</u>	Agriculture Summer Tour	Tennessee Tech University - Quality Enhancement Plan	6/14 – 5/15	\$10,500

J.W. Baier, D. Airhart, K. Pierce	TTU SOA Medicinal Demonstration Garden	Tennessee Tech University - Quality Enhancement Plan	6/14 – 5/15	\$3,950
D. Elkins J.W. Baier D.L. Airhart	AgriScience Center and Greenhouse Complex at Tennessee Tech University	Legislative Federally Appointed Funds	05/05 – 05/07	\$500,000
J.W. Baier, L. Marzen, S.E. Taylor	Mapping and Condition Assessment of Public Dams in Alabama	Office of Water Resources of the Alabama Department of Economic and Community Affairs	05/01/02 to 04/31/04	\$99,461
J.W. Baier, Luke Marzen, and S.E. Taylor	Mapping and Condition Assessment of Public Dams in Alabama	Office of Water Resources of the Alabama Department of Economic and Community Affairs	05/01/02 to 04/31/02	\$383,704
J. W. Baier, K. McLean, K. Glass, L. Curtis, D. Moore	Evaluation of Irrigation Water Management, Variety Response and Reniform Nematode Control Measures in Conjunction with Subsurface Drip Irrigation in Central Alabama	Alabama Cotton Commission	01/01/01 to 12/30/01	\$33,000
J.W. Baier, and S.E. Taylor	Utilizing Polyacrylamide (PAM) for Surface Water Sediment Control (Faculty Mentoring)	AU Vice President for Research	01/01/01 to 12/30/01	\$4,000
J.W. Baier	Soil Particle Size Analyzer (Small Equipment Grant)	AU Vice President for Research	06/01/00 to 12/30/00	\$50,000
J. W. Baier	Technology For Reducing Water Quality Impacts From Land Applied Poultry Litter.	USDA-NRI	10/01 to 9/04	\$143,506
J.W. Baier, S.E. Taylor, J. Lundberg, R. Meldahl, J. Shaw, L. Wolf, H. Clonts	GPS Lab for Auburn University	AU Vice President for Research	06/01/00 to 12/30/00	\$200,000

WORK AND CONSULTING EXPERIENCE

Consulting Engineer, May 1987 - 1997

Mr. Doug Vescio (Supervisor May Contact)

Tree Top Landscaping & Lawn Irrigation

901 Todds Road

Lexington, KY 40509

Phone: (859) 269-7633

Designed and provided technical assistance for 100 commercial, 200 residential and 20 athletic field irrigation systems for Tree Top Landscaping and Irrigation. Provided technical assistance and supervision on projects such as the University of Kentucky Soccer and Softball Complex that included irrigation installation, soil conditioning, and field surfacing.

Consulting Engineer, August 1996

Designed and supervised the renovation of the local high school baseball field for the McCreary County Board of Education. The renovation included soil reconditioning, field resurfacing and grading, and subsurface drainage installation.

Consulting Engineer, May 1988

Designed and supervised the installation of an irrigation system for the campus residence of the University of Kentucky President.

Consulting Engineer, May 1988

Designed the Kearney Hills Golf Course irrigation system for the Lexington-Fayette Urban County Government Department of Parks and Recreation and provided complete as-built drawings.

Design Engineer, 1987 - 1988, Mid-East Power Equipment, Lexington, KY

Mr. John Spence (Supervisor) Deceased

Business no longer exists

Designed 12 golf course, 100 commercial and 300 residential irrigation systems in Kentucky, Tennessee and South Carolina. Provided technical support to contractors, homeowners, and golf course superintendents.

SHORT COURSES PRESENTED

Trickle Irrigation Workshop, November 5, 2003. Presented a short on course on trickle irrigation design and installation fundamentals for landscape applications to approximately 24 attendees at the Auburn University Horticulture School. Auburn, AL.

Gulf States Horticulture Exposition, January 24-25, 2001. Presented a short course on irrigation design fundamentals to 80 attendees from several Gulf States including, Alabama, Florida, Mississippi, Louisiana, and Texas. Mobile, AL.

"Installation of Trickle Irrigation Systems for Horticultural Row Crops", presented to 150 vegetable growers. Developed material and assisted in presenting a hands-on short course in design and installation of trickle irrigation systems, March 1987.

SHORT COURSES ATTENDED

“ADA & Title IX Training”, Kae Carpenter 2014

"Landfill Bioreactor Design and Operation" held in Wilmington, Delaware by the Environmental Protection Agency. March 23 -24, 1995.

"Construction Quality Assurance/Construction Quality Control (CQA/CQC) for Waste Containment Facilities - Hydrologic Evaluation of Landfill Performance (HELP) Model" held in Atlanta, Georgia by the Environmental Protection Agency. June 8-9, 1994.

"Designing Subsurface Gas Extraction and Control Systems" held in Madison, Wisconsin, by the College of Engineering, University of Wisconsin - Madison, Department of Engineering Professional Development. October 4 - 5, 1993.

"Materials Recovery and Recycling" held in Columbus, Ohio, by the Environmental Protection Agency. August 1992.

"Design, Operation and Closure of Municipal Solid Waste Landfills" held in Nashville, Tennessee by the Environmental Protection Agency. June 18 - 19, 1992.

INVITED PRESENTATIONS

“Enzymes”, March 2, 2013. 28th National Sweet Sorghum Producers and Processors Association Annual Conference. Pigeon Forge, TN.

“Food Safety Modernization Act and Labeling”, March 2, 2013. 28th National Sweet Sorghum Producers and Processors Association Annual Conference. Pigeon Forge, TN.

“Agricultural Sprayers”, March 4, 2013, White/Van Buren Co. Cattlemen Meeting, Sparta, TN.

“Welcome to Tennessee and Research at the Tennessee Tech University”, February 26-28, 2009. 24th National Sweet Sorghum Producers and Processors Association Annual Conference. Pigeon Forge, TN.

“Irrigation for Plant Production” October 5, 2007. Middle Tennessee Nursery Association Trade Show, McMinnville, TN.

“Irrigation Design, Installation, and Components” 2007. Tennessee Tech Garden Club.

Landscape Construction (HORT 3280). October 1 and October 2, 2002. Conducted a lecture on the overview of irrigation design fundamentals and conducted actual irrigation installations during the lab periods at the greenhouse complex.

Black Heritage Freedom Farm. October 23 and October 31, 2002. Developed and conducted exercises for the presentation of GPS technology for 80 junior high school students at the Black Heritage Farm in Wilcox County.

Annual Alabama Water Resources Conference and Symposium. Sept. 4-6, 2002. Gave a presentation to 150 attendees on using spatial technologies to aid rural water municipalities in mapping and maintaining system infrastructure. Orange Beach, AL.

Soil and Water Conservation Society, Alabama Chapter. June 14-15, 2001. Gave a presentation on the use of polyacrylamide to control erosion to 100 attendees. Birmingham, AL.

Annual Alabama Water Resources Conference and Symposium. Sept. 5-7, 2001. Gave a presentation to 150 attendees on using polyacrylamide to alleviate erosion from disturbed areas. Orange Beach, AL.

Alabama NRCS. January 30, 2000. Advised state NRCS engineers on methods for conserving irrigation water usage. Auburn, AL.

"Water Requirements for Irrigation" presented at the Southern Forest Nursery Management Cooperative: Forest Nursery Irrigation Workshop held in Auburn, Alabama. August 3-4, 1999

"Environmental Awareness" presentation at Yarborough Elementary School. April 28, 1999

"Irrigation Application on Athletic Fields" presented at the University of Kentucky Turfgrass Management Symposium held in Lexington, Kentucky. June 23, 1995.

"Cost Comparison of Irrigation Systems for Kentucky" presented at the Franklin County Cooperative Extension Meeting held in Frankfort, Kentucky. February 15, 1995.

"Utilization of Fertigation to Enhance Produce Yields" presented to the Southern Ohio Produce Association held in Cincinnati, Ohio. May 1990.

"Trickle Irrigation on Staked Tomatoes" presented at the Green County Cooperative Extension Field Day. 1989.

"Trickle Irrigation for Horticultural Row Crops with Chemigation" presented to the Casey County Cooperative Extension Field Day. 1988.

PUBLICATIONS

Butcher, K., N. W. Conner, and J. Baier. 2014. "Using the echo smartpen in an agricultural classroom". Poster presentation. Southern Region meeting of the American Association for Agricultural Education, Dallas, TX.

Davis, J.N., J.E. Baier, J.P. Fulton, D.A. Brown, and T.P. McDonald. 2007. "Use of Chemical Soil Additives to Stabilize Off-Road Vehicle Trails". *Applied Engineering in Agriculture*. 23(5): 597-602.

Bruner L.L., G.J. Keever, J.W. Baier, C. Stuart Whitman, P.R. Knight and J.E. Altland. 2006. "Butterfly Feeding Preferences for Buddleja Selections in the Landscape", *Journal of Environmental Horticulture*, 24(1): 39-44.

Bruner L.L., D.J. Eakes, G.J. Keever, J.W. Baier, C. Stuart Whitman, P. R. Knight, J.E. Altland, E.M. Silva. 2005. "Nectar Characteristics of Lantana and Butterfly Visitation". *Proceedings of SNA Research*

Conference, Fiftieth annual report, pp 624-627.

Bruner L.L., D.J. Eakes, G.J. Keever, J.W. Baier, C.Stuart-Whitman, P.R. Knight, and J.E. Altland. 2003. "Butterfly Feeding Preferences among Cultivars of *Lantana camara* in the Landscape, a Commonly Recommended Nectar Source". Proceedings of SNA Research Conference, Forty-eighth annual report, pp 358-362.

Veal, L.M., S.E. Taylor, J.W. Baier, K.H. Yoo, R.B. Rummer. 2003. "Comparing water quality impacts from forest road stream crossings: life-cycle impacts from a portable bridge". ASAE Technical Paper No. 03-5010. ASAE, St. Joseph, MI. 19 pp.

Veal, M.W., S.E. Taylor, R.B. Rummer, J.W. Baier. 2003. "Development of a Test Device for Evaluation of Thrown Object Hazards". Journal of Agricultural Safety and Health, 9(2):119-131.

Bruner, L.L., D.J. Eakes, G.J. Keever, J.W. Baier, C. Stuart-Whitman, P.R. Knight, and J.E. Altland. 2002, "Feeding Preferences of *Agraulis Vanillae* (Gulf Fritillary) for *Pentas Lanceolata* Cultivars". Proceedings of SNA Research Conference, Forty-seventh annual report, pp 506-509.

Curtis, L. M, C.H. Burmester, D. H. Harkins, B. E. Norris, and J. Baier. 2002 "Sprinkler and Subsurface Drip Irrigation at the Tennessee Valley Research and Extension Center". 2002 Cotton Research Report, Alabama Agricultural Experiment Station, Research Report Series No. 24, pp 17-19.

Baier, J.W., "Polyacrylamide". Alabama Erosion and Sediment Control Handbook Vol. I, revision 2002.

Veal, M.W., S.E. Taylor, R.B. Rummer, and J.W. Baier. 2002. "Development of a Test Device for Evaluation of Thrown Object Hazards". ASABE Technical Paper No. 02-8018. ASABE, St. Joseph, MI.

Curtis, L. M, C.H. Burmester, D. H. Harkins, B. E. Norris, and J. Baier. 2001 "Sprinkler and Subsurface Drip Irrigation, Tennessee Valley Research and Extension Center". 2001 Cotton Research Report, Alabama Agricultural Experiment Station, Research Report Series No. 22, pp 14-17.

Hill, D. T. and J. W. Baier. 2000, "A Physical and Chemical Properties of Screened-flushed Pig Slurry Waste". Journal of Agricultural Engineering Research, doi:10.1006/jaer.2000.0620.

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