

CURRICULUM VITAE
December 20, 2021

I. PERSONAL INFORMATION

Katie Lynn Lewis, Ph.D.

*Associate Professor, Soil Chemistry and Fertility
Texas A&M AgriLife Research and Texas Tech University
1102 E. Drew Street
Lubbock, TX 79403
Phone: 806-746-6101
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Appointed Sept. 2, 2014*

II. EDUCATION

Ph.D., Soil Science, Texas A&M University, College Station, Texas, December 2014.
Title: *Soil and Plant Responses to Lipid-extracted Algae Soil Amendment*

M.S., Soil Science, Texas A&M University, College Station, Texas, December 2010.
Title: *Effects of Oilseed Meals on the Germination, Growth, and Survival of Crop and Weed Species*

B.S., Chemistry for Professional Chemists (ACS certified), Sam Houston State University, Huntsville, Texas, May 2008.

III. PROFESSIONAL EXPERIENCE

Current Position

A. Associate Professor, Soil Chemistry and Fertility, appointed Sept. 2, 2020

Joint appointment of 75% at Texas A&M AgriLife Research (Lubbock, TX) and 25% at Texas Tech University (Lubbock, TX).

**B. Position Description, Expectations, and Effort
Texas A&M AgriLife Research (75% of time)**

Research - 80% of TAMU appointment

Develop practical soil fertilization and management strategies that will maintain or enhance the value and quality of soils and optimize production efficiency. Procure contract and grant funding and conduct and publish groundbreaking research independently and as part of a multidisciplinary team.

Teaching - 5% of TAMU appointment

Develop and sustain a strong graduate training program. Advise students conducting independent research.

Service - 15% of TAMU appointment

Interact and communicate effectively with producers, industry, students, and other academic audiences through publications, presentations, and Extension programs.

Serve on departmental, research station, college, university, and national scientific society committees as requested. Serve as manuscript reviewer for scientific journals.

Texas Tech University (25% of time)

Teach undergraduate and graduate level soil fertility courses once per year in the fall semester. Advise and train graduate students.

IV. TEACHING

A. Courses

Courses	Credit Hours	Frequency Taught	Student Evaluation Avg.
Undergraduate Courses			
PSS 4335-001 (Soil Fert. & Nutr. Mngt., classroom)	3	Once every 2 years	4.76
PSS 4335-D01 (Soil Fert. & Nutr. Mngt., distance)	3	Once every 2 years	4.19
Graduate Courses			
PSS 5331-001 (Adv. Nutr. Mngt., classroom)	3	Once every 2 years	4.90
PSS 5331-D01 (Adv. Nutr. Mngt., distance)	3	Once every 2 years	4.39
Department Average			4.37 (2020)

Fall 2021 - Texas Tech University, Plant and Soil Science:

Soil Fertility and Nutrient Management (undergraduate)

PSS 4335-001 (11 students, evaluation score of 4.90, 4.43 PSS avg, 4.43 CASNR avg, 4.37 TTU avg)

Advanced Nutrient Management (graduate)

PSS 5331-001 (17 students, evaluation score of 4.93, 4.43 PSS avg, 4.43 CASNR avg, 4.37 TTU avg)

Fall 2020 - Texas Tech University, Plant and Soil Science:

Soil Fertility and Nutrient Management (undergraduate)

PSS 4335-D01, distance (19 students, evaluation score of 4.29, 4.37 PSS avg, 4.34 CASNR avg, 4.36 TTU avg)

Advanced Nutrient Management (graduate)

PSS 5331-D01, distance (23 students, evaluation score of 4.51, 4.37 PSS avg, 4.34 CASNR avg, 4.36 TTU avg)

Fall 2019 - Texas Tech University, Plant and Soil Science:

Soil Fertility and Nutrient Management (undergraduate)

PSS 4335-001 (32 students, evaluation score of 4.60, 4.43 PSS avg, 4.37 CASNR avg, 4.37 TTU avg)

Advanced Nutrient Management (graduate)

PSS 5331-001 (16 students, evaluation score of 4.90, 4.43 PSS avg, 4.37 CASNR avg, 4.37 TTU avg)

Fall 2018 - Texas Tech University, Plant and Soil Science:

Soil Fertility and Nutrient Management (undergraduate)

PSS 4335-D01, distance (31 students, evaluation score of 4.17, 4.36 PSS avg, 4.28 CASNR avg, 4.34 TTU avg)

Advanced Nutrient Management (graduate)

PSS 5331-D01, distance (12 students, evaluation score of 4.20, 4.36 PSS avg, 4.28 CASNR avg, 4.34 TTU avg)

Fall 2017 - Texas Tech University, Plant and Soil Science:

Soil Fertility and Nutrient Management (undergraduate)

PSS 4335-001 (34 students, evaluation score of 4.90, 4.33 PSS avg, 4.33 CASNR avg, 4.37 TTU avg)

Advanced Nutrient Management (graduate)

PSS 5331-001 (16 students, evaluation score of 4.87, 4.33 PSS avg, 4.33 CASNR avg, 4.37 TTU avg)

Fall 2016 - Texas Tech University, Plant and Soil Science:

Soil Fertility and Nutrient Management (undergraduate)

PSS 4335-001 (9 students, evaluation score of 4.79)
PSS 4335-D01, distance (18 students, evaluation score of 4.15)

Advanced Nutrient Management (graduate)

PSS 5331-001 (9 students, evaluation score of 4.96)
PSS 5331-D01, distance (13 students, evaluation score of 4.33)

Spring 2016 - Texas Tech University, Plant and Soil Science:

Problems: Soil Nutrient Management (undergraduate)

PSS 4001-003 (1 student, evaluation score not available)

Fall 2015 - Texas Tech University, Plant and Soil Science:

Soil Fertility and Nutrient Management (undergraduate)

PSS 4335-001 (15 students, evaluation score of 3.88)
PSS 4335-D01, distance (24 students, evaluation score of 3.96)

Advanced Nutrient Management (graduate)

PSS 5331-001 (11 students, evaluation score of 4.67)
PSS 5331-D01, distance (4 students, evaluation score not available)

Guest lecture for Plant Pathology in PSS Department. Nutrient Management and Plant Diseases. Texas Tech University. Lubbock, TX. Nov. 2017.

Guest lecture for Biofuels and the Environment. Utilizing biofuel byproducts, such as oilseed meal residue and lipid extracted algae, as soil amendments. Texas A&M University. College Station, TX. Nov. 2011.

B. Graduate Students

	Since Last Promotion (2020 – present)		Career (2014 – present)	
Degree	Chair or Co-chair	Member	Chair or Co-Chair	Member
M.S.	4	6	11	19
Ph.D.	5	7	7	12

a. Presently chair, M.S.:

1. Rebekah Ortiz, Texas Tech University – Lubbock, 2020 – 2022
2. Hector Valencia, Texas Tech University – Lubbock, 2021 – 2022
3. Nicholas Boogades, Texas A&M University – College Station, 2021 – 2022

b. Presently on committee, M.S.:

1. Garrett Huddleston, Texas Tech University – Lubbock, 2020 – 2022
2. Cindi Hazelton, Texas Tech University – Lubbock, 2019 – 2022
3. Austin Koonce, Texas Tech University – Lubbock, 2015 – 2022
4. Seth Taylor, Texas Tech University – Lubbock, 2015 – 2021

c. Presently chair, Ph.D.:

1. Amee Bumguardner, Texas Tech University – Lubbock, 2018 – 2022
2. Lauren Selph, Texas Tech University – Lubbock, 2021 – 2024

d. Presently co-chair, Ph.D.:

1. Christopher Cobos, Texas A&M University – College Station, 2021 – 2024
2. Joseph Burke, Texas A&M University – College Station, 2018 – 2021

e. Presently on committee, Ph.D.:

1. Haibin Gu, Texas Tech University – Lubbock, 2020 – 2023
2. Kyle Russell, Texas Tech University – Lubbock, 2020 – 2023
3. Billi Jean Petermann, Texas Tech University – Lubbock, 2019 – 2023
4. Amin Ferdous, Texas Tech University – Lubbock, 2018 – 2022

f. Graduated served as chair, M.S.:

1. Taylor Wright, Texas Tech University – Lubbock, 2017 – 2020
“Response of different cotton varieties to Velum® Total in fields infested with *Rotylenchulus reniformis*”
2. Luke Stutler, Texas Tech University – Lubbock, 2017 – 2019 (non-thesis)
3. Mark McDonald, Texas Tech University – Lubbock, 2016 – 2018
“Impact of conservation management practices on greenhouse gas emission in semi-arid, intensively cropped regions of Texas”

4. Joseph Burke, Texas Tech University – Lubbock, 2015 – 2018
“Soil health management in cotton monocultures on the Texas High Plains”
5. James Grant, Texas Tech University – Lubbock, 2015 – 2017
“The effects of inoculum density, management practices, and environmental factors on the development of *Verticillium dahlia* within cotton”

g. Graduated served as co-chair, M.S.:

1. Leah Ellman, Texas A&M University – College Station, 2019 – 2021
“Influence of Cover Crop Selection on Soil Microbial Activity During a Transition to Organic Agriculture”
2. Bryce DeLong, Texas Tech University – Lubbock, 2018 – 2020
“Weed Management and Economics in Bollgard® II XtendFlex™ Cotton Systems”
3. Ameer Bumguardner, Texas Tech University – Lubbock, 2016 – 2018
“Soil potassium effects on cotton (*Gossypium hirsutum*) growth, yield, and quality in the Texas High Plains”

h. Graduated served on committee, M.S.:

1. Emma Schmidt, Texas Tech University – Lubbock, 2020 – 2021
“Pairing sequential extractions and X-ray absorption spectroscopy to analyze potassium fixation in agricultural soils”
2. Clay Braden, Texas Tech University – Lubbock, 2020 – 2021
“Profitability impacts of cropping systems in the Southern High Plains of Texas”
3. Grace Ogden, Texas Tech University – Lubbock, 2018 – 2020
“The Influence of Glufosinate in Auxinic-based herbicide Systems”
4. Emily Capule, Texas Tech University – Lubbock, 2018 – 2020 (non-thesis)
5. Andrew Dunlap, Texas Tech University – Lubbock, 2016 – 2019
“Irrigation, Planting Date, and Maturity Affect Soybean Productivity in the Texas High Plains”
6. Tanner Drake, Texas Tech University – Lubbock, 2015 – 2019
“Effects of Fruit Placement in Upland Cotton by Water Regimes”
7. Kyle Russell, Texas Tech University – Lubbock, 2017 – 2019
“Weed Management Systems in Auxin Tolerant Cotton and Non-Auxin Tolerant Cotton Response to Simulated Dicamba Drift”
8. Ashmita Rawal, Texas Tech University – Lubbock, 2017 – 2019,
“Determination of base saturation percentage in agricultural soils via portable x-ray fluorescence spectrometer”
9. Catherine Kobylinski, Texas A&M University – College Station, 2016–2019
“Combining GPR and EMI for Root Phenotyping in Multiple Soil”
10. Md Mahbubul Islam, Texas Tech University – Lubbock, 2017 – 2018 (non-thesis)
11. Lauren Tomlin, Texas A&M University – College Station, 2016 – 2018,
“The impacts of double cropping in a winter wheat system on soil health and crop yields”
12. Brady Arthur, Texas A&M University – College Station, 2016 – 2018,

“Investigation of the ability to credit residual nitrogen based on soil texture and nutrient management zone identification using soil electrical conductivity, pH, and reflectance”

13. Kelsey House, Texas Tech University – Lubbock, 2015 – 2017 (non-thesis)
14. Heather Elkins, Texas A&M University – College Station, 2015 – 2017,
“Cotton, *Gossypium hirsutum* L., cultivars differential response to salinity”
15. Hardy Parsons, Texas Tech University – Lubbock, TX, 2014 – 2018,
“Cotton boll distribution, yield, and fiber quality in response to irrigation”

i. Graduated served as chair, Ph.D.:

1. Gondah Zolue, Texas Tech University – Lubbock, 2015 – 2020
“Biochar as an Amendment to Improve the Quality of Highly Degraded Soil”
2. Nana Kusi, Texas Tech University – Lubbock, 2015 – 2019
“Potassium uptake, utilization, and chemistry in cotton and soils of the Texas Southern High Plains”

j. Graduate served as co-chair, Ph.D.:

1. Mark McDonald, Texas A&M University – College Station, 2018 – 2021
“Conservation management and nitrogen fertilizer timing effects on semi-arid microbial production of nitrogen gases”
2. Clayton White, Texas Tech University – Lubbock, 2016 – 2021
“Cover crop and weed management strategies in no-tillage cotton systems in the Texas High Plains”

k. Graduated served on committee, Ph.D.:

1. Christopher Miller, Texas Tech University – Lubbock, 2017 – 2021
“Effects of Huisache (*Acacia farnesiana*) and Honey Mesquite (*Prosopis glandulosa*) on Understory Forage Characteristics and Soil Nutrients in the Texas Gulf Prairies”
2. Perejitei Bekewe, Texas A&M University – College Station, 2017 – 2021
“Building soil and food security in wheat production systems in Texas”
3. Irish Pabuayon, Texas Tech University – Lubbock, 2018 – 2021
“A Fresh Look at Resource Assimilation and Partitioning in Cotton”
4. Autumn Acree, Texas Tech University – Lubbock, 2017 – 2020
“Contemporary Advancements in Soil Characterization: Geochemical, Morphological, and Spectroscopic Approaches”
5. Rebecca McCullough, Texas Tech University – Lubbock, 2016 – 2019
“Impact of Groundwater Resources and Crop Insurance on Agricultural Producers in the Southern High Plains of Texas”
6. Henrique Da Los Carvalho, Texas A&M University – College Station, 2016 – 2019, “Alteration of sorghum (*Sorghum bicolor* L. Moench) leaf optical properties by epicuticular waxes and its effect on surface energy balance and transpiration”
7. Curtis Schaefer, Texas Tech University – Lubbock, TX, 2014 – 2017,
“Testing the cotton maturity and irrigation timing paradigm”

8. Xiaoxiao Lui, Texas Tech University – Lubbock, TX, 2014 – 2017,
“Effect of different production practices on the development of Verticillium wilt
and cotton fiber quality”

V. RESEARCH

A. Program Statement

The goal is to establish a nationally recognized Soil Chemistry and Fertility Program based on innovative research and competitive graduate student training. The Soil Chemistry and Fertility Program conducts research aimed at determining more practical soil fertilization and management strategies that will maintain or enhance the value and quality of soils and optimize nutrient and water use efficiency. Graduate training is a major component of the research and education within this program.

a. Objectives:

1. Optimize fertilizer application (quantity and timing) in relation to irrigation capacity so that nutrient use efficiency and yield can be maintained or improved.
2. Evaluate cropping systems of cotton rotated with crops adapted to the Texas Southern High Plains and determine proper management strategies for these systems to enhance soil quality (i.e., C sequestration, water and nutrient holding capacity, aggregation, etc.).
3. Determine the feasibility of utilization of new fertilizer formulations and products, biofuel co-products, and/or soil amendments.

B. Summary of Grants and Contracts Awarded

Type and role	Since hire		Career	
	Total dollars to all PIs	Dollars allocated to program	Total dollars to all PIs	Dollars allocated to program
External Competitive				
PI	\$11,141,482	\$1,724,321	\$11,141,482	\$1,724,321
Co-PI	\$15,063,279	\$1,346,292	\$15,063,279	\$1,346,292
Total (PI + Co-PI)	\$26,204,761	\$3,070,612	\$26,204,761	\$3,070,612
Internal				
PI	\$709,469	\$255,604	\$709,469	\$255,604
Co-PI	\$600,000	\$76,000	\$600,000	\$76,000
Total (PI + Co-PI)	\$1,220,816	\$331,604	\$1,220,816	\$331,604
Other (Industry)				
Gifts and gifts-in-kind	\$1,015,956	\$993,434	\$1,015,956	\$993,434
Totals				
PI	\$12,819,749	\$2,942,033	\$12,819,749	\$2,942,033
Co-PI	\$15,672,844	\$1,427,074	\$15,672,844	\$1,427,074

Total (PI + Co-PI)	\$28,492,593	\$4,369,107	\$28,492,593	\$4,369,107
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C. Summary of Publications and Scholarly Work

Type	Since hire	Career
Refereed/peer-reviewed	18	21
Editor-reviewed	0	0
Scientific abstracts	120	133
Books	0	0
Chapters in books	1	1
Research agency publ.	13	13
Extension agency publ.	0	0
Popular/industry articles	2	0

D. Summary Table of Scientific and Professional Presentations Since Hire

Type	Invited	Volunteer or submitted	Total
International	4	14	18
National	5	9	14
Regional	5	3	8
State	13	0	13
Local	52	0	52

VI. SERVICE

A. Extension Seminars and Professional Conferences (Invited)

a. International

1. **Lewis, K.L.**, J.A. Burke*, W.S. Keeling, D.M. McCallister, P.B. DeLaune and J.W. Keeling. 2019. Do cover crops help or hurt with water conservation? Dryland Cropping Systems Symposium, 2019 Annual ASA-CSSA International Meetings. November 2019. San Antonio, TX (invited presentation)
2. **Lewis, K.L.**, J.A. Burke*, W.S. Keeling, D.M. McCallister, P.B. DeLaune and J.W. Keeling. 2018. Soil benefits and yield limitations of cover crop use in Texas High Plains Cotton. Cover Crop Symposium, 2018 Annual ASA-CSSA International Meetings. November 2018. Baltimore, MD (invited presentation)
3. **Lewis, K.L.** 2016. Cotton nutrient management. South African Diplomat Beltwide Tour. October 2016. Lubbock, TX.

b. National

1. **Lewis, K.L.** and J. Moore. 2016. Agricultural Reuse of Treated Produced Water. Governmental Energy-Water Nexus Workgroup Meeting, Whitehouse. August 2016. Washington D.C. (conference call).
2. **Lewis, K.L.** and J. Moore. 2016. Agricultural Reuse of Treated Produced Water. Ground Water Protection Council – Underground Injection Conference. February 2016. Denver, CO.
3. **Lewis, K.L.** 2015. Irrigating cotton with desalinated produced water. NSF FEW Workshop. December 2015. Arlington, VA.
4. **Lewis, K.L.** 2015. Irrigating cotton with desalinated produced water. Baker Institute Workshop. December 2015. Houston, TX.

c. Regional

1. **Lewis, K.L.**, J.W. Keeling, and P.B. DeLaune. 2021. Management impacts on soil carbon and biological activity. Soil Health Workshop Virtual Field Day (Gulf Coast and Blacklands of Texas). 3 November 2021.
2. **Lewis, K.L.**, J.W. Keeling, and P.B. DeLaune. 2021. Management impacts on soil carbon and biological activity. Soil Health Workshop Virtual Field Day (Texas High Plains and Oklahoma). 22 October 2021.
3. **Lewis, K.L.** 2021. Prioritizing nutrient inputs to maximize use efficiency. 2nd Annual Great Plains Cotton Conference. 23 February 2021. Virtual Conference.
4. **Lewis, K.L.**, C.D.R. White, J.A. Burke, J.W. Keeling, and P.B. DeLaune. 2021. Overview of cotton cropping system research in the High Plains. 2021

- Texas/Oklahoma/Arizona Cotton Physiology Meeting. 3 February 2021. Virtual Meeting.
5. **Lewis, K.L.** 2019. Potassium management across the Cotton Belt. Texas/Oklahoma/Arizona Cotton Physiology Meeting. January 2019. San Angelo, TX.
 6. **Lewis, K.L.** 2018. Update of Nutrient Management on the High Plains. Texas/Oklahoma Cotton Physiology Meeting. February 2018. Lubbock, TX.
 7. **Lewis, K.L.** 2017. Soil Conservation Practices in Semi-Arid Regions of Texas. Texas/Oklahoma Cotton Physiology Meeting. February 2017. College Station, TX.
 8. **Lewis, K.L.** 2016. Potassium: availability and uptake. Texas/Oklahoma Cotton Physiology Meeting. January 2016. San Angelo, TX. (invited)

d. State

1. **Lewis, K.L., J.W. Keeling, P.B. DeLaune, J.A. Burke, M. McDonald, and C.J. Cobos.** 2021. Carbon storage potential in Texas' High Plains. Texas Wheat Board of Directors Meeting. 30 November 2021. Amarillo, TX.
2. **Lewis, K.L.** 2021. Soil health and nutrient management. Arkansas Grower Meeting. 15 November 2021. Virtual Meeting.
3. **Lewis, K.L.** 2021. Farming in a carbon economy: carbon cycling and budgeting. Carbon Farming in Texas, Meeting hosted by Texas A&M AgriLife Extension. 11 May 2021. Hybrid Meeting.
4. **Lewis, K.L., J.W. Keeling, P.B. DeLaune, J.A. Burke, M. McDonald, and C.J. Cobos.** 2021. Carbon storage potential in Texas' High Plains. Texas Corn Producers Association, Board of Directors Meeting. 22 April 2021. Virtual.
5. **Lewis, K.L., J.W. Keeling, P.B. DeLaune, and J.A. Burke.** 2021. Carbon storage potential in cotton cropping systems. Unpacking Carbon – OSU Spring CCA Session 1. 30 March 2021. Virtual Live-Stream Meeting.
6. **Lewis, K.L., J.W. Keeling, P.B. DeLaune, and J.A. Burke.** 2021. Cover crop benefits to soil health. 7th Annual Water College, Texas Alliance for Water Conservation. 21 January 2021. Virtual meeting.
7. **Lewis, K.L.** 2019. Potassium management across the Cotton Belt. Louisiana Consultants Conference. February 2019. Alexandria, LA.
8. **Lewis, K.L.** 2018. Soil Health Promoting Practices and Nutrient Management. NRCS Soil Fertility Continuing Education Opportunity. November 2018. Canyon, TX
9. **Lewis, K.L.** 2017. Nutrient management for cotton production. Texas Plant Protection Conference. December 2017. College Station, TX. (invited presentation)
10. **Lewis, K.L.** 2017. Soil Health Promoting Practices and Nutrient Management. NRCS Soil Fertility Continuing Education Opportunity. November 2017. Canyon, TX.
11. **Lewis, K.L.** 2016. Potassium availability and plant uptake. NRCS Soil Fertility Continuing Education Opportunity. November 2016. Plainview, TX.

12. **Lewis, K.L.** 2015. Impact of cotton cropping systems and management strategies on the productive capacity of soil in the Texas Southern High Plains. International Year of Soil Health Seminar Series, USDA - TTU. October 2015.
13. **Lewis, K.L.** 2014. Symptomology of row crop nutrient deficiencies. NRCS Soil Fertility Continuing Education Opportunity. November 2014. Plainview, TX.

e. Local

1. **Lewis, K.L.,** G. Ritchie, M. Maeda, R. Noland, P. DeLaune, and J. Dever. 2021. Optimizing nutrient management of modern cotton cultivars. Tom Green Cotton Tour. 29 September 2021.
2. **Lewis, K.L.,** J.W. Keeling, P.B. DeLaune, J.A. Burke, M. McDonald, and C.J. Cobos. 2021. Cover crops and carbon storage in semi-arid, sandy soils. Martin County Producer Meeting. 29 September 2021.
3. **Lewis, K.L.** 2021. Fertility concerns in the semi-arid High Plains. Texas Ag Industries Association. 15 September 2021. Virtual.
4. **Lewis, K.L.** 2021. Carbon Cycling and Storage. West Texas Agricultural Chemical Institute. 12 September 2021. Lubbock, TX. Attendance: 114.
5. **Lewis, K.L.** 2021. Soil health and cotton. Lower Rolling Plains Ag Conference. 7 April 2021. Virtual.
6. **Lewis, K.L.** 2021. Using cover crops to improve soil health. The Master Irrigator. 24 March 2021. Virtual.
7. **Lewis, K.L.** 2021. Soil health and fertility in cotton. Southeast Panhandle Ag Conference. 3 March 2021. Virtual.
8. **Lewis, K.L.** 2021. Soil and nutrient management for cotton in sandy soil. Sandyland Ag Conference. 25 February 2021. Virtual Live-Stream Meeting.
9. **Lewis, K.L.,** G. Ritchie, M. Maeda, R. Noland, P. DeLaune, and J. Dever. 2021. Optimizing nutrient management of modern cotton cultivars. NW Panhandle Ag Conference. 28 January 2021.
10. **Lewis, K.L.** J.W. Keeling, P.B. DeLaune, J.A. Burke, A. Bumguardner, and C.J. Cobos. 2021. Optimizing nitrogen management across cotton cropping systems. NW Panhandle Ag Conference. 28 January 2021. Virtual Live-Stream Meeting.
11. **Lewis, K.L.** 2021. Soil health and cotton production. Llano Estacado Cotton Conference. 26 January 2021. Virtual.
12. **Lewis, K.L.,** G. Ritchie, M. Maeda, R. Noland, P. DeLaune, and J. Dever. 2021. Optimizing nutrient management of modern cotton cultivars. NW Panhandle Ag Conference. 20 January 2021.
13. **Lewis, K.L.** 2020. Crop rotations, cover crops and nutrient management. High Plains Ag Conference. 4 December 2020. Lubbock, TX.
14. **Lewis, K.L.,** G. Ritchie, M. Maeda, and E. Kimura. 2020. Cotton and Peanuts across the High Plains and Rollings Plains - Panel. West Texas Agricultural Chemical Conference. September 2020. Virtual.
15. **Lewis, K.L.** 2020. Later Season Foliar Potassium Fertilizer: is it Worth the Cost? Coastal Bend Soil Campaign. October 2020. Virtual.
16. **Lewis, K.L.** and P. DeLaune. 2020. Cover Crops across the High Plains and Rollings Plains. Cotton Strategy Meeting. July 2020. Virtual.

17. **Lewis, K.L.** 2020. Soil Health and Cover Crops. Castro County Ag Day. February 2020. Dimmitt, TX.
18. **Lewis, K.L.** 2020. Fertility Decisions and Cover Crop Potential. Hub of the Plains Ag Conference. February 2020. Lubbock, TX.
19. **Lewis, K.L.** 2020. Soil Health. Turf and Ornamental Workshop. February 2020. Lubbock, TX.
20. **Lewis, K.L.** 2020. Fertility Decisions and Cover Crop Potential. Llano Estacado Ag Conference. February 2020. Muleshoe, TX.
21. **Lewis, K.L.** 2020. Soil Health across the Southern High Plains. Southern Mesa Ag Conference. January 2020. Lamesa, TX.
22. **Lewis, K.L.** 2019. Cover crops and soil health. High Plains Ag Conference. December 2019. Lubbock, TX.
23. **Lewis, K.L.** 2019. Soil Fertility and nutrient management. Texas Ag Industries Association. September 2019. Lubbock, TX.
24. **Lewis, K.L.** and W. Keeling. 2019. Cover crops and soil health. High Plains Consultants Conference. March 2019. Lubbock, TX.
25. **Lewis, K.L.** 2019. Soil health management systems. Concho Valley Cotton Conference. February 2019. San Angelo, TX.
26. **Lewis, K.L.** 2019. Nutrient Management. Lubbock Master Gardener Program. February 2019. Lubbock, TX.
27. **Lewis, K.L.** 2019. Soil health management systems. Cotton Conference. February 2019. Olton, TX.
28. **Lewis, K.L.** 2019. Soil health management systems. Cotton Conference. February 2019. Spearman, TX.
29. **Lewis, K.L.** 2019. Soil health management systems. Llano Estacado Cotton Conference. January 2019. Muleshoe, TX.
30. **Lewis, K.L.** 2019. Soil health management systems. Top of Texas Cotton Conference. January 2019. Pampa, TX.
31. **Lewis, K.L.** 2019. Soil and nutrient management for cotton production. Southern Mesa Ag Conference. January 2019. Lamesa, TX.
32. **Lewis, K.L.** 2018. Cover crops and nutrient management. High Plains Ag Conference. December 2018. Lubbock, TX.
33. **Lewis, K.L.** 2018. Soil and nutrient management for cotton production. Caprock Crop Production Conference. January 2018. Plainview, TX.
34. **Lewis, K.L.** 2018. Soil and nutrient management for cotton production. South Plains Ag Conference. January 2018. Brownfield, TX.
35. **Lewis, K.L.** 2018. Soil and nutrient management for cotton production. Southern Mesa Ag Conference. January 2018. Lamesa, TX.
36. **Lewis, K.L.** and W. Keeling. 2017. Soil and nutrient management effects on cotton yield. Dawson County Field Day, AG-CARES farm. September 2017. Lamesa, TX.
37. **Lewis, K.L.** 2017. Cover crop and soil management practices. West Texas Agricultural Chemical Conference. September 2017. Lubbock, TX.
38. **Lewis, K.L.** 2017. Phosphorus management in Texas' High Plains. Tri County Crop Tour (Glasscock, Reagan, and Upton Counties). September 2017.

39. **Lewis, K.L.** 2017. Soil health and nutrient management. High Plains Consultants Conference. March 2017. Lubbock, TX.
40. **Lewis, K.L.** 2017. Nutrient management in the Southern High Plains. West Central, LLC Agronomy Update. January 2017. Plainview, TX.
41. **Lewis, K.L.** 2017. Soil health and nutrient management. Caprock Crop Production Conference. January 2017. Plainview, TX.
42. **Lewis, K.L.** 2016. Nutrient effects on cotton lint quality. AgriLife Quality Cotton Conference. August 2016. Lubbock, TX.
43. **Lewis, K.L.** and W. Keeling. 2016. Soil management effects on cotton yield. Dawson County Field Day, AG-CARES farm. September 2016. Lamesa, TX.
44. **Lewis, K.L.** and P. DeLaune. 2016. Soil and nitrogen fertilization management. Rolling Plains Spring Field Day. May 2016. Chillicothe, TX.
45. **Lewis, K.L.** 2016. Soil nutrient management strategies. Lower Rolling Plains Ag Conference. April 2016. Snyder, TX.
46. **Lewis, K.L.** 2016. Irrigation water: salinity and nutrients. South Plains Irrigation Conference. April 2016. Brownfield, TX.
47. **Lewis, K.L.** and J. Moore. 2016. Beneficial reuse of oil and gas produced water. Water Advancement, Technology, Training & Solutions (WATTS) Conference. March 2016. Lubbock, TX.
48. **Lewis, K.L.** and J. Moore. 2015. Beneficial reuse of oil and gas produced water. Energy Water Solutions – Pecos Field Day. November 2015. Pecos, TX.
49. **Lewis, K.L.** 2015. Potassium availability and uptake. Texas Ag Industries Association Conference. September 2015. Lubbock, TX.
50. **Lewis, K.L.** 2015. Soil nutrient management strategies. Lower Rolling Plains Ag Conference. April 2015. Snyder, TX.
51. **Lewis, K.L.** 2015. Soil fertility in the Texas Southern High Plains. Southern Mesa Agricultural Conference. January 2015. Lamesa, TX.
52. **Lewis, K.L.** 2014. Soil fertility research update and program introduction. 62nd Annual Agricultural Chemicals Conference – WTACI. September 2014. Lubbock, TX.

B. Professional improvements and activities

1. Cultivating Change Foundation, Focus Group. Virtual. (2020)
2. Soil Health Institute – Soil Health Webinar Series. Virtual. (2020)
3. Soil and Crop Sciences Faculty Retreat. College Station, TX. (December 2019)
4. Professional Development Seminar, “Making the transition from staff to supervisor”. Lubbock, TX. (January 2018)
5. Invited guest at the Lubbock Professional Women’s Group lunch to participate on a panel discussion: “Women in a male dominated field”. Lubbock, TX. (September 2017)
6. Attended Pedagogy workshop at AgriLife Staff Conference, College Station, TX. (January 2017)
7. Extension Professional Development – Soil Fertility and Nutrient Management Lectures (2016)
8. Leadership Conference – TAMU, College Station, TX. (November 2014)

C. Committees

a. Professional organization committees

1. Great Plains Soil Fertility Conference – Chair of Organizing Committee (2021 – 2022)
2. West Texas Ag Chemical Institute – Scholarship Committee, Chair (2019 – 2021)
3. West Texas Ag Chemical Institute – Program Committee (2017 – 2020)
4. Great Plains Soil Fertility Conference – Organizing Committee (2017 – present)
5. West Texas Ag Chemical Institute – Scholarship Committee (2016 – ongoing)

b. Departmental and Texas A&M AgriLife Research committees

1. Faculty Regional Director of the AgriLife Field to Market, FieldPrint Calculator Program (2016-present)
2. Extension Plant Pathology Specialist, search committee (2019)
3. Extension State Cotton Specialist, search committee (2019)
4. Soil Carbon assistant/associate professor, search committee (2017-2018)
5. Soil Chemistry and Fertility assistant/associate professor, search committee (2015-2016)

c. Departmental Texas Tech committees

1. Thornton Chair Forage Agronomist, search committee (2021)
2. Plant and Soil Science farm management committee (2017 – present)
3. Soil Microbiology assistant/associate professor, search committee (2016)
4. Ecophysiology assistant/associate professor, search committee (2015-2016)
5. Soil and Water Agroecology research assistant professor, search committee (2015)

D. Invited reviews

a. Peer-reviewed publications

1. Agronomy: 2020 (x2)
2. Agricultural & Environmental Letters: 2019, 2020 (x2), 2021
3. Crop Science Journal: 2018
4. Peanut Science: 2016
5. Agronomy Journal: 2014, 2015, 2017 (x2), 2018, 2019
6. Geoderma: 2015
7. Soil and Water Conservation: 2014 and 2016
8. Applied and Environmental Soil Science: 2012

b. Peer-review grant proposals

1. NIFA-AFRI, Foundational Program, September 2020
2. NIFA-AFRI, Soil Health Program, August 2021

c. External promotion review

d. Judging student competitions

1. ASA-CSSA-SSSA. Graduate student poster competition. Cover Crop Community. November 2020. Virtual.
2. ASA-CSSA-SSSA. Ph.D. student oral competition. Cover Crop Community. November 2020. Virtual.
3. Beltwide Cotton Conference. M.S. student oral competition. Agronomy, Physiology, and Soil poster session. January 2019. New Orleans, LA.
4. Beltwide Cotton Conference. Ph.D. student poster competition. Agronomy, Physiology, and Soil poster session. January 2017. Dallas, TX.
5. Beltwide Cotton Conference. Ph.D. student oral competition. Agronomy, Physiology, and Soil oral session. January 2017. Dallas, TX.
6. ASA-CSSA-SSSA. Graduate student poster competition. ASA, Soil-Plant-Water-Relations Community. November 2016. Phoenix, AZ.
7. Great Plains Soil Fertility Conference. Graduate student poster competition. March 2016. Denver, CO.

E. Professional organization involvement

a. Leadership roles

1. Great Plains Soil Fertility Conference – Chair (2021 – 2022)
2. Agrosystems, Geosciences, and Environment – Associate Editor (2018 – present)
3. Agronomy, Physiology, and Soil Conference, Beltwide Cotton Conference – Past Chair (2020 – 2021); Chair (2019 – 2020); Vice Chair (2018 – 2019)
4. West Texas Ag Chemical Institute – Past President (2019 – 2020); President (2018 – 2019); President (2018 – 2019); Vice President (2017 – 2018); Secretary (2016 – 2017)
5. International Plant Nutrition Institute (IPNI) Potassium Working Group – Texas representative (2018 – 2019)
6. Cover Crop Community, ASA Conference – Chair (2019 – 2020); Vice Chair (2018 – 2019)
7. No-Till – Texas Advisory Board (2017 – 2019)
8. Great Plains Soil Fertility Conference – Southern Region Representative (2017 – present)
9. Southern Cover Crops Council – Texas representative for Southern Cover Crops Council development (2016 – 2018)
10. Plant and Soil Science Agronomy Club Advisor, Texas Tech University (2015 – present)

b. Leadership activities

1. Beltwide Cotton Conference. Moderator for Agronomy, Physiology, and Soil Conference. Virtual. (January 2021)
2. Beltwide Cotton Conference. Moderator for Agronomy, Physiology, and Soil Conference. Austin, TX. (January 2020)
3. ASA-CSSA. Moderator for Cover Crop ASA Session. San Antonio, TX. (November 2019)
4. ASA-CSSA. Moderator for Cover Crop ASA Session. Baltimore, MD. (November 2018)

5. Beltwide Cotton Conference. Moderator for Agronomy, Physiology, and Soil Conference. San Antonio, TX. (January 2018)
6. ASA-CSSA-SSSA. Moderator for ASA session. Tampa, FL. (October 2017)
7. Beltwide Cotton Conference. Moderator for Agronomy, Physiology, and Soil Conference. Dallas, TX. (January 2017)
8. Beltwide Cotton Conference. Moderator for Soil Management and Plant Nutrition Conference. New Orleans, LA. (January 2016)

F. Professional affiliations

1. High Plains Association of Crop Consultants (2015 – present)
2. Texas Ag Industries Association (2015 – present)
3. Soil Science Society of America (2008 – present)
4. American Society of Agronomy (2008 – present)
5. Crop Science Society of America (2008 – present)

G. Community Service

1. Mentor to Whiteface I.S.D. 6th grade science fair team. Soil health evaluation – laboratory experiments. Placed at National Competition (2016 – 2018)
2. Ag-in-the-Bag. Provided cotton education to Lubbock elementary schools. (September 2017 and 2019).

VII. GRANTS AND CONTRACTS

A. Awarded Grants

a. External

1. **Lewis, K.L.**, T.A., Berthold, J. Bell, P.B. DeLaune, F.M. Rouquette, G. Smith, B. Pinchak, S. Ale, J.W. Keeling, B. Wyatt, T. Gentry, E. Kimura, L. Gregory, M. Maeda, B. McCarl, J.K. Smith, W.W. Keeling, K. Wagner, D. McCallister, A. Mirchi, A.C. Rocateli, D. Bagnall, S. Sharma, J. Warren, A. Jilling, S. Byrd, B. Guerrero, C. Dunn, J.A. Burke, and C.J. Cobos. 2021. Sustainable agricultural intensification and enhancement through the utilization of regenerative agricultural management practices. National Institute of Food and Agriculture, Sustainable Agricultural Systems (SAS, A9201). Proposal No. 2021-05752. September 2021 – August 2026. \$10,000,000 (\$900,702 to program).
2. Kimura, E., **K.L. Lewis**, P. DeLaune, P. Dotray, J. Grichar, J. McGinty, M. Baring, F. Abello, and C. Monclova-Santana. 2021. Improving Texas Peanut Grower Profitability. Texas Peanut Producers Board. January 2022 – June 2023. Co-PI. \$90,000. (\$17,000 to program)
3. **Lewis, K.L.**, W. Keeling, and P. DeLaune. 2021. Impact of cotton cropping systems and management strategies on the productive capacity of soil in the Texas Southern High Plains. Texas State Support – Cotton Incorporated. 2022. PI. \$13,500 (\$13,500 to program).
4. **Lewis, K.L.**, W. Keeling, R. Noland, M. Maeda, and P. DeLaune. 2021. Reevaluating nutrient demands of modern cotton cultivars in the Southern High Plains and Rolling Plains of Texas. Texas State Support – Cotton Incorporated. 2022. PI. \$30,000 (\$22,260 to program).

5. **Lewis, K.L.**, and M. Maeda. 2021. Developing a Fertigation Strategy for Subsurface Drip Irrigation on Texas' Southern High Plains. Texas State Support – Cotton Incorporated. 2022. PI. \$18,000 (\$18,000 to program).
6. Slaughter, L., **K.L. Lewis**, and G. Ritchie. 2021. Potential use and efficacy of beneficial microorganisms to enhance cotton productivity and soil health in the Texas Southern High Plains (#18-085TX). Texas State Support - Cotton Incorporated. 2022. Co-PI. \$10,000 (\$0 to program; TTU).
7. Slaughter, L., **K.L. Lewis**, and J. Sharma. 2021. Exploration and Discovery of the Cotton Microbiome in the Texas Southern High Plains. Texas State Support - Cotton Incorporated. 2022. Co-PI. \$20,000 (\$0 to program; TTU).
8. **Lewis, K.L.**, M. Maeda, and G. Ritchie. 2021. Developing a Fertigation Strategy for Cotton using Subsurface Drip Irrigation. Fluid Fertilizer Foundation. January 2022 – December 2022. PI. \$15,000 (\$15,000 to program).
9. Howe, J., T. Gentry, and **K.L. Lewis**. 2021. Soil Health Literature Review. Soil Health Institute. June 2021 – December 2021. Co-PI. \$40,000 (\$10,000 to program).
10. **Lewis, K.** 2021. Faculty Fellow - 104B State Water Resources Institute Program. Department of Interior's U.S. Geological Survey. March 2021 – December 2021. \$14,000 (\$14,000 to program).
11. Maeda, M. and **K.L. Lewis**. 2021. Acetic acid evaluation in cotton and corn. Shell. 2021. \$37,593 (\$26,543 to program).
12. **Lewis, K.L.**, D. Porter, J. Bell, and D. McCallister. 2020. Evaluation of integrated advanced irrigation technologies and soil conservation practices on water use efficiency and soil health. Texas Corn Producers Board (NRCS cost share). January 2021 – December 2021. PI. \$27,460 (\$7,560 to program).
13. Kimura, E., **K. Lewis**, P. DeLaune, P. Dotray, J. Grichar, J. McGinty, M. Baring, F. Abello, and C. Monclova-Santana. 2020. Improving Texas Peanut Grower Profitability. Texas Peanut Producers Board. January 2021 – June 2022. Co-PI. \$90,000. (\$17,000 to program)
14. **Lewis, K.L.**, M. Maeda, and G. Ritchie. 2020. Developing a Fertigation Strategy for Cotton using Subsurface Drip Irrigation. Fluid Fertilizer Foundation. January 2021 – December 2021. PI. \$15,000 (\$15,000 to program).
15. DeLaune, P., **K. Lewis**, W. Keeling, W. Keeling, and E. Kimura. 2020. Diversifying Organic Cotton Production in Semi-Arid Environments of Texas. NIFA-Organic. September 2020 – August 2023. Co-PI. \$499,937 (\$241,084 to program).
16. Siebecker, M. and **K. Lewis**. 2020. A Molecular and Kinetics Based Approach to Understand Potassium Sorption and Fixation to Soil Clay and Oxide Minerals in Agricultural Fields. NIFA-AFRI. September 2020 – August 2022. Co-PI. \$335,489 (\$0 to program; TTU).
17. Guo, W., **K. Lewis**, and G. Ritchie. 2020. Optimizing Nitrogen Management in Dryland Cotton using Precision Agriculture Technologies in the Southern High Plains. Texas State Support – Cotton Incorporated. 2021. Co-PI. \$30,000 (\$2,500 to program; TTU).
18. Slaughter, L., **K. Lewis**, and G. Ritchie. 2020. Potential use and efficacy of beneficial microorganisms to enhance cotton productivity and soil health in the

- Texas Southern High Plains (#18-085TX). Texas State Support - Cotton Incorporated. 2021. Co-PI. \$10,000 (\$0 to program; TTU).
19. Slaughter, L., **K. Lewis**, and J. Sharma. 2020. Exploration and Discovery of the Cotton Microbiome in the Texas Southern High Plains. Texas State Support - Cotton Incorporated. 2021. Co-PI. \$20,000 (\$0 to program; TTU).
 20. **Lewis, K.L.**, W. Keeling, and P. DeLaune. 2020. Impact of cotton cropping systems and management strategies on the productive capacity of soil in the Texas Southern High Plains. Texas State Support – Cotton Incorporated. 2021. PI. \$13,500 (\$13,500 to program).
 21. **Lewis, K.L.**, W. Keeling, R. Noland, M. Maeda, and P. DeLaune. 2020. Reevaluating nutrient demands of modern cotton cultivars in the Southern High Plains and Rolling Plains of Texas. Texas State Support – Cotton Incorporated. 2021. PI. \$30,000 (\$17,100 to program).
 22. Kimura, E., **K. Lewis**, P. DeLaune, P. Dotray, J. Grichar, J. McGinty, M. Baring, F. Abello, and C. Monclova-Santana. 2019. Improving Texas Peanut Grower Profitability. Texas Peanut Producers Board. January 2020 – June 2021. Co-PI. \$90,000. (\$17,000 to program)
 23. **Lewis, K.L.**, D. Porter, J. Bell, and D. McCallister. 2019. Evaluation of integrated advanced irrigation technologies and soil conservation practices on water use efficiency and soil health. Texas Corn Producers Board (NRCS cost share). January 2020 – December 2020. PI. \$27,460 (\$7,560 to program).
 24. **Lewis, K.L.**, D. Porter, J. Bell, and D. McCallister. 2019. Evaluation of integrated advanced irrigation technologies and soil conservation practices on water use efficiency and soil health. NRCS – Conservation Innovation Grants, Texas. January 2020 – December 2020. PI. \$74,810 (\$19,397 to program).
 25. Guo, W., **K. Lewis**, and G. Ritchie. 2019. Optimizing Nitrogen Management in Dryland Cotton using Precision Agriculture Technologies in the Southern High Plains. Texas State Support – Cotton Incorporated. 2020. Co-PI. \$30,000 (TTU).
 26. Slaughter, L., **K. Lewis**, and G. Ritchie. 2019. Potential use and efficacy of beneficial microorganisms to enhance cotton productivity and soil health in the Texas Southern High Plains (#18-085TX). Texas State Support - Cotton Incorporated. 2020. Co-PI. \$10,000 (TTU).
 27. Slaughter, L., **K. Lewis**, and J. Sharma. 2019. Exploration and Discovery of the Cotton Microbiome in the Texas Southern High Plains. Texas State Support - Cotton Incorporated. 2020. Co-PI. \$20,000 (TTU).
 28. **Lewis, K.L.**, W. Keeling, and P. DeLaune. 2019. Impact of cotton cropping systems and management strategies on the productive capacity of soil in the Texas Southern High Plains. Texas State Support – Cotton Incorporated. 2020. PI. \$17,500 (\$17,500 to program).
 29. **Lewis, K.L.**, W. Keeling, G. Ritchie, R. Noland, M. Maeda, J. Dever, and P. DeLaune. 2019. Reevaluating nutrient demands of modern cotton cultivars in the Southern High Plains and Rolling Plains of Texas. Texas State Support – Cotton Incorporated. 2020. PI. \$30,000 (\$15,460 to program).
 30. Byrd, S., **K. Lewis**, G. Morgan, and J. Howe. 2019. Evaluation of foliar fertilizers in cotton for plant growth, reproductive development, yield, fiber

- quality, and financial returns. Fluid Fertilizer Foundation. 2020. \$6,000 (\$2,000 to program).
31. Frame, W., **K. Lewis**, T. Raper, G. Harris, and R. Stewart. 2019. An integrated approach for nitrogen management in Upland Cotton (*Gossypium hirsutum*) across the U.S. Cotton Belt. 4R Research Fund, International Plant Nutrition Institute. 2019 – 2023. \$874,980 (\$175,000 to program)
 32. Kimura, E., **K. Lewis**, P. DeLaune, P. Dotray, J. Grichar, J. McGinty, M. Baring, F. Abello, and C. Monclova-Santana. 2018. Improving Texas Peanut Grower Profitability. Texas Peanut Producers Board. January 2019 – June 2020. Co-PI. \$90,000 (\$15,000 to program).
 33. **Lewis, K.L.**, P. DeLaune, T. Gentry, W. Keeling, E. Kimura, and J. Keeling. 2018. Organic and Conventional Agriculture: Learning from Each Other to Promote Soil Health and Economic Viability in West Texas. USDA-SARE, Full Proposal. 2019 – 2021. \$299,697 (\$162,857 to program)
 34. Parajulee, M., A. Hakeem, W. Keeling, **K. Lewis**, D. McCallister, and S. Vyavhare. 2018. Developing Insect Pest Management Strategies in Water Deficit Cotton Production Systems: Management Recommendations for Production. USDA-NIFA. December 2018 – November 2021. Co-PI. \$324,603.
 35. **Lewis, K.L.**, D. Porter, J. Bell, and D. McCallister. 2018. Evaluation of integrated advanced irrigation technologies and soil conservation practices on water use efficiency and soil health. Texas Corn Producers Board (NRCS cost share). January 2019 – December 2019. PI. \$34,090 (\$16,996 to program).
 36. Neely, H., **K. Lewis**, J. Foster, C. Neely, H. Leggette, M. Welch, J. Lofton, and J. Copes. 2018. Improve Outreach to Improve Soils: Combining Data, Economics, and Communication to Improve Soil Health Across the South Central United States. USDA-NRCS-CIG. 2018-2021. \$1,090,562 (\$180,402.77 to program).
 37. Byrd, S., **K. Lewis**, G. Morgan, and J. Howe. 2018. Evaluation of foliar fertilizers in cotton for plant growth, reproductive development, yield, fiber quality, and financial returns. Fluid Fertilizer Foundation. 2019. \$6,000 (\$2,000 to program).
 38. Slaughter, L., **K. Lewis**, and G. Ritchie. 2018. Potential use and efficacy of beneficial microorganisms to enhance cotton productivity and soil health in the Texas Southern High Plains (#18-085TX). Texas State Support - Cotton Incorporated. 2019. Co-PI. \$10,000 (TTU).
 39. Slaughter, L., **K. Lewis**, and J. Sharma. 2018. Exploration and Discovery of the Cotton Microbiome in the Texas Southern High Plains. Texas State Support - Cotton Incorporated. 2019. Co-PI. \$20,000 (TTU).
 40. **Lewis, K.L.**, W. Keeling, G. Ritchie, and P. DeLaune. 2018. Impact of cotton cropping systems and management strategies on the productive capacity of soil in the Texas Southern High Plains. Texas State Support – Cotton Incorporated. 2019. PI. \$17,500/year (\$17,500 to program).
 41. **Lewis, K.L.**, W. Keeling, G. Ritchie, J. Dever, and P. DeLaune. 2018. Reevaluating nutrient demands of modern cotton cultivars in the Southern High Plains and Rolling Plains of Texas. Texas State Support – Cotton Incorporated. 2019. PI. \$30,000/year (\$20,500 to program).

42. **Lewis, K.L.**, T. Wheeler, P. Dotray, et al. 2018. Peanut production systems for Texas. Texas Peanut Producers. 2018. PI. \$65,500 (\$52,569 to program).
43. **Lewis, K.L.** and J. Woodward. 2018. Integrated management of root knot and reniform in cotton. Plains Cotton Improvement Program. 2018. PI. \$20,000. (\$20,000 to program).
44. Neely, C., J. Mower, D. Coker, D. Hathcoat, **K. Lewis**, E. Kimura, R. Sutton, and C. Jones. 2018. Maximizing Texas Wheat Production through Soil Nitrogen Crediting and Improved Nitrogen Recommendations. Texas Wheat Producers Board. 2018 – 2019. Co-PI. \$5,000 (\$5,000 to program).
45. Neely, H. **K. Lewis**, J. Foster, and C. Neely. 2018. Improving soil health with novel wheat double cropping rotations under reduced tillage. USDA-NRCS. September 2018 – September 2019. Co-PI. \$30,000 (\$6,089 to program).
46. Slaughter, L., **K. Lewis**, and G. Ritchie. 2017. Potential use and efficacy of beneficial microorganisms to enhance cotton productivity and soil health in the Texas Southern High Plains (#18-085TX). Texas State Support - Cotton Incorporated. 2018. Co-PI. \$10,000 (TTU).
47. Neely, H. **K. Lewis**, J. Foster, and C. Neely. 2017. Improving soil health with novel wheat double cropping rotations under reduced tillage. USDA-NRCS. September 2017 – September 2018. Co-PI. \$30,000 (\$6,089 to program).
48. Byrd, S., **K. Lewis**, G. Morgan, and J. Howe. 2017. Evaluation of foliar fertilizers in cotton for plant growth, reproductive development, yield, fiber quality, and financial returns. Fluid Fertilizer Foundation. 2018 – 2019. \$6,000. (\$2,000 to program)
49. DeLaune, P. and **K. Lewis**. 2017. Evaluating soil health parameters in two benchmark soils of the Texas High Plains. Funding: NRCS. October 2017 – September 2019. CoPI. \$200,000 (\$99,660 to program).
50. **Lewis, K.L.**, J. Bordovsky, W. Keeling, G. Ritchie, P. DeLaune. 2017. Impact of cotton cropping systems and management strategies on the productive capacity of soil in the Texas Southern High Plains. Texas State Support – Cotton Incorporated. 2018. PI. \$17,500 (\$17,500 to program).
51. **Lewis, K.L.**, W. Keeling, G. Ritchie, J. Dever, and P. DeLaune. 2017. Reevaluating nutrient demands of modern cotton cultivars in the Southern High Plains and Rolling Plains of Texas. Texas State Support – Cotton Incorporated. 2018. PI. \$20,000/year (\$12,217 to program).
52. **Lewis, K.L.**, D. Porter, J. Bell, and D. McCallister. 2017. Evaluation of integrated advanced irrigation technologies and soil conservation practices on water use efficiency and soil health. Texas Corn Producers Board (NRCS cost share). January 2018 – December 2018. PI. \$36,324 (\$17,262 to program).
53. Bordovsky, J., **K. Lewis**, D. Porter, and R. Williams. 2017. Water management to sustain the economic activity from the Ogallala aquifer. USDA – Agricultural Research Service (Ogallala Aquifer Program). September 2017 – August 2020. Co-PI. \$76,976 (\$6,624 to program).
54. Neely, C., J. Mower, D. Coker, D. Hathcoat, **K. Lewis**, E. Kimura, R. Sutton, and C. Jones. 2017. Maximizing Texas Wheat Production through Soil Nitrogen Crediting and Improved Nitrogen Recommendations. Texas Wheat Producers Board. 2017 – 2018. Co-PI. \$5,000 (\$5,000 to program).

55. **Lewis, K.L.** Limus N stabilizer – urea fertilizer additive for cotton production. BASF. 2017. PI. \$10,000 (\$10,000 to program).
56. **Lewis, K.L.** 2017. Evaluation of biological soil amendments for peanut production. Monsanto – BioAg. PI. 2017. \$10,206 (\$10,206 to program).
57. **Lewis, K.L.** 2017. On-farm evaluation of biological soil amendments for peanut production. Monsanto – BioAg. PI. 2017. \$10,206 (\$10,206 to program).
58. **Lewis, K.L.,** R. Anders, and J. Zack. 2017. Increasing economics resilience of West Texas agriculture through novel human crops. CH Foundation. PI. January 2018 – December 2018. PI. \$35,000 (\$35,000 to program). TTU submitted.
59. **Lewis, K.L.,** J. Bordovsky, W. Keeling, G. Ritchie, P. DeLaune. 2016. Impact of cotton cropping systems and management strategies on the productive capacity of soil in the Texas Southern High Plains. Texas State Support – Cotton Incorporated. 2017. PI. \$17,500/year (\$17,500 to program).
60. **Lewis, K.L.,** W. Keeling, J. Bordovsky, and R. Williams. 2016. Integrated grain sorghum production in a cotton/sorghum rotation: irrigation, tillage and weed management in the Southern High Plains of Texas. Texas Grain Sorghum Board. January 2017 – December 2017. PI. \$10,000 (\$10,000 to program).
61. Tracy, J., B. McCarl, K. Wagner, M. Ganjegunte, R. Srinivasan, G. Niu, J. Dever, J. Enciso, **K. Lewis,** Q. Xue, R. Lacewell, T. Berthold, and Z Sheng. 2016. Diversifying the Water Portfolio for Agriculture in the Rio Grande Basin. USDA-NIFA. January 2017 – December 2020. Co-Investigator. \$4,997,257 (\$124,780 to program).
62. **Lewis, K.L.,** R. Anders, and J. Zack. 2016. Increasing economics resilience of West Texas agriculture through novel human crops. CH Foundation. PI. January 2017 – December 2017. PI. \$35,073.67 (\$35, 073.67 to program). TTU submitted.
63. **Lewis, K.L.,** D. Porter, J. Bell, and C. Hilyer. 2016. Evaluation of integrated advanced irrigation technologies and soil conservation practices on water use efficiency and soil health. Texas Corn Producers Board (NRCS cost share). January 2017 – December 2017. PI. \$46,996 (\$46,996 to program).
64. **Lewis, K.L.** 2016. Evaluation of biological soil amendments for peanut production. Monsanto – BioAg. PI. 2016. \$7,371 (\$7,371 to program).
65. **Lewis, K.L.** 2016. Evaluation of phosphorus fertilizer for corn production. BASF. 2016. PI. \$11,000 (\$11,000 to program).
66. Hays, D., F. Hons, H. Neely, **K. Lewis,** N. Rajan, R. Lacey, J. Foster, R. Lacey, and R. Jessup. 2015. Developing ground penetrating radar (GPR) for enhanced root and soil organic carbon imaging: optimizing bioenergy crop adaptation and agro-ecosystem services. ARPA-E, Department of Energy. Co-PI. February 2016 – January 2019. Co-PI. \$4,600,000 (\$136,973 to program).
67. **Lewis, K.L.,** J. Bordovsky, W. Keeling, G. Ritchie, P. DeLaune. 2015. Impact of cotton cropping systems and management strategies on the productive capacity of soil in the Texas Southern High Plains. Texas State Support – Cotton Incorporated. 2016. PI. \$17,500/year (\$17,500 to program).
68. Ritchie, G., C. West, J. Moore-Kucera, **K. Lewis.** 2015. Integrating cotton and sorghum cropping systems in the Texas High Plains. Texas State Support and

- United Sorghum Checkoff. 2016 - 2017. Co-PI. \$26,500 (\$8,000 to program). TTU submitted.
69. **Lewis, K.L.** 2015. Evaluation of cotton yield, quality, and plant growth response to soil-applied potassium. Cotton Incorporated – Core. 2015 – 2017. PI. \$8,000/year (\$24,000 to program).
 70. DeLaune, P., J. Foster, **K. Lewis**, and W. Keeling. 2014. Demonstrating soil health promoting practices to increase water holding capacity and yield in deficit-irrigated agriculture. NRCS CIG. 2015 – 2017. Co-PI. \$361,000 (\$33,000 to program).
 71. **Lewis, K.L.** 2015. Evaluation of soil surfactants. BASF. 2015. PI. \$20,000 (\$20,000 to program).
 72. **Lewis, K.L.** and F.M. Hons. 2014. Preliminary greenhouse assessment of the agronomic efficacy of modified ammonium nitrate fertilizer. Alcoa, Inc. and Alcoa Technical Center. 2015. PI. \$110,788 (\$110,788 to program).

b. Internal

1. **Lewis, K.L.**, P. DeLaune, and T. Gentry. 2020. Root carbon contributions and influences on greenhouse gas emission in Texas' High Plains and Rolling Plains. Texas A&M AgriLife Research Air Quality Seed Grant. September 2020 – August 2021. PI. \$88,653 (\$43,357 to program).
2. **Lewis, K.L.**, P. DeLaune, and T. Gentry. 2019. Root carbon contributions and influences on greenhouse gas emission in Texas' High Plains and Rolling Plains. Texas A&M AgriLife Research Air Quality Seed Grant. September 2019 – August 2020. PI. \$88,640 (\$43,582 to program).
3. **Lewis, K.L.**, J. Foster, M. Maeda, J. Jung, H. Neely, C. Neely, A. Somenahally, P. DeLaune, and M. Welch. 2018. A novel approach for evaluating the impact of cropping systems on crop productivity and the soil microbiome by linking UAS-data to soil health indicators. Crop Improvement Program. September 2018 – August 2019. PI. \$90,000 (\$8,500 to program).
4. **Lewis, K.L.**, P. DeLaune, and T. Gentry. 2018. Impact of conservation management practices on greenhouse gas emissions in semi-arid, intensively cropped regions of Texas. Texas A&M AgriLife Research Air Quality Seed Grant. September 2018 – August 2019. PI. \$109,088 (\$47,382 to program).
5. **Lewis, K.L.**, J. Foster, M. Maeda, J. Jung, H. Neely, C. Neely, A. Somenahally, P. DeLaune, and M. Welch. 2017. A novel approach for evaluating the impact of cropping systems on crop productivity and the soil microbiome by linking UAS-data to soil health indicators. Crop Improvement Program. September 2017 – August 2018. PI. \$90,000 (\$8,250 to program).
6. **Lewis, K.L.**, P. DeLaune, and T. Gentry. 2017. Impact of conservation management practices on greenhouse gas emissions in semi-arid, intensively cropped regions of Texas. Texas A&M AgriLife Research Air Quality Seed Grant. September 2017 – August 2018. PI. \$109,088 (\$52,533 to program).
7. **Lewis, K.L.**, P. DeLaune, K. Casey, and T. Marek. 2015. Impact of conservation management practices on greenhouse gas emissions in semi-arid, intensively cropped regions of Texas. Texas A&M AgriLife Research Air

- Quality Seed Grant. September 2015 – August 2017. PI. \$134,000 (\$52,000 to program).
8. Keeling, W., J. Bordovsky, T. Wheeler, J. Woodward, **K. Lewis**, G. Ritchie, M. Parajulee, P. DeLaune, and R. Williams. 2015. Sustaining soil and water resources in the Texas High Plains through innovative crop management strategies. Texas A&M AgriLife Research Cropping Systems Seed Grant. September 2015 – August 2017. Co-PI. \$300,000 (\$30,000 to program).
 9. Neely, H., D. Hays, C. Neely, J. Foster, **K. Lewis**, and R. Lacey. 2015. Merging crop breeding and soil science to enhance crop abiotic stress adaptation, agro-ecological sustainability, and soil health. Texas A&M AgriLife Research Cropping Systems Seed Grant. September 2015 – August 2017. Co-PI. \$300,000 (\$46,000 to program).

c. Other (Industry Sponsored Research)

1. **Lewis, K.L.** Soil amendments in cotton. Heliae. 2021. \$8,250 (\$8,250 to program).
2. **Lewis, K.L.** Granular sources of fertilizer in cotton. American Plant Food. 2021. \$9,600 (\$9,600 to program).
3. **Lewis, K.L.** Evaluation of nutrient sources in cotton. ICL. 2021. \$8,064 (\$8,064 to program).
4. **Lewis, K.L.** Starter fertigation evaluation in cotton. Helena. 2021. \$8,000 (\$8,000 to program).
5. **Lewis, K.L.** Water-FACT Variety. Bayer Crop Science. 2021. \$16,000 (\$16,000 to program).
6. **Lewis, K.L.** Variety and management demonstrations. Bayer Crop Science. 2021. \$10,000 (\$10,000 to program).
7. **Lewis, K.L.** Granular sources of N and S fertilizers in cotton. Anuvia. 2021. \$11,200 (\$11,200 to program).
8. **Lewis, K.L.** Fertilizer management program evaluation in cotton. Wilbur Ellis. 2021. \$57,900 (\$57,900 to program).
9. **Lewis, K.L.** Phosphorus and potassium evaluation in cotton. Mosaic. 2021. \$6,000 (\$6,000 to program).
10. **Lewis, K.L.** Foliar fertilizer program evaluation in cotton. West Central. 2021. \$7,000 (\$7,000 to program).
11. **Lewis, K.L.** Fertigation program evaluation in cotton. Yara. 2021. \$10,000 (\$10,000 to program).
12. **Lewis, K.L.** Granular sources of fertilizer in cotton. American Plant Food. 2020. \$4,800 (\$4,800 to program).
13. **Lewis, K.L.** Granular sources of N and S fertilizers in cotton. Anuvia. 2020. \$4,800 (\$4,800 to program).
14. **Lewis, K.L.** Water-FACT Variety. Bayer Crop Science. 2020. \$14,000 (\$14,000 to program).
15. **Lewis, K.L.** Demonstrations. Bayer Crop Science. 2020. \$10,000 (\$10,000 to program).
16. **Lewis, K.L.** Peanut fungicide evaluation. Bayer Crop Science. 2020. \$2,500 (\$2,500 to program).

17. **Lewis, K.L.** Starter fertigation evaluation in cotton. Helena. 2020. \$6,400 (\$6,400 to program).
18. **Lewis, K.L.** Soil amendments in cotton. Heliae. 2020. \$15,750 (\$15,750 to program).
19. **Lewis, K.L.** Phosphorus and potassium evaluation in cotton. Mosaic. 2020. \$10,000 (\$10,000 to program).
20. **Lewis, K.L.** Potassium sources and application methods in cotton. Nachurs. 2020. \$11,250 (\$11,250 to program).
21. **Lewis, K.L.** Fertility program evaluation in cotton. Nachurs. 2020. \$8,250 (\$8,250 to program).
22. **Lewis, K.L.** Foliar fertilizer program evaluation in cotton. Simplot. 2020. \$8,250 (\$8,250 to program).
23. **Lewis, K.L.** Soil amendments in cotton. SNF. 2020. \$6,800 (\$6,800 to program).
24. **Lewis, K.L.** Foliar fertilizer program evaluation in cotton. West Central. 2020. \$3,000 (\$3,000 to program).
25. **Lewis, K.L.** Fertilizer management program evaluation in cotton. Wilbur Ellis. 2020. \$44,250 (\$44,250 to program).
26. **Lewis, K.L.** Fertigation program evaluation in cotton. Yara. 2020. \$9,600 (\$9,600 to program).
27. **Lewis, K.L.** Evaluation of soil amendments in cotton. Zydex. 2020. \$2,400 (\$2,400 to program).
28. **Lewis, K.L.** Fertigation management in cotton. Yara. 2019. \$8,000 (\$8,000 to program).
29. **Lewis, K.L.** Corn and cotton fertilizer evaluation. West Central. 2019. \$29,250 (\$29,250 to program).
30. **Lewis, K.L.** Corn and cotton fertilizer evaluation. Wilbur Ellis. 2019. \$35,800 (\$35,000 to program).
31. **Lewis, K.L.** Foliar fertilizer evaluation in cotton. Wilbur Ellis. 2019. \$11,200 (\$11,200 to program).
32. **Lewis, K.L.** Peanut fungicide trial. Bayer. 2019. \$2,500 (\$2,500 to program).
33. **Lewis, K.L.** Cotton variety by water FACT trial. Bayer. 2019. \$15,000 (\$15,000 to program).
34. **Lewis, K.L.** Peanut inoculum evaluation. Bayer. 2019. \$12,600 (\$12,600 to program).
35. **Lewis, K.L.** Broadcast fertilizer evaluation in cotton. Anuvia. 2019. \$4,900 (\$4,900 to program).
36. **Lewis, K.L.** Potassium fertilizer evaluation in cotton. Nachurs. 2019. \$16,000 (\$16,000 to program).
37. **Lewis, K.L.** Cotton seed treatments to enhance soil moisture retention. SNF. 2019. \$10,500 (\$10,500 to program).
38. **Lewis, K.L.** Foliar and in-furrow fertilizer evaluation in cotton. Simplot. 2019. \$7,000 (\$7,000 to program).
39. **Lewis, K.L.** Cotton seed treatment evaluation. Sumitomo. 2019. \$15,000 (\$15,000 to program).

40. **Lewis, K.L.** Broadcast fertilizer evaluation in cotton. Mosaic. 2019. \$2,500 (\$2,500 to program).
41. **Lewis, K.L.** Wetting agent evaluation in cotton. Exacto. 2019. \$6,000 (\$6,000 to program).
42. **Lewis, K.L.** Nitrogen stabilizer evaluation in cotton. Koch. 2019. \$13,300 (\$13,300 to program).
43. **Lewis, K.L.** Measuring greenhouse gas emission in citrus groves. Locus Ag. 2018. \$11,400 (\$11,400 to program).
44. **Lewis, K.L.** Sulfur fertilizer evaluation in cotton. Anuvia. 2018. PI. \$4,900 (\$4,900 to program).
45. **Lewis, K.L.** Mixed cotton technology yield trial. Monsanto. 2018. PI. \$9,000 (\$9,000 to program).
46. **Lewis, K.L.** Cotton variety evaluation under different irrigation and nutrient management. Monsanto. 2018. PI. \$8,000 (\$8,000 to program).
47. **Lewis, K.L.** Soil amendments in cotton. West Central. 2018. PI. \$10,000 (\$10,000 to program).
48. **Lewis, K.L.** Fertilizer evaluation in cotton. Wilbur Ellis. 2018. PI. \$16,950 (\$16,950 to program).
49. **Lewis, K.L.** Fertilizer evaluation in cotton. Yara. 2018. PI. \$20,500 (\$20,500 to program).
50. **Lewis, K.L.** Evaluation of seed treatments for cotton. Sumitomo. 2018. PI. \$50,000 (\$50,000 to program).
51. **Lewis, K.L.** Soil amendment evaluation in cotton. SNF. 2018. PI. \$3,450 (\$3,450 to program).
52. **Lewis, K.L.** Potassium (K-Fuel) in-furrow and foliar application in cotton. Nachurs. 2018. PI. \$16,000 (\$16,000 to program).
53. **Lewis, K.L.** Macro- and micronutrient fertilizer evaluation for cotton production. Mosaic. 2018. \$5,000 (\$5,000 to program).
54. **Lewis, K.L.** Evaluation of fertilizer formulations in wheat. Mosaic. 2017 – 2018. PI. \$5,500 (\$5,500 to program).
55. **Lewis, K.L.** Intelliphos fertilizer and wetting agent evaluation for cotton under subsurface drip irrigation. Wilbur Ellis. 2017. PI. \$11,600 (\$11,600 to program).
56. **Lewis, K.L.** Sulfur fertilizer evaluation in cotton. Anuvia. 2017. PI. \$5,000 (\$5,000 to program).
57. **Lewis, K.L.** Potassium (K-Fuel) in-furrow and foliar application in cotton. Nachurs. 2017. PI. \$16,000 (\$16,000 to program).
58. **Lewis, K.L.** Soil amendments in cotton (small plot). West Central. 2017. PI. \$7,200 (\$7,200 to program).
59. **Lewis, K.L.** Soil amendments in cotton (large plot). West Central. 2017. PI. \$4,000 (\$4,000 to program).
60. **Lewis, K.L.** Phosphorus and potassium fertilizer – cotton. Verdesian Life Sciences. 2017. PI. \$7,500 (\$7,500 to program).
61. **Lewis, K.L.** Macro- and micronutrient fertilizer evaluation for cotton production. Mosaic. 2017. \$5,000 (\$5,000 to program).
62. **Lewis, K.L.** Wetting agent use in subsurface-drip – cotton. Exacto. 2017. PI. \$11,000 (\$11,000 to program).

63. **Lewis, K.L.** Evaluation of fertilizer formulations in wheat. Mosaic. 2016 – 2017. PI. \$6,000 (\$6,000 to program).
64. **Lewis, K.L.** Evaluation of camelina cultivars in Southern High Plains of Texas. Linnaeus Plant Sciences, Inc. 2017. PI. \$6,144 (\$6,144 to program).
65. **Lewis, K.L.** Cotton response to in-furrow and foliar applications of micronutrients fertilizer solutions. ZeroGravity Solutions. 2017. PI. \$13,440 (\$6,720 to program).
66. **Lewis, K.L.** Limus N stabilizer soil amendment. BASF. 2016. PI. \$5,000 (\$5,000 to program).
67. **Lewis, K.L.** Potassium fertilizer – cotton. Mosaic. 2016. PI. \$5,000 (\$5,000 to program).
68. **Lewis, K.L.** Phosphorus and potassium fertilizer – cotton. Verdesian Life Sciences. 2016. PI. \$9,100 (\$9,100 to program).
69. **Lewis, K.L.** Soil amendments in cotton (small plot). West Central. 2016. PI. \$5,600 (\$5,600 to program).
70. **Lewis, K.L.** Soil amendments in cotton (large plot). West Central. 2016. PI. \$4,200 (\$4,200 to program).
71. **Lewis, K.L.** Phosphorus fertilizer – cotton. Ostara. 2016. PI. \$6,000 (\$6,000 to program).
72. **Lewis, K.L.** Nitrogen fertilizer – cotton (field). Anuvia. 2016. PI. \$8,000 (\$8,000 to program).
73. **Lewis, K.L.** Seed furrow applied fertilizer – corn, cotton, canola and rice (germination). Anuvia. 2016. PI. \$5,000 (\$5,000 to program).
74. **Lewis, K.L.** Wetting agent use in subsurface-drip – cotton. Exacto. 2016. PI. \$11,000 (\$11,000 to program).
75. **Lewis, K.L.** and S. Byrd. Microsurge seed treatment – cotton. Talc USA. 2016. PI. \$9,565 (\$4,783 to program).
76. **Lewis, K.L.** Fertilizer formulations – canola. Mosaic. 2016. PI. \$4,600 (\$4,600 to program).
77. **Lewis, K.L.** K-salt fertilizer and PGPR. Nachurs-Alpine. 2016. PI. \$4,460 (\$4,460 to program).
78. **Lewis, K.L.** 2015. Nitrogen stabilizer soil amendment. Verdesian Life Sciences. 2015. PI. \$5,500 (\$5,500 to program).
79. **Lewis, K.L.** Polymer coated monoammium phosphate fertilizer. ICL Specialty Fertilizers. 2015. PI. \$12,500 (\$12,500 to program).
80. **Lewis, K.L.** Salt tolerant grain sorghum – variety testing. Chromatin. 2015. PI. \$5,000 (\$5,000 to program).
81. **Lewis, K.L.** New fertilizer formulations - cotton. Mosaic. 2015. PI. \$13,300 (\$13,300 to program).
82. **Lewis, K.L.** VitAg-modified ammonium sulfate fertilizer - cotton. VitAg. 2015. PI. \$12,840 (\$12,840 to program).

B. Awarded Sub-Contracts

1. Howe, J. and **K. Lewis**. 2019. Optimizing the agricultural value of brushite upcycled from urban wastewater: a slow-release P fertilizer and high-grade phosphate ore. USDA-NIFA-Small Business Innovation Research (SBIR)

Program Phase II subcontract from Nutrient Recovery & Upcycling LLC. April 2019 – March 2021. Co-PI. \$107,382 (\$44,836 to program)

2. Kumar, N., M. Garcia, D. Hackett, K. Lee, W. Song, T. Pridmore, E. Spalding, **K. Lewis**, and H. Yu. 2016. Low Cost X-Ray CT System for in-situ Imaging of Roots. ARPA-E. 2017 – 2019. Co-PI. \$1,000,000 (\$148,211 to program).

C. Submitted Grants and Pre-proposals

1. **Lewis, K.L.**, P. DeLaune, J. Foster, and J. Bell. 2021. Soil carbon assessment across Texas. Texas Corn Producers Board. \$42,000. In Review.
2. **Lewis, K.L.**, P. DeLaune, J. Foster, and J. Bell. 2021. Soil carbon assessment across Texas. National Sorghum Checkoff. \$10,000. In Review.
3. **Lewis, K.L.**, P. DeLaune, J. Foster, and J. Bell. 2021. Soil carbon assessment across Texas. Cotton Incorporated. \$10,000. In Review.
4. **Lewis, K.L.**, P.B. DeLaune, T. Gentry, S. Ale, M. Maeda, C.J. Cobos, and J.A. Burke. Developing sustainable and resilient cotton cropping systems in the semi-arid Texas Great Plains. National Institute of Food and Agriculture, Commodity Board Co-funding Topics (A1811). \$299,754. In Review.
5. **Lewis, K.L.**, J.A. Burke, C.J. Cobos, and C.D.R. White. Enhanced assessments of dryland cotton production for a sustainable future. Better Cotton Initiative. \$35,000. In Review.

D. Pre-Proposals and Grants Not Funded

1. **Lewis, K.L.**, P.B. DeLaune, T.A. Berthold, K. Wagner, S. Ale, D. McCallister, W.W. Keeling, J.W. Keeling, J. Bell, M. Maeda, E. Kimura, S. Byrd, J. Warren, S. Sharma, B. Pinchak, B. Wyatt, L. Gregory, B. Guerrero, J.A. Burke, and C.J. Cobos. 2021. Sustainable agricultural intensification and enhancement through the utilization of soil health promoting practices. United States Department of Agriculture-Natural Resources Conservation Service, Conservation Innovation Trials. \$4,999,794. Withdrawn due to similarities to the funded USDA-NIFA SAS proposal.
2. **Lewis, K.L.**, J.L. Foster, S. Ale, M. Maeda, P.B. DeLaune, F. Dou, D. McCallister, B. Grisham, J. Landivar, J. Jung, L. Baumhardt, J. Osorio Leyton, J.A. Burke, and C.J. Cobos. 2020. Quantifying carbon storage and climate benefits of the Conservation Reserve Program and Regenerative Agriculture across Texas. United States Department of Agriculture-Natural Resources Conservation Service, Conservation Reserve Program Climate Change Mitigation Assessment Initiative. \$9,997,580. Not Funded.
3. **Lewis, K.L.**, J.L. Foster, P.B. DeLaune, T. Gentry, M. Maeda, J.A. Burke, and C.J. Cobos. Evaluating the role of microbial-rhizosphere interactions to support climate resilient cotton (*Gossypium hirsutum*) growth in Texas. National Institute of Food and Agriculture, Agricultural Microbiome (A1402). \$849,924. Not funded.
4. Murray, S.C., J. Aitkenhead, M. Bagavathiannan, M. Brewer, D. Cope, A. Chang, M. Clayton, P. DeLaune, N. Duffield, J. Foster, J. Howe, A. Ibrahim, T. Isakeit, R. Jessup, J. Jung, M. Katzfuss, D. LeBauer, H. Leggett, **K. Lewis**, M. Maeda, J. McGinty, L. Malambo, T. Marek, M. Palma, S. Popescu, N. Rajan, L.

- Ribera, W. Rooney, R. Schnell, A. P. Smith, M. Starek, J. Stillisano, Y. Shi, J.A. Thomasson, H. Waxman, R.K.W. Wong, and Q. Xue. 2019. Advancing data driven decision making for sustainable agricultural production using aerial systems. AFRI: Sustainable Agriculture Systems Coordinated Agricultural Project. 2020-2025. Co-Investigator. \$10,000,000.
5. **Lewis, K.L.**, S. Ale, T. Boutton, P. DeLaune, T. Gentry, and J. West. 2020. Root carbon contributions and influences on nitrogen cycling and plant resiliency in semi-arid agro-ecosystems. USDA-NIFA, AFRI. September 2020 – August 2023. PI. \$499,022.
 6. Murray, S.C., J. Aitkenhead, M. Bagavathiannan, M. Brewer, D. Cope, A. Chang, M. Clayton, P. DeLaune, N. Duffield, J. Foster, J. Howe, A. Ibrahim, T. Isakeit, R. Jessup, J. Jung, M. Katzfuss, D. LeBauer, H. Leggett, **K. Lewis**, M. Maeda, J. McGinty, L. Malambo, T. Marek, M. Palma, S. Popescu, N. Rajan, L. Ribera, W. Rooney, R. Schnell, A. P. Smith, M. Starek, J. Stillisano, Y. Shi, J.A. Thomasson, H. Waxman, R.K.W. Wong, and Q. Xue. 2019. Advancing data driven decision making for sustainable agricultural production using aerial systems. AFRI: Sustainable Agriculture Systems Coordinated Agricultural Project. 2020-2025. Co-Investigator. \$10,000,000.
 7. DeLaune, P., **K. Lewis**, G. Ganjegunte, E. Kimura, and M. Maeda. 2020. Demonstrating Conservation Approaches to Reduce Salinity Severity in Semi-Arid Irrigated Systems. USDA-NRCS, CIG. September 2020 – August 2023. Co-PI. \$943,503.
 8. Slaughter, L., **K. Lewis**, V. Acosta-Martinez, and C. Phillips. 2020. Characterizing soil microbiomes for sustainable management of semi-arid cropping systems. USDA-NIFA, AFRI. September 2020 – August 2023. Co-PI. \$495,000.
 9. Murray, S.C., J. Aitkenhead, M. Bagavathiannan, M. Brewer, D. Cope, A. Chang, M. Clayton, P. DeLaune, N. Duffield, J. Foster, J. Howe, A. Ibrahim, T. Isakeit, R. Jessup, J. Jung, M. Katzfuss, D. LeBauer, H. Leggett, **K. Lewis**, M. Maeda, J. McGinty, L. Malambo, T. Marek, M. Palma, S. Popescu, N. Rajan, L. Ribera, W. Rooney, R. Schnell, A. P. Smith, M. Starek, J. Stillisano, Y. Shi, J.A. Thomasson, H. Waxman, R.K.W. Wong, and Q. Xue. 2019. Advancing data driven decision making for sustainable agricultural production using aerial systems. AFRI: Sustainable Agriculture Systems Coordinated Agricultural Project. 2020-2025. Co-Investigator. \$10,000,000; \$XXX for program.
 10. **Lewis, K.L.**, M. Burow, J. Cason, P. DeLaune, P. Dotray, T. Gentry, E. Kimura, N. Puppala, C. Simpson, and T. Wheeler. 2019. Addressing the Challenges of Organic Peanut Production with Conservation Management Strategies and Breeding. USDA-NIFA Organic Research and Extension Initiative. \$993,516.
 11. **Lewis, K.L.**, G. Ritchie, P. DeLaune, M. Maeda, J. Snider, R. Noland, W. Porter, and G. Rains. 2018. Improving Nutrient Management in Modern Cotton Cultivars: A Much-Needed Assessment. 4R Research Fund, International Plant Nutrition Institute. 2019 – 2023. \$750,000. Full proposal requested.
 12. **Lewis, K.L.**, S. Ale, T. Boutton, P. DeLaune, T. Gentry, and J. West. 2018. Root carbon contributions and influences on nitrogen cycling and plant

- resiliency in semi-arid agro-ecosystems. USDA-NIFA, AFRI. January 2019 – December 2021. PI. \$499,022.
13. Rush, C., R. Wallace, **K. Lewis**, et al. 2018. Optimizing High Value Vegetable Crop Production and Profitability in Windy, Semi-Arid Environments. USDA-NIFA-Specialty Crops Initiative. 2018 – 2022. \$7,426,750.00.
 14. **Lewis, K.L.**, J. Foster, P. DeLaune, J. Howe, G. Morgan, E. Kimura, W. Keeling, W. Keeling, D. McCallister, J. Bell, J. McGinty, A. Maeda. 2018. Interactive producer-based approach to optimizing soil health management systems. USDA-NRCS-CIG. 2018-2021. \$999,698.
 15. **Lewis, K.L.** P. DeLaune, J.W. Keeling, W. Keeling, and S. Byrd. 2017. Enhancing agricultural sustainability through intensive organic cotton and peanut production. Southern SARE. 2018 – 2020. \$251,891.
 16. **Lewis, K.L.**, J. Woodward, and C. Bednarz. 2017. Evaluating nutrient response of cotton varieties under varying *Verticillium* wilt pressure. Project Revolution – Bayer and Texas Tech University. 2018 – 2020. \$75,600.
 17. **Lewis, K.L.**, P. DeLaune, S. Byrd, J. Dever, W. Keeling, and G. Ritchie. 2017. Nutrient accumulation and requirements of current cotton cultivars in the Southern High Plains and Rolling Plains of Texas. Fluid Fertilizer Foundation. 2018 – 2019. \$24,000.
 18. **Lewis, K.L.**, W. Keeling, J. Bordovsky, P. DeLaune, T. Wheeler, and W. Keeling. 2017. Sustaining soil and water resources in the Texas High Plains through innovative crop management strategies. Texas A&M AgriLife Research Crop Improvement Seed Grant. September 2017 – August 2019. Co-PI. \$160,000 (\$160,000 to program).
 19. **Lewis, K.L.**, S. Ale, T. Boutton, P. DeLaune, T. Gentry, and J. West. 2017. Root carbon contributions and influences on nitrogen cycling and plant resiliency in semi-arid agro-ecosystems. USDA-NIFA, AFRI. January 2018 – September 2020. PI. \$499,985.
 20. Vogel, J., S. Deng, D. Lampert, S. Taghvaeian, D. Marburger, B. Quinn, K. Murray, J. Ziolkowska, V. Uddameri, D. Reible, R. Williams, **K. Lewis**, J. Bell, D. Jordan-Werhane, and M. Libault. 2017. A systems approach for optimizing efficient use of brackish and produced water for agricultural production. USDA-NIFA, AFRI – Water for Food Production Systems Challenge Area. Co-PI. \$5,000,000.
 21. Parajulee, M., A. Hakeem, W. Keeling, **K. Lewis**, and S. Vyavhare. 2017. Economics of insect-pest management in water-deficit cotton production. USDA-NIFA. December 2017 – November 2020. Co-PI. \$199,399.
 22. Neely, H., **K. Lewis**, J. Foster, R. Schnell, C. Neely, R. Collett. 2017. Sustainably increasing crop production and bioproducts by improving soil health through changes in tillage and cropping system intensification. NIFA-AFRI. January 2018 – December 2020. Co-PI. \$499,966.
 23. **Lewis, K.L.**, J. Foster, P. DeLaune, W. Keeling, J. Bordovsky, J. McGinty, S. Byrd, E. Kimura, W. Keeling. 2017. Healthy soils support water use efficiency: encouraging implementation of cover cropping and conservation tillage in arid regions. USDA-NRCS, CIG. May 2017 – April 2020. PI. \$823,798.

24. Sing, S., C. West, G. Ritchie, **K. Lewis**, S. Deb, and C. Adams. 2016. Impact of integrating winter cover crops into cotton producing cropping systems. Ogallala Aquifer Program. 2017 – 2019. \$215,050. TTU submitted.
25. Parajulee, M., A. Hakeem, W. Keeling, **K. Lewis**, and S. Vyavhare. 2016. Economics of insect-pest management in water-deficit cotton production. USDA-NIFA. December 2016 – November 2019. Co-PI. \$199,399.
26. Neely, H., **K. Lewis**, J. Foster, R. Schnell, C. Neely, R. Collett. Sustainably increasing crop production and bioproducts by improving soil health through changes in tillage and cropping system intensification. NIFA-AFRI. January 2017 – December 2020. Co-PI. \$499,966.
27. **Lewis, K.L.**, W. Keeling, J. Bordovsky, T. Wheeler, and R. Williams. Sustaining soil and water resources in the Texas High Plains through innovative crop management strategies. Southern SARE. January 2017 – December 2019. PI. \$299,800.
28. **Lewis, K.L.**, P. DeLaune, J. Foster, J. Bordovsky, S. Byrd, T. Gentry, J. Jung, W. Keeling, M. Maeda, J. McGinty, T. Provin, and R. Williams. 2016. Demonstrating improved natural resource management in drought prone regions by focusing on soil health and function. USDA-NRCS CIG. September 2016 – August 2019. PI. \$1,243,630.
29. **Lewis, K.L.**, P. DeLaune, and F. Hons. 2015. The biogeochemical cycling of nitrogen in semi-arid agro-ecosystems under long-term conservation tillage. NIFA AFRI. March 2016 – December 2018. PI. \$495,404.
30. Vavra, C., **K. Lewis**, R. Clough, and Y. Lee. 2015. Cleaning/Purifying oil & gas wastewaters for agricultural use. Texas A&M Research, Engineering and Extension: Creation and Deployment of Water-Use Efficient Technology Platforms. 2016 – 2017. PI. \$140,000.
31. Bell, J., B. Guerrero, W. Keeling, **K. Lewis**, T. Marek, A. Schlegel, and R. Schwartz. 2015. Evaluation of early-season plant growth regulators on cotton development and yield and implications for cotton production in the Southern Ogallala Region. Ogallala Aquifer Program. 2016 – 2017. Co-PI. \$190,000.
32. Bell, J., **K. Lewis**, and T. Marek. 2015. Evaluation of early season plant growth regulators on cotton development and yield in the Southern Ogallala Region. Texas A&M AgriLife Research Cropping Systems Seed Grant. 2016 – 2017. Co-PI. \$150,000.
33. Hays, D., R. Lacey, N. Rajan, G. Smith, M. Zhang, **K. Lewis**, X. Dong, O. Bouukar, A. Novo, and D. Goodman. 2015. TOOLS-PGR: High throughput phenotyping (HTP) and genotyping the cowpea core collection for novel food, forage and climate adaptive traits. National Science Foundation. November 2015 – October 2018. Co-PI. \$2,921,438.
34. Neely, H., **K. Lewis**, R. Schnell. 2015. Can I Grow It Here? A Dynamic, Interactive Map for Predicting Cover Crop Success. American Science Foundation. 08/2015 – 07/2016. Co-PI. \$16,802.
35. **Lewis, K.L.**, W. Keeling, J. Bordovsky. 2015. Integrated Grain Sorghum Production in a Cotton/Sorghum Rotation: Irrigation, Fertility and Weed Management in the Southern High Plains of Texas. United Sorghum Checkoff Program. \$22,160. Jan. 2016 - Dec. 2016.

36. **Lewis, K.L.**, J. Bordovsky, W. Keeling, M. Zwonitzer, P. DeLaune, J. Smith, S. Thompson, and D. Hays. 2015. Demonstrating resilience strategies in drought prone regions through crop rotation and cover crop implementation. NRCS – CIG. 2015-2018. Co-PI. \$496,179.
37. **Lewis, K.L.**, J.P. Bordovsky, and W. Keeling. 2014. Integrated grain sorghum production in a cotton/sorghum rotation: irrigation, fertility and weed management in the Southern High Plains of Texas. Texas Grain Sorghum Board. 2014 – 2015. PI. \$22,160. In Review.
38. Dou, F., F. Hons, J. Wight, X. Yu, J. Storlien, and **K. Lewis**. 2013. Impact of biomass feedstock production on belowground carbon processes and carbon sequestration. NASA USDA DOE. Carbon Processes Program. Collaborator. \$998,858.

VIII. PUBLICATIONS AND PROFESSIONAL OUTPUT

Authorship: *Graduate students under my supervision.

A. Refereed/Peer-Reviewed Publications (Citations: 335; h-index:10; i10-index:11)

1. McDonald, M.*, **K.L. Lewis**, T. Gentry, and P. DeLaune. 2021. Soil pore space gas probes for use in agricultural research. Soil Security, 5: 100015. <https://doi.org/10.1016/j.soisec.2021.100015>
2. McDonald, M.*, **K.L. Lewis**, P. DeLaune, T. Boutton, J. Reed, and T. Gentry. 2021. Nitrous oxide consumption potential in a semi-arid agricultural system: effects of conservation soil management and nitrogen timing on nosZ mediated N₂O consumption. Frontiers in Environmental Science, 9: 702806. doi: 10.3389/fenvs.2021.702806
3. Pabuayon, I.L.*, D. Mitchell-McCallister, **K.L. Lewis**, and G.L. Ritchie. 2021. Yield and Economic Response of Modern Cotton Cultivars to Nitrogen Fertilizer. Agronomy, 11(11): 2149. <https://doi.org/10.3390/agronomy11112149>
4. Kusi, N.*, **K.L. Lewis**, G. Morgan, G. Ritchie, S. Deb, R. Stevens, and H. Sintim. 2021. Cotton cultivar response to potassium fertilizer application in Texas' Southern High Plains. Agronomy Journal, 2021:1-18. DOI: 10.1002/agj2.20807
5. Pabuayon, I.L.*, **K.L. Lewis**, and G.L. Ritchie. 2021. Hidden fractions: another look at micronutrient and sodium partitioning in modern cotton cultivars. Crop Science, 61:3623-3636. <https://doi.org/10.1002/csc2.20569>
6. **Lewis, K.L.**, G. Morgan, W. Frame, T. Cutts, D. Delaney, K. Edmisten, D. Fromme, D. Dodds, J. Burke, R. Boman, B. Robertson and R. Nichols. 2021. Impact of Soil Applied Potassium on Cotton Yield Across the Cotton Belt. Agronomy Journal, 2021:1-15. DOI: 10.1002/agj2.20719
7. Rabia, A.H., J. Neupane, Z. Lin, **K.L. Lewis**, G. Cao, and W. Guo. 2021. Principles and Applications of Topography in Precision Agriculture. Advances in Agronomy. (accepted)
8. Liu, X.*, J.E. Woodward, **K.L. Lewis**, B. Kelly, S. Byrd, and Y. Chen. 2021. Effects of production practices on temporal disease progress of Verticillium wilt of cotton (*Gossypium hirsutum* L.) in the Texas High Plains, USA. Crop Protection, 140: 105429. <https://doi.org/10.1016/j.cropro.2020.105429>.
9. Burke, J.A.*, **K.L. Lewis**, G.L. Ritchie, P.B. DeLaune, V. Acosta-Martinez, J.M. Moore, T. McLendon, and J.W. Keeling. 2021. Net positive soil water

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 12. McDonald, M.D.*, **K.L. Lewis**, and G.L. Ritchie. 2020. Short Term Cotton Lint Yield Improvements from Cover Crop and No-tillage Implementation. *Agronomy*, 10(7): 994. <https://doi.org/10.3390/agronomy10070994>.
 13. Pabuayon, I.L.*, **K.L. Lewis**, and G.L. Ritchie. 2020. Dry Matter and Nutrient Partitioning Changes for the Past 30 Years of Cotton Production. *Agronomy Journal*. doi: 10.1002/agj2.20386.
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25. **Lewis, K.L.L**, J.L. Foster, F.M. Hons, and T. Boutton. 2017. Initial aggregate formation and soil carbon storage from lipid-extracted algae amendment. *AIMS Environmental Science*, 4(6): 743-762. DOI: 10.3934/environsci.2017.6.743
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30. Hu, P., A.S. Wang, A.S. Engledow, E.B. Hollister, **K.L. Rothlisberger**, J.E. Matocha, D.A. Zuberer, T.L. Provin, F.M. Hons, and T. J. Gentry. 2011. Inhibition of the germination and growth of *Phymatotrichopsis omnivora* (Cotton Root Rot) by oilseed meals and isothiocyanates. *Applied Soil Ecology*, 49: 68-75.

B. Book Chapters

1. **Lewis, K.L.**, P.B. DeLaune, and W. Keeling. 2016. Securing our soil in intensive monoculture cropping systems. In: D.J. Field, C.L. Morgan, and A.B. McBratney (Eds.), *Global Soil Security*. Springer International Publishing, Switzerland. p. 145-151.

C. Research Agency Publications

1. **Lewis, K.L.**, J.A. Burke, J.W. Keeling, D.E.B. Kelley, and A.R. Bumguardner. 2021. Impact of cotton cropping systems on cotton lint yield and productive capacity of soil. 2020 AG-CARES Annual Report. Texas A&M AgriLife

- Research, Lubbock, TX. February 2021.
<https://lubbock.tamu.edu/files/2021/02/2020-AG-CARES-Report.pdf>
2. **Lewis, K.L.**, J.A. Burke, J.W. Keeling, D.E.B. Kelley, and A.R. Bumguardner. 2021. Impact of cotton cropping systems on nitrogen management on cotton lint yield. 2020 AG-CARES Annual Report. Texas A&M AgriLife Research, Lubbock, TX. February 2021. <https://lubbock.tamu.edu/files/2021/02/2020-AG-CARES-Report.pdf>
 3. **Lewis, K.L.**, J.A. Burke, J.W. Keeling, D.E.B. Kelley, and A.R. Bumguardner. 2020. Impact of cotton cropping systems on cotton lint yield and productive capacity of soil. 2019 AG-CARES Annual Report. Texas A&M AgriLife Research, Lubbock, TX. February 2020.
<https://lubbock.tamu.edu/files/2020/02/AGCARES-Report-Websitev2.pdf>
 4. **Lewis, K.L.**, J.A. Burke, J.W. Keeling, D.E.B. Kelley, and A.R. Bumguardner. 2020. Impact of cotton cropping systems on nitrogen management on cotton lint yield. 2019 AG-CARES Annual Report. Texas A&M AgriLife Research, Lubbock, TX. February 2020.
<https://lubbock.tamu.edu/files/2020/02/AGCARES-Report-Websitev2.pdf>
 5. **Lewis, K.L.**, D. Kelley, J.A. Burke, and J. Bordovsky. 2019. Effects of crop rotation, tillage, and irrigation on soil organic carbon and aggregate distribution. Helms Research Report: Summary Report 2018. Texas A&M AgriLife Research Technical Report. March 2019.
 6. **Lewis, K.L.** J.W. Keeling, D. Kelley, A. Bumguardner, and J.A. Burke. 2019. Impact of cotton cropping systems and nitrogen management strategies on the productive capacity of soil and cotton lint yield, AG-CARES. 2018 Annual Report. Texas A&M AgriLife Research Technical Report. February 2019.
 7. **Lewis, K.L.**, P. DeLaune, W. Keeling, D. Kelley, and J. Burke*. 2018. Demonstrating soil heath promoting practices to increase water holding capacity and yield in deficit-irrigation agriculture. In: 2017 Annual Report, Agricultural Complex for Advanced Research and Extension Service (AG-CARES), Technical Report 16-2. Texas A&M AgriLife Research and Extension Service, Lubbock, TX. p. 36-41.
 8. White, R.*, W. Keeling, **K. Lewis**, and J. Spradley. 2018. Cover crop management with wheat and rye at AG-CARES, Lamesa, TX. In: 2017 Annual Report, Agricultural Complex for Advanced Research and Extension Service (AG-CARES), Technical Report 16-2. Texas A&M AgriLife Research and Extension Service, Lubbock, TX. p. 42-44.
 9. **Lewis, K.L.**, D. Kelley, J. Burke*, and J. Bordovsky. 2018. Effects of Crop Rotation, Tillage, and Irrigation on Soil Aggregate Distribution. In: 2017 Helm Research Farm Summary Report, Technical Report 16-3. Texas A&M AgriLife Research, Lubbock, TX. p. 15.
 10. **Lewis, K.L.**, G. Morgan, and D. Kelley. 2017. Evaluation of cotton yield, quality, and plant growth response to soil-applied potassium. In: 2016 Annual Report, Agricultural Complex for Advanced Research and Extension Service (AG-CARES), Technical Report 16-2. Texas A&M AgriLife Research and Extension Service, Lubbock, TX. p. 38-40.

11. **Lewis, K.L.**, P. DeLaune, W. Keeling, D. Kelley, and J. Burke. 2017. Demonstrating soil health promoting practices to increase water holding capacity and yield in deficit-irrigation agriculture. In: 2016 Annual Report, Agricultural Complex for Advanced Research and Extension Service (AG-CARES), Technical Report 16-2. Texas A&M AgriLife Research and Extension Service, Lubbock, TX. p. 32-37.
12. **Lewis, K.L.**, D. Kelley, J. Burke*, and J. Bordovsky. 2017. Effects of Crop Rotation, Tillage, and Irrigation on Soil Aggregate Distribution. In: 2016 Helm Research Farm Summary Report, Technical Report 16-3. Texas A&M AgriLife Research, Lubbock, TX. p. 15.
13. **Lewis, K.L.**, G. Morgan, and D. Kelley. 2016. Evaluation of cotton yield, quality, and plant growth response to soil-applied potassium. In: 2015 Annual Report, Agricultural Complex for Advanced Research and Extension Service (AG-CARES), Technical Report 16-2. Texas A&M AgriLife Research and Extension Service, Lubbock, TX. p. 26-31.
14. **Lewis, K.L.**, P. DeLaune, W. Keeling, D. Kelley, and J. Foster. 2016. Demonstrating soil health promoting practices to increase water holding capacity and yield in deficit-irrigation agriculture. In: 2015 Annual Report, Agricultural Complex for Advanced Research and Extension Service (AG-CARES), Technical Report 16-2. Texas A&M AgriLife Research and Extension Service, Lubbock, TX. p. 32-35.
15. **Lewis, K.L.**, D. Kelley, J. Burke*, and J. Bordovsky. 2016. Effects of Crop Rotation, Tillage, and Irrigation on Soil Aggregate Distribution. In: 2015 Helm Research Farm Summary Report, Technical Report 16-3. Texas A&M AgriLife Research, Lubbock, TX. p. 6.

D. Scientific Abstracts and Presentations

1. Long, M.E.*, **K.L. Lewis**, J. Blount, G.L. Ritchie, and M.M. Maeda. 2021. Developing a fertigation strategy for cotton using subsurface drip irrigation. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT. Poster presentation.
2. Valencia, H.L.*, and **K.L. Lewis**. 2021. Comparing the effects of organic and traditional cropping systems on soil extracellular enzyme activity. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT. Poster presentation.
3. Bumgardner, A.R.*, **K.L. Lewis**, G.L. Ritchie, K.F. Bronson, and M.M. Maeda. 2021. Relationship between plant nitrogen, NDVI, and NDRE of cotton on the Texas High Plains. 2021 Annual ASA-SSSA-CSA International Meetings. Salt Lake City, UT.
4. McDonald, M.D.*, **K.L. Lewis**, and T.J. Gentry. 2021. Initial analysis of conservation practice effects on the soil metatranscriptome. 2021 Annual ASA-CSSA-SSSA International meeting, Salt Lake City, UT.
5. McDonald, M.D.*, **K.L. Lewis**, and T.J. Gentry. 2021. Proximal and distal controls for nitrous oxide emissions in semi-arid conservation cropping systems. 2021 Annual ASA-CSSA-SSSA International meeting, Salt Lake City, UT.

6. Pabuayon, I. L. B.*, D.M. McCallister, **K.L. Lewis**, and G.L. Ritchie. 2021. Weather sensitivity of cotton in the Southern High Plains. 2021 ASA-CSSA-SSSA Annual International Meetings. Nov. 7-10, 2021. Salt Lake City, UT.
7. Selph, L.S.*, L. Ellman-Stortz*, **K.L. Lewis**, T. Gentry, and P.B. DeLaune. 2021. Influence of cover crop selection on soil microbial activity in a transitional organic production system. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT. Poster presentation.
8. Richardville, K.D., P.B. DeLaune, **K.L. Lewis**, R.L. Baumhardt, J.A. Burke. 2021. Impact of tillage and crop rotation on soil enzymatic activity in a semi-arid region. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT. Poster presentation.
9. White, C.D.R., **K.L. Lewis**, and J.W. Keeling. 2021. Dryland cropping systems for the semi-arid Texas Southern High Plains. 2021 Annual ASA-CSSA-SSSA International Meetings. Salt Lake City, Utah.
10. **Lewis, K.L.**, J.A. Burke, C.D.R. White, C.J. Cobos, P.B. DeLaune, and J.W. Keeling. 2021. Overcoming the challenges of cover crops in semi-arid, sandy soils of the Texas High Plains. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT.
11. Burke, J.A.*, and **K.L. Lewis**. 2021. Nitrogen management to increase cotton production following cover crops in semi-arid West Texas. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT.
12. Cobos, C.J.*, J.A. Burke, D.M. McCallister, W.W. Keeling, P.B. DeLaune, and **K.L. Lewis**. 2021. Economic benefits of water saving with no-tillage and cover crops in semi-arid Texas cotton production. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT.
13. Burke, J.A. *, **K.L. Lewis**, P.B. DeLaune, and J.W. Keeling. 2021. Soil water depletion and recharge following cover crop use in semi-arid cotton production. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT.
14. Burke, J.A. *, and **K.L. Lewis**. 2021. Cover crop influences on soil properties following termination in the semi-arid Texas High Plains. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT.
15. Ritchie, B., E. Ritchie, J.A. Burke, **K.L. Lewis**, and P.B. DeLaune. 2021. Comparison of two aggregate stability methods using a RO-TAP ® sieve shaker. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT. Poster presentation.
16. Ritchie, E., J.A. Burke, and **K.L. Lewis**. 2021. Soil health indicators are impacted by rhizosphere dynamics in a mesocosm study. 2021 Annual ASA-CSSA-SSSA International Meeting. Salt Lake City, UT. Poster presentation.
17. Watts, D.C., **K.L. Lewis**, H.L. Valencia, and E. Ritchie. 2021. Subsurface drip effects on soil health indicators. 2021 Annual ASA- CSSA-SSSA International Meeting. Salt Lake City, UT. Poster presentation.
18. White, C.D.R., **K.L. Lewis**, and J.W. Keeling. 2021. Cover crop management to optimize yield of Texas High Plains Cotton. 2021 Beltwide Cotton Conference. Virtual.

19. **Lewis, K.L.**, J.A. Burke, and P.B. DeLaune. 2021. Soil health and cotton yield in sandy soil of the semiarid High Plains of Texas. 2021 Soil and Water Conservation Society International Meeting. Virtual conference.
20. Burke, J.A.* , **K.L. Lewis**, C.J. Cobos, J.W. Keeling, and P.B. DeLaune. 2021. Soil health parameters vary based on soil type in semi-arid Texas cropping systems. 2021 Soil and Water Conservation Society International Meeting. Virtual conference.
21. McDonald, M.D.* , **K.L. Lewis**, and T.J. Gentry. 2021. Soil conservation practices impact proximal controls for N₂O production and consumption in semi-arid crop production. 2021 Soil and Water Conservation Society International Annual Conference (Virtual)
22. Burke, J.A.* , and **K.L. Lewis**. 2021. Nutrient cycling following cover crops in cotton production. West Texas Agricultural Chemical Institute. 12 September 2021. Lubbock, TX. Attendance: 114.
23. Burke, J.A.* , **K.L. Lewis**, and P.B. DeLaune. 2021. Soil health research in semi-arid Texas cropping systems. National Soil Survey Center Webinar: Dynamic Soil Properties for Soil Health (DSP4SH). 11 March 2021. Available at:
<https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/focusteam/?cid=nrcseprd1746221>. Estimated Attendance: 270.
24. **Lewis, K.L.**, J.A. Burke*, J.W. Keeling, and P.B. DeLaune. 2021. Cover crop benefits to soil health. NRCS Dynamic Soil Properties for Soil Health (DSP4SH) Virtual Symposium. 11 March 2021. Virtual Meeting. Available at <https://youtu.be/1YJ8cgeL1R0>. Estimated Attendance: 50.
25. Burke, J.A.* , **K.L. Lewis**, J.W. Keeling, P.B. DeLaune, and C.J. Cobos. 2021. Carbon stocks of sandy and clay loam soils in West Texas cropping systems. NRCS Dynamic Soil Properties for Soil Health (DSP4SH) Virtual Symposium. 11 March 2021. Virtual Meeting. Available at <https://youtu.be/XAhhwXEV5i0>. Estimated Attendance: 50.
26. Burke, J.A.* , **K.L. Lewis**, J.W. Keeling, and C.J. Cobos. 2021. Carbon stocks in sandy and clay loam soils in West Texas cropping system. 58th Annual Soil Survey & Land Resources Workshop. 5 February 2021. Virtual Meeting. Estimated Attendance: 90.
27. **Lewis, K.L.**, C.D.R. White, J.A. Burke, J.W. Keeling, and P.B. DeLaune. 2021. Overview of cotton cropping system research in the High Plains. 2021 Texas/Oklahoma/New Mexico Cotton Physiology Meeting. 3 February 2021. Virtual Meeting. Estimated Attendance: 60.
28. **Lewis, K.L.**, J.W. Keeling, P.B. DeLaune, and J.A. Burke. 2021. Cover crop benefits to soil health. 7th Annual Water College, Texas Alliance for Water Conservation. 21 January 2021. Virtual meeting. Registered attendees: 215.
29. **Lewis, K.L.**, J.W. Keeling, P.B. DeLaune, J.A. Burke, A.R. Bumgardner, and C.J. Cobos. 2021. Optimizing nitrogen management across cotton cropping systems. 2021 Virtual Beltwide Cotton Conferences. January 5-7, 2021. Virtual.
30. Pabuyan, I.L.B.* , G.L. Ritchie, and **K.L. Lewis**. 2021. Essential micronutrient and sodium partitioning changes in modern cotton cultivars. 2021 Virtual Beltwide Cotton Conferences. January 5-7, 2021.

31. Bumguardner, A.R.*, **K.L. Lewis**, G.L. Ritchie, and T. Cutts. 2021. Do nitrogen and calcium play nice in cotton. 2021 Annual Beltwide Cotton Conference. January 5-7, 2021. Virtual.
32. Burke, J.A.*, **K.L. Lewis**, and J.L. Foster. 2021. Nitrogen dynamics following cover crops in Texas High Plains cotton. 2021 Beltwide Cotton Conferences Proceedings. Virtual Conference.
33. Cobos, C.J., **K.L. Lewis**, M.D. McDonald, P.B. DeLaune, and J.A. Burke. 2021. Greenhouse gas emissions and nitrogen dynamics in Texas High Plains cotton. 2021 Beltwide Cotton Conferences Proceedings. Virtual Conference.
34. McDonald, M.D.*, **K.L. Lewis**, and T.J. Gentry. 2021. Potential for microbial mitigation of N₂O emissions with conservation agriculture. 2021 World Microbe Forum. Virtual.
35. Burke, J.A.*, and **K.L. Lewis**. 2021. Nitrogen management to increase cotton production following cover crops in semi-arid West Texas. 2021 Texas Plant Protection Association Annual Meeting. College Station, TX. Poster presentation.
36. **Lewis, K.L.** and J.A. Burke*. 2021. Carbon cycling and storage: Measurement challenges. 2021 Texas Plant Protection Association Annual Meeting. College Station, TX. 7 December 2021.
37. Schmidt, E., G. Zandoni, B. Segvic, M. Siebecker, and **K.L. Lewis**. 2021. Revisiting Potassium Chemistry in Soils via Combined Extractions and Synchrotron Techniques. 2021 Soil Survey and Land Resource Workshop – Texas. February 2021. Virtual. (oral presentation)
38. Petermann, B.J., **K.L. Lewis**, V. Acosta-Martinez, H. Laza, J. Steffan, and L. Slaughter. Soil microbial response to long-term management practices in cotton systems of the Texas Southern High Plains. 2021 Soil Survey and Land Resource Workshop – Texas. February 2021. Virtual. (oral presentation)
39. Bekewe, P.E.*, H.L. Neely, C.B. Neely, J.L. Foster, **K.L. Lewis**, T.W. Boutton, B. Gerrish, and A.J. Gyawali. 2020. Comparing soil health parameters in no-till and conventional tillage farms across three ecoregions in Texas. 2020 Annual ASA-CSSA-SSSA International Meetings. November 2020. Virtual. (poster competition)
40. Bumguardner, A.R.*, **K.L. Lewis**, G.L. Ritchie, K.F. Bronson, M.M. Maeda. 2020. Optimizing nitrogen management and irrigation in cotton on the Texas High Plains. 2020 Annual ASA-SSSA-CSA International Meetings. November 2020. Virtual. Second place oral presentation (oral competition)
41. Burke, J.A.*, **K.L. Lewis**, and J.L. Foster. 2020. Moisture use, decomposition, and nutrient cycling of cover crops on Texas High Plains cotton production. 2020 Annual ASA-CSSA-SSSA International Meeting. November 2020. Virtual conference. Second place PhD competition. (poster and 5-minute rapid oral competition)
42. Burke, J.A.* and **K.L. Lewis**. 2020. Does cotton benefit from additional nitrogen when planting into cover crop residues? 2020 Annual ASA-CSSA-SSSA International Meeting. November 2020. Virtual conference. (oral presentation)

43. Ellman-Stortz, L.M.*, B. Hux, **K.L. Lewis**, T.J. Gentry, P.B. DeLaune, E. Pierson. 2020. Influence of Cover Crop Choice on Soil Microbial Activity and Greenhouse Gas Flux During a Transitional Period to Organic Agriculture. 2020 Annual ASA-CSSA-SSSA International Meetings. November 2020. Virtual. (Oral Competition)
44. McDonald, M.*, **K. Lewis**, and T. Gentry. 2020. Soil Management Affects Potential for Nitrous Oxide Production and Consumption. 2020 Annual ASA, CSSA, and SSSA. November 2020. San Antonio, TX. (poster competition)
45. McDonald, M.*, and **K. Lewis**. (2020 November) Increased in Cotton Lint Yield Determined Shortly After Implementing Cover Crops and No-Tillage. 2020 Annual ASA, CSSA, and SSSA. November 2020. San Antonio, TX. 2nd Place Graduate Student Oral Presentation Competition. (oral competition)
46. Pabuayon, I.L.B.*, **K.L. Lewis**, and G.L. Ritchie. Re-evaluation of essential micronutrient and sodium uptake in high productivity cotton cultivars. 2020 Annual ASA-CSSA-SSSA International Meetings. November 2020. Virtual. (poster presentation)
47. White, C.D.R.*, **K.L. Lewis**, and J.W. Keeling. 2020. Cover crop management on the Texas High Plains. 2020 Annual ASA-CSSA-SSSA International Meetings. November 2020. Virtual. (Oral competition).
48. Bumguardner, A.R.*, **K.L. Lewis**, J.A. Burke. 2020. Not a silver bullet: Organic cotton does not enhance soil microbial communities. 68th Annual West Texas Agricultural Chemicals Institute Conference. September 2020. Virtual - Lubbock, TX. (oral presentation)
49. Pabuayon, I.L.B.*, **K.L. Lewis**, and G.L. Ritchie. 2020. Changes in resource partitioning after 30 years of cotton production. 68th Annual West Texas Agricultural Chemicals Institute Conference. September 2020. Virtual - Lubbock, TX. (oral presentation)
50. White, C.D.R.*, K.L. Lewis, J.W. Keeling. 2020. Cover crop management on the Texas High Plains. 68th Annual West Texas Agricultural Chemicals Institute Conference. September 2020. Lubbock, TX. (oral presentation)
51. Foster, J.L., P.E. Bekewe, H.L. Neely, C.B. Neely, L.E. Tomlin, and **K.L. Lewis**. 2020. Wheat double cropping systems to improve soil health. 2020 Soil and Water Conservation International Annual Conference. July 2020. Des Moines, IA. (Poster).
52. Victoria, M., H.R. Leggette, J.L. Foster, H. Neely, C. Neely, **K. Lewis**, P. Bekewe, B.J. Gerrish, and J. Parrella. 2020. Minding the microbes: The adoption of soil health management techniques by Oklahoma wheat producers. 2020 Soil and Water Conservation International Annual Conference. July 2020. Des Moines, IA. (poster competition).
53. Bumguardner, A.R.*, and **K.L. Lewis**. 2020. Optimizing irrigation and fertilizer management in cotton to increase nitrogen use efficiency. 2020 Semi-annual Great Plains Soil Fertility Conference. March 2020. Denver, CO. (poster competition)
54. Burke, J.A.*, and **K.L. Lewis**. 2020. Nitrogen management in conservation systems to increase use efficiency and cotton production. Proceedings of the

- Great Plains Soil Fertility Conference. March 2020. Denver, CO. First place poster competition. (poster competition)
55. McDonald, M.*, K. Lewis, T. Gentry, and P. DeLaune. 2020. Conservation Management and Nitrogen Fertilization to Enhance Soil Chemical and Biological Properties. March 2020. Denver, CO. Denver, CO. (poster competition)
 56. Pabuayon, I.L.B.*, **K.L. Lewis**, and G.L. Ritchie. 2020. Nutrient partitioning changes in the past 30 years of cotton production. 2020 Great Plains Soil Fertility Conference. March 2020. Denver, CO. Third place poster presentation. (graduate student competition)
 57. Bekewe, P.E.*, H.L. Neely, C.B. Neely, J.L. Foster, **K.L. Lewis**, B. Gerrish, L.E. Tomlin, and T.W. Boutton. 2020. Building Soil Health and Food Security in Wheat-Based Cropping Systems in Texas. 2020 Annual Soil Survey and Land Resource Workshop. February 2020. College Station, TX. (oral competition).
 58. Burke, J.A.*, **K.L. Lewis**, G.L. Ritchie, P.B. DeLaune, and J.W. Keeling. 2020. Cover crops enhance soil moisture in semi-arid cotton production. 2020 Soil Survey and Land Resources Meeting. February 2020. College Station, TX. Second place graduate student competition. (poster competition)
 59. Burke, J.A.*, **K.L. Lewis**, and P.B. DeLaune. 2020. Soil health indicators in cotton production. 2020 Soil Survey and Land Resources Meeting. February 2020. College Station, TX. First place graduate student competition. (oral competition)
 60. Victoria, M., H.R. Leggette, J.L. Foster, H. Neely, C. Neely, **K. Lewis**, P. Bekewe, B.J. Gerrish, and J. Parrella. 2020. Measuring adoption of soil health practices of wheat producers in Texas. 2020 National Agricultural Communication Symposium. February 2020. Louisville, KY. (poster competition).
 61. Burke, J.A.*, and **K.L. Lewis**. 2020. Soil health indicators and cotton production on the semi-arid Texas High Plains. 2020 Southwest Cotton Physiology Meeting. February 2020. Ardmore, OK. (oral presentation)
 62. White, C.D.R.*, **K.L. Lewis**, and J.W. Keeling. 2020. Cover crop management on the Texas High Plains. 2020 Southwest Cotton Physiology Meeting. February 2020. Ardmore, OK. (oral presentation)
 63. Pabuayon, I.L.B.*, **K.L. Lewis**, and G.L. Ritchie. 2020. Nutrient partitioning changes in the past 30 years of cotton production. 2020 Southwest Cotton Physiology Meeting. February 2020. Ardmore, OK. (oral presentation)
 64. Bumguardner, A.R.*, **K.L. Lewis**, G.L. Ritchie, K.F. Bronson, M.M. Maeda. 2020. Nitrogen and irrigation management in cotton based on the normalized difference vegetation index on the Texas High Plains. 2020 Annual Beltwide Cotton Conference. January 2020. Austin, TX. (oral competition)
 65. Burke, J.A., and K.L. Lewis. 2020. Nitrogen management in conservation systems to increase use efficiency and cotton production. Beltwide Cotton Conferences Proceedings. January 2020. Austin, TX. First place PhD competition. (oral competition)

66. Pabuayon, I.L.B.*, **K.L. Lewis**, and G.L. Ritchie. 2020. Resource partitioning in cotton: Three decades later. 2020 Beltwide Cotton Conferences. January 2020. Austin, TX. (poster presentation)
67. White, C.D.R.*, **K.L. Lewis**, and J.W. Keeling. 2020. Cover crop management in Texas High Plains cotton. 2020 Beltwide Cotton Conference. January 2020. Austin, TX. Third place oral presentation (oral competition).
68. Bekewe, P.E.*, H.L. Neely, C.B. Neely, L.E. Tomlin, J.L. Foster, **K.L. Lewis**, T.W. Boutton, and B. Gerrish. 2019. Towards Improving Soil Health in Wheat Cropping Systems in Texas [abstract]. In: Proceedings of the 31st Annual Texas Plant Protection Conference; 2019 Dec. 10 – 11; Bryan, TX.
69. **Lewis, K.L.**, J.A. Burke*, W.S. Keeling, D.M. McCallister, P.B. DeLaune and J.W. Keeling. 2019. Do cover crops help or hurt with water conservation? Dryland Cropping Systems Symposium, 2019 Annual ASA-CSSA-SSSA International Meetings. November 2019. San Antonio, TX (invited presentation)
70. Slaughter, L., B.J. Petermann*, **K.L. Lewis**, V. Acosta-Martinez, J. Sharma, J. Steffan, 2019. Soil Microbial Response to Long-Term Management Practices in Cotton Systems of the Texas Southern High Plains. 2019 Annual ASA-CSSA-SSSA International Meetings. November 2019. San Antonio, TX. (oral presentation)
71. Acosta-Martinez, V., J.A. Burke*, **K.L. Lewis**, and M.M. Mikha. 2019. Linkages between the microbial components and soil organic matters pools within transitions to dryland. 2019 Annual ASA-CSSA-SSSA International Meetings. November 2019. San Antonio, TX. (oral presentation)
72. Burke, J.A.*, **K.L. Lewis**, and P.B. DeLaune. 2019. Soil health indicators and cotton production on the semi-arid Texas High Plains. 2019 Annual ASA-CSSA-SSSA International Meetings. November 2019. San Antonio, TX. First place oral presentation. (oral competition)
73. Bumguardner, A.R.*, **K.L. Lewis**, G.L. Ritchie, K.F. Bronson, and M.M. Maeda. 2019. Nitrogen and irrigation management in cotton based on the normalized difference vegetation index on the Texas High Plains. 2019 Annual ASA-CSSA-SSSA International Meetings. November 2019. San Antonio, TX. (oral competition)
74. Desrochers, J.*, **K.L. Lewis**, J.P. Bordovsky, and J.A. Burke*. 2019. Effects of cropping system, tillage, and irrigation management in soil chemical and physical properties on the Southern High Plains of Texas. 2019 Annual ASA-CSSA-SSSA International Meetings. November 2019. San Antonio, TX. (poster competition)
75. Pabuayon, I.L.B.*, G.L. Ritchie and **K.L. Lewis**. 2019. Re-Evaluation of the Biomass Partitioning and Nutrient Accumulation of Cotton Cultivars in Texas Southern High Plains. 2019 Annual ASA-CSSA-SSSA International Meetings. November 2019. San Antonio, TX. (oral competition)
76. McDonald, M.*, **K.L. Lewis**, and T. Gentry. 2019. Nitrous Oxide Production and Consumption by Soil Microorganisms in a Semi-arid Region. International ASA-CSSA-SSSA Annual Meeting. November 2019. San Antonio, TX. Second Place Graduate Student Oral Presentation. (oral competition)

77. Boswell, J., M. McDonald*, **K.L. Lewis**, and T. Gentry. 2019. Quantification of Bacterial Nitrogen-Cycling Genes and Archaeal NosZ in Soils Subjected to Conservation Agriculture Practices. International ASA-CSSA-SSSA Annual Meetings. November 2019. San Antonio, TX. (poster presentation)
78. McDonald, M.*, **K.L. Lewis**, and T. Gentry. 2019. Microbial Assessment of Nitrous Oxide Producing Organisms in Texas Cotton Cropping Systems. Texas branch meeting of ASM, November 2019. San Antonio, TX. (oral presentation)
79. Bekewe, P.E.*, H.L. Neely, C.B. Neely, J.L. Foster, **K.L. Lewis**, and T.W. Boutton. 2019. Can Double Cropping Provide Similar Soil Health Benefits As Cover Cropping in Texas? [abstract]. In: Proceedings of the ASA-CSSA-SSSA International Meetings; 2019 Nov. 10 – 13; San Antonio, TX.
80. Bekewe, P.E.*, H.L. Neely, C.B. Neely, J.L. Foster, **K.L. Lewis**, and T.W. Boutton. 2019. The Impact of Reduced Tillage and Double Cropping on Soil Moisture Dynamics [abstract]. In: Proceedings of the ASA-CSSA-SSSA International Meetings; 2019 Nov. 10 – 13; San Antonio, TX.
81. Stufflebeam, A., H.L. Neely, P.E. Bekewe*, **K.L. Lewis**, J.L. Foster, and C.B. Neely. 2019. Comparing the Impact of Short-Term Soil Health Practices on Aggregate Stability across Texas [abstract]. In: Proceedings of the ASA-CSSA-SSSA International Meetings; 2019 Nov. 10 – 13; San Antonio, TX.
82. Pintar, J.R., A.P. Smith, H.L. Neely, C.B. Neely, J.L. Foster, **K.L. Lewis**, P.E. Bekewe*, A. Joshi Gyawali, and J. Desrochers. 2019. Developing Spatial Sampling Strategies for Monitoring Microbial Activity for Soil Health [abstract]. In: Proceedings of the ASA-CSSA-SSSA International Meetings; 2019 Nov. 10 – 13; San Antonio, TX.
83. Burke, J.A.*, and **K.L. Lewis**. 2019. Soil your undies? Using underwear to estimate soil biological activity. 2019 West Texas Agricultural Chemical Institute Annual Meeting. September 2019. Lubbock, TX. (poster presentation)
84. Pabuayon, I.L.B.*, **K.L. Lewis**, and G.L. Ritchie. 2019. Leaf and Petiole Nutrient Concentration by Node-Stem Position in Cotton. West Texas Agricultural Chemicals Institute Annual Conference. September 2019. Lubbock, TX. (poster presentation)
85. Bumguardner, A.R., **K.L. Lewis**, G.L. Ritchie, K.F. Bronson, and M.M. Maeda. 2019. Nitrogen and irrigation management in cotton based on the normalized difference vegetation index on the Texas High Plains. Annual West Texas Agricultural Chemical Institute meeting. September 2019. Lubbock, TX. (poster presentation)
86. Bekewe, P.E.*, H.L. Neely, C.B. Neely, J.L. Foster, **K.L. Lewis**, B. Gerrish, and T.W. Boutton. 2019. The Impact of Double Cropping and Tillage Systems on Cropping Systems Productivity in Three Ecoregions in Texas [abstract]. In: Proceedings of the Small Grains Workers Meeting; 2019 Aug. 28; College Station, TX.
87. McDonald, M.*, B. Hux, **K.L. Lewis**, and T. Gentry. 2019. Environmental and Agronomic Effects of Cover Crop and Reduced Tillage Implementation in Southern Texas High Plains Cotton Production. Southern Region Water Conference. July 2019. College Station, TX. (poster presentation)

88. McDonald, M.*, **K.L. Lewis**, J. Boswell, and T. Gentry. 2019. Effects on the Denitrifier Community and Nitrous Oxide Production/Consumption at the Soil:Atmosphere Interface in a Semi-Arid Cropping System. Annual Meeting for the American Society of Microbiology> June 2019. San Francisco, CA. (poster presentation)
89. Boswell, J., M. McDonald, **K.L. Lewis**, and T. Gentry. 2019. Quantification of Microbial 16S, nosZ-clade I & nosZ-clade II Genes Following Application of Conservation Agriculture Practices. Annual meeting for the American Society of Microbiology. June 2019. San Francisco, CA. (poster presentation)
90. McDonald, M. and **K.L. Lewis**. 2019. Effects of Nitrogen Fertilizer Management on Greenhouse Gas Emissions in a Semi-Arid Region of Texas. The Anderson Houston Soil and Water Conservation District #421 Soil Health Short Course. March 2019. College Station, TX. First place Graduate Student Poster Competition. (poster presentation)
91. Bekewe, P.E.*, H.L. Neely, C.B. Neely, J.L. Foster, **K.L. Lewis**, and T.W. Boutton. 2019. The Impact of Double Cropping and Tillage Systems on Soil Health in Wheat Cropping Systems in Three Ecoregions in Texas [abstract]. In: Proceedings of the Soil Survey and Land Resource Workshop; 2019 Feb. 7 – 8; College Station, TX.
92. **Lewis, K.L.**, J.W. Keeling, D. McCallister, P.B. DeLaune, J.A. Burke, and W. Keeling. 2019. Economics comparison of cover crop use in Texas High Plains cotton. 2019 Beltwide Cotton Conference. January 2019. New Orleans, LA.
93. Burke, J.A., **K.L. Lewis**, and P.B. DeLaune. 2019. A novel evaluation of soil health in semi-arid Texas cotton production. 2019 Beltwide Cotton Conference. January 2019. New Orleans, LA. Second place oral presentation (oral competition)
94. Luth, K., Ritchie, G.L., Pabuayon, I.L.B., **Lewis, K.L.**, and Macha, N. 2019. Cotton and Sorghum Intercropping. 2019 Beltwide Cotton Conferences. Jan. 8-10, 2019. New Orleans, LA.
95. Pabuayon, I.L.B.*, Ritchie, G.L., and **Lewis, K.L.** 2019. Re-Assessment of the Nutrient Accumulation and Requirements of Modern Cotton Cultivar in Southern High Plains. 2019 Beltwide Cotton Conferences. Jan. 8-10, 2019. New Orleans, LA.
96. Ware, C., **K.L. Lewis**, A. Bumguardner*, D. Kelley, and T. Roach. 2019. Comparison of soil and foliar applied potassium fertilizer in cotton. 2019 Beltwide Cotton Conference. January 2019. New Orleans, LA. First place undergraduate poster presentation. (poster competition)
97. Bumguardner, A.*, **K.L. Lewis**, G. LeGrande. 2019. Evaluation of phosphorus and potassium application methods and rates on cotton lint yield and fiber quality. 2019 Beltwide Cotton Conference. January 2019. New Orleans, LA. (oral competition)
98. Bekewe, P. E.*, H.L. Neely, C.B. Neely, J.L. Foster, **K.L. Lewis**, and L.E. Tomlin. 2019. Towards Improving Soil Health in Wheat Cropping Systems in Texas [abstract]. In: Proceedings of the SSSA International Meetings; 2019 Jan. 6 – 9; San Diego, CA.

99. **Lewis, K.L.**, J.A. Burke*, W.S. Keeling, D.M. McCallister, P.B. DeLaune and J.W. Keeling. 2018. Soil benefits and yield limitations of cover crop use in Texas High Plains Cotton. Cover Crop Symposium, 2018 Annual ASA-CSSA International Meetings. November 2018. Baltimore, MD. (invited presentation)
100. Kusi, N.*, **K.L. Lewis**, G. Morgan, G. Ritchie, S. Deb, R. Stevens and B. Segvic. Comparison of Extraction Methods to Best Predict Plant Available Potassium Based on Soil Mineralogy. 2018 Annual ASA-CSSA International Meetings. November 2018. Baltimore, MD. (oral presentation)
101. Kusi, N.*, **K.L. Lewis**, G. Morgan, G. Ritchie, S. Deb, and R. Stevens. Potassium Management of Modern Cotton Cultivars in Texas. (Oral). 2018 Annual ASA-CSSA International Meetings. November 2018. Baltimore, MD. Second place oral presentation. (oral presentation)
102. Burke, J.A.*, **K.L. Lewis**, G.L. Ritchie, P.B. DeLaune, and J.W. Keeling. 2018. Cover crops enhance soil moisture to cotton in the semi-arid Texas High Plains. 2018 Annual ASA-CSSA International Meetings. November 2018. Baltimore, MD. First place oral presentation. (oral competition)
103. Bumguardner, A.*, **K.L. Lewis**, G.D. Morgan, G.L. Ritchie, S.A. Byrd. 2018. Soil potassium effects on cotton growth, yield and quality in the Texas High Plains. 2018 Annual ASA-CSSA International Meetings. November 2018. Baltimore, MD. (oral competition)
104. McDonald, M.* and **K.L. Lewis**. 2018. Short-term impacts of conservation tillage and cover crops on Texas High Plains cotton production: assessment of cotton lint yield and greenhouse gas emissions. 2018 Annual ASA-CSSA International Meetings. November 2018. Baltimore, MD. (oral presentation)
105. Burke, J.A.*, **K.L. Lewis**, G.L. Ritchie, P.B. DeLaune, and J.W. Keeling. 2018. Do cover crops limit moisture to cotton on the Texas High Plains? 2018 West Texas Agricultural Chemical Institute Annual Meeting. September 2018. Lubbock, TX. First place poster competition. (poster competition)
106. Bumguardner, A.R.*, **K.L. Lewis**, S.A. Byrd, G.D. Morgan, G.L. Ritchie, R.L. Nichols, and D.B. Kelley. 2018. Soil potassium effects on cotton growth and yield in a Texas sandy soil. 2018 West Texas Agricultural Chemical Institute meeting. September 2018. Lubbock, TX. (poster competition)
107. **Lewis, K.L.**, J.A. Burke*, C.W.R. White*, P.B. DeLaune and J.W. Keeling. 2018. Temporal soil carbon dynamics and conservation practices in a semi-arid region. 2018 International Congress of Soils. August 2018. Rio de Janeiro, Brazil.
108. Burke, J.A.*, **K.L. Lewis**, G.L. Ritchie, J.W. Keeling, and P.B. DeLaune. 2018. Challenging the myth that cover crops limit moisture to cotton on the Texas High Plains. 2018 TTU Graduate School Poster Competition. April 2018 Lubbock, TX. (poster competition)
109. **Lewis, K.L.**, G. Morgan, R. Boman, T. Cutts, D. Dodds, K. Edmisten, H. Frame, D. Fromme, B. Robertson, and R. Nichols. 2018. Evaluation of cotton yield response to soil-applied potassium. 2018 Great Plains Soil Fertility Conference. March 2018. Denver, CO. (oral presentation)
110. **Lewis, K.L.** and N.Y. Kusi*. 2018. Cotton cultivar responses and soil potassium dynamics. 2018 Great Plains Soil Fertility Conference. March 2018. Denver, CO. (oral presentation)

111. McDonald, M.*, and **K.L. Lewis**. 2018. Effects of Nitrogen Fertilizer Management on Greenhouse Gas Emissions in a Semi-Arid Region of Texas. 2018 Great Plains Soil Fertility Conference. March 2018. Denver, CO. (poster presentation)
112. **Lewis, K.L.**, W. Keeling, J.W. Keeling, and T. Wheeler. 2018. Cropping systems to enhance water and soil conservation in a semi-arid region of Texas. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. (oral presentation)
113. **Lewis, K.L.**, G. Morgan, R. Boman, T. Cutts, D. Dodds, K. Edmisten, H. Frame, D. Fromme, B. Robertson, and R. Nichols. 2018. Evaluation of cotton yield response to soil-applied potassium. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. (oral presentation)
114. Bumguardner, A.R.*, **K.L. Lewis**, S.A. Byrd, G.D. Morgan, G.L. Ritchie, R.L. Nichols, D.B. Kelley. 2018. Soil potassium effects on cotton growth, yield, and quality in the Texas High Plains. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. (oral competition)
115. Bumguardner, A.R.*, **K.L. Lewis**, S.A. Byrd, D.B. Kelley, T. Roach. 2018. Cotton response to soil and foliar applied potassium fertilizer. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. (poster competition)
116. Burke, J.A.*, **K.L. Lewis**, G.L. Ritchie, J.W. Keeling, and P.B. DeLaune. 2018. Long-term impacts of conservation management practices on aggregation, soil moisture, and cotton yield. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. First place oral presentation. (oral competition)
117. Burke, J.A.*, **K.L. Lewis**, J.W. Keeling, and P.B. DeLaune. 2018. A novel evaluation of temporal carbon and nitrogen dynamics of cotton cropping systems on the Texas High Plains. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. First place poster competition. (poster competition)
118. Kusi, N.Y.*, **K.L. Lewis**, and G.D. Morgan. 2018. Potassium application timing and cotton yield in Texas' Southern High Plains. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. (oral presentation)
119. McDonald, M.*, **K.L. Lewis**, and P. DeLaune. 2018. Nitrogen Cycling in a Managed Semi-Arid Agricultural Ecosystem. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. (poster presentation)
120. McDonald, M.*, **K.L. Lewis**, and P. DeLaune. 2018. Short Term Impacts of Conservation Practices and Nitrogen Management in Cotton Production on the Southern High Plains. 2018 Beltwide Cotton Conference. January 2018. San Antonio, TX. (oral presentation)
121. Bumguardner, A.R.*, **K.L. Lewis**, S.A. Byrd, G.D. Morgan, G.L. Ritchie, R.L. Nichols, D.B. Kelley. 2017. Soil potassium effects on cotton growth, yield, and quality in the Texas High Plains. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL. (poster competition)
122. Burke, J.A.*, **K.L. Lewis**, C.D.R. White*, J.W. Keeling, and P.B. DeLaune. 2017. Temporal variability of soil C in semi-arid soil on the Texas High Plains. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL. First place oral presentation. (oral competition)

123. Kusi, N.Y.O.*, **K.L. Lewis**, and G.D. Morgan. 2017. Potassium application timing and rates on cotton yield, and leaf mineral concentrations in the Southern Texas High Plains. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL. (oral competition)
124. Kusi, N.Y.O.*, **K.L. Lewis**, G.D. Morgan and B. Segvic. 2017. Identifying the possible control of clay mineralogy of soils in some southern US states over the fluctuations in potassium fixation. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL. (poster presentation)
125. **Lewis, K.L.**, J.A. Burke*, T. Wheeler, and J.W. Keeling. 2017. Cropping systems to enhance water and soil conservation in semi-arid regions of Texas. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL. (oral presentation)
126. Maeda, A. J.L. Foster, **K.L. Lewis**, J.A. Burke*, M. Bean, R.L. Noland, and J. Landivar. 2017. Quantifying sustainability using the Fieldprint Calculator. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL. (poster presentation)
127. McDonald, M.D.*, **K.L. Lewis**, P.B. DeLaune. 2017. Nitrous oxide losses from managed agricultural soil in a semi-arid region of Texas. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL. (poster presentation – 3rd place graduate student competition)
128. McDonald, M.D.*, **K.L. Lewis**, P.B. DeLaune. 2017. Impact of conservation management practices on carbon dioxide emissions in a semi-arid region. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL. (poster presentation)
129. Tomlin, L.E.*, H.L. Neely, C.B. Neely, **K.L. Lewis**, J.L. Foster. 2017. The impacts of a double cropping system on soil water and crop yields. 2017 Annual ASA-CSSA-SSSA International Meetings. October 2017. Tampa, FL.
130. Burke, J.A.*, **K.L. Lewis**, J.W. Keeling, P.B. DeLaune, and A. Maeda. 2017. Evaluation of Fieldprint Calculator to evaluate economic and environmental sustainability of conservation management on the Texas High Plains. 2017 Texas Field-to-Market Meeting. June 2017. Invited poster presentation. Austin, TX.
131. Burke, J.A.*, **K.L. Lewis**, and P.B. DeLaune. 2017. Rhizodeposits dramatically increase soil organic carbon levels in semi-arid soils. 2017 TTU Graduate School Poster Competition. March 2017. First place poster competition. Lubbock, TX. (poster competition).
132. White, C.D.R.*, J.A. Burke*, **K.L. Lewis**, J.W. Keeling, and P.B. DeLaune. 2017. Effects of conservational management practices on cotton yield and soil quality. 2017 TTU Graduate School Poster Competition. March 2017. Lubbock, TX. (poster competition)
133. Bumguardner, A.*, S. Byrd, **K. Lewis**, G. Morgan, G. Ritchie, D. Kelley, and R. Nichols. 2017. Soil potassium effects on cotton yield, quality, and growth in the Texas High Plains. Beltwide Cotton Conference. January 2017. Dallas, TX. (oral presentation)

134. Byrd, S. and **K.L. Lewis**. 2017. Benefits and limitations of cover crops. Beltwide Cotton Conference. January 2017. Dallas, TX. (oral presentation)
135. **Lewis, K.L.**, N. Kusi*, G. Morgan, R. Nichols, and H. Frame. 2017. Soil factors affecting potassium availability. Beltwide Cotton Conference. January 2017. Dallas, TX. (oral presentation)
136. Schaefer, C.*, G. Ritchie, J. Bordovsky, and **K.L. Lewis**. 2017. Effects of irrigation timing and rate on cotton boll production in West Texas. Beltwide Cotton Conference. January 2017. Dallas, TX. (oral presentation)
137. White, C.D.R.*, J.A. Burke*, **K. Lewis**, J.W. Keeling, and P.B. DeLaune. 2017. Effects on conservation management practices on cotton yield and soil quality. Beltwide Cotton Conference. January 2017. Second place M.S. poster competition. Dallas, TX. (poster presentation)
138. Burke, J.A.* and **K.L. Lewis**. 2016. Farmers' perceptions of soil health management practices on the Texas High Plains. 2016 Annual ASA-CSSA-SSSA International Meetings. November 2016. Phoenix, AZ. (poster presentation)
139. Burke, J.A.*, **K.L. Lewis**, and P.B. DeLaune. 2016. Impact of conservation management practices on soil carbon fractions on the Texas High Plains. 2016 Annual ASA-CSSA-SSSA International Meetings. November 2016. Phoenix, AZ. (poster presentation)
140. Kusi, N. Y.*, **K.L. Lewis**, and G. Morgan. 2016. Quantification of plant available potassium (K) at various depths in soils of the Texas High Plains. 2016 Annual ASA-CSSA-SSSA International Meetings. November 2016. Phoenix, AZ. (graduate student poster presentation)
141. **Lewis, K.L.**, G. Morgan, and R. Nichols. 2016. Impact of potassium fertilizer on cotton yield and quality. 2016 Annual ASA-CSSA-SSSA International Meetings. November 2016. Phoenix, AZ.
142. McDonald, M.D.*, J.A. Burke*, P. DeLaune, and **K.L. Lewis**. 2016. Impact of conservation management practices on greenhouse gas emissions in semi-arid, intensively cropped regions of Texas. 2016 Annual ASA-CSSA-SSSA International Meetings. November 2016. Phoenix, AZ. (graduate student poster presentation)
143. Tomlin, L.E.*, H.L. Neely, C.B. Neely, **K.L. Lewis**, J.L. Foster, R.W. Schnell, and P.B. DeLaune. 2016. Double cropping in wheat: the relative impacts of roots and tillage on soil health. 2016 Annual ASA-CSSA-SSSA International Meetings. November 2016. Phoenix, AZ. (graduate student poster presentation)
144. White, C.D.R.*, J.A. Burke*, **K.L. Lewis**, V. Acosta-Martinez, J.W. Keeling, and P.B. DeLaune. 2016. Impact of agronomic practices on soil biological properties on the Texas High Plains. 2016 Annual ASA-CSSA-SSSA International Meetings. November 2016. Third place poster competition. Phoenix, AZ. (poster presentation)
145. **Lewis, K.L.**, G. Morgan, and R. Nichols. 2016. Impact of potassium fertilizer application rate and method on cotton yield and quality. Great Plains Soil Fertility Conference. March 2016. Denver, CO. (oral presentation)

146. **Lewis, K.L.** 2016. Fertilizer formulations and soil products for use in cotton. Great Plains Soil Fertility Conference. March 2016. Denver, CO. (oral presentation)
147. Kelley, D. and **K.L. Lewis.** 2016. Effect of potassium application timing on cotton fiber quality and yield. Beltwide Cotton Conference. January 2016. New Orleans, LA. (poster presentation)
148. Keys, K., M. Kelley, and **K.L. Lewis.** 2016. Cotton response to chelated fertilizer formulations in a semi-arid environment. Beltwide Cotton Conference. January 2016. New Orleans, LA. (graduate student poster presentation)
149. DeLaune, P., P. Mubvumba, and **K.L. Lewis.** 2016. Influence of management practices on soil health in cotton cropping systems. Beltwide Cotton Conference. January 2016. New Orleans, LA. (oral presentation)
150. Woodward, J. and **K.L. Lewis.** 2016. Effect of common production practices on yield and fiber quality of late planted cotton varieties in west Texas. Beltwide Cotton Conference. January 2016. New Orleans, LA. (poster presentation)
151. **Lewis, K.L.,** P. DeLaune, and W. Keeling. 2016. Evaluation of cover cropping and tillage management on soil health and cotton production in a semi-arid environment. Beltwide Cotton Conference. January 2016. New Orleans, LA. (oral presentation)
152. Zwonitzer, M., **K. Rothlisberger-Lewis,** and J. Keeling. 2015. Cropping system management: irrigation, tillage and crop rotation in a semi-arid climate. 2015 Annual ASA-CSSA-SSSA International Meetings. November 2015. Minneapolis, MN. (graduate student oral presentation)
153. **Rothlisberger-Lewis, K.L.,** P. DeLaune, J. Keeling. 2015. Securing Our Soil in Intense Monoculture Cropping Systems. 2015 Annual ASA-CSSA-SSSA International Meetings. November 2015. Minneapolis, MN. (oral presentation)
154. **Lewis, K.L.** and P. DeLaune. 2015. Securing Our Soil in Intense Monoculture Cropping Systems. Global Soil Security Symposium. May 2015. College Station, TX. (oral presentation)
155. **Lewis, K.L.,** J. Burke, T. Witt, G. Ritchie. 2015. Nutrient Uptake by Cotton in Relation to Irrigation Frequency. 2015 Beltwide Cotton Conference. January 2015. San Antonio, TX. (poster presentation)
156. Haegelin, B., J. Storlien, F. Hons, **K. Lewis (Rothlisberger).** 2014. Greenhouse gas fluxes as affected by urea fertilizer, nitrification inhibitor, and biomass sorghum residue application to soil. 2014 Annual ASA-CSSA-SSSA International Meetings. November 2014. Long Beach, CA. (poster presentation)
157. **Rothlisberger – Lewis, K.L.,** J.L. Foster, F.M. Hons, T.J. Gentry, and T.W. Boutton. 2014. Effect of lipid-extracted algae on soil physicochemical dynamics. 2014 Annual ASA-CSSA-SSSA International Meetings. November 2014. Long Beach, CA. (oral presentation)
158. **Rothlisberger – Lewis, K.L.,** J.L. Foster, F.M. Hons, T.J. Gentry, and T.W. Boutton. 2014. Nutrient availability and ryegrass productivity in soil amended

- with lipid-extracted algae. 2014 Annual ASA-CSSA-SSSA International Meetings. November 2014. Long Beach, CA. (poster presentation)
159. **Rothlisberger-Lewis, K.L.**, J.L. Foster, F.M. Hons, and T.J. Gentry. 2014. Nutrient availability and ryegrass productivity in soil amended with lipid extracted algae. 2014 Annual ASA Southern Branch Meetings. February 2014. Third place poster competition. Dallas, TX. (poster presentation)
 160. **Rothlisberger-Lewis, K.L.**, J.L. Foster, F.M. Hons, and T.J. Gentry. 2013. Ryegrass productivity and nutrient availability in soils amended with LEA. 2013 Texas Plant Protection Conference. December 2013. Bryan, TX. (poster presentation)
 161. **Rothlisberger-Lewis, K.L.**, J.L. Foster, F.M. Hons, and T.J. Gentry. 2013. Ryegrass productivity and nutrient availability in soils amended with LEA. 2013 Annual ASA-CSSA-SSSA International Meetings. November 2013. Tampa, FL. (poster presentation)
 162. **Rothlisberger-Lewis, K.L.**, J.O. Storlien, J.L. Foster, F.M. Hons, and T.J. Gentry. 2013. Greenhouse gas fluxes as affected by LEA applications. 2013 Annual ASA-CSSA-SSSA International Meetings. November 2013. Third place poster competition. Tampa, FL. (poster presentation)
 163. Foster, J., **K. Rothlisberger-Lewis**, and F. Hons. 2013. LEA as a Soil Amendment. National Alliance for Advanced Biofuels and Bio-Products Annual Meeting. January 2013. Tempe, AZ. (oral presentation)
 164. **Rothlisberger, K.L.**, J.L. Foster, F.M. Hons, and T.J. Gentry. 2012. Physical and chemical soil assessment following amendments of lipid extracted algae meal. 2012 Annual ASA-CSSA-SSSA International Meetings. November 2012. Cincinnati, OH. (oral presentation)
 165. **Rothlisberger, K.L.**, F.M. Hons, V.A. Saladino, L.B. Crotwell, G.D. Morgan, and R.L. Nichols. 2012. Nitrogen requirements of adapted, genetically–modified cotton varieties. 2012 Beltwide Cotton Conference. February 2012. Orlando, FL. (poster presentation)
 166. **Rothlisberger, K.L.**, J.L. Foster, F.M. Hons, and T.J. Gentry. 2011. Carbon and nitrogen mineralization of whole and lipid extracted algae meal in soil. 2011 Texas Plant Protection Conference. December 2011. Bryan, TX. (poster presentation)
 167. **Rothlisberger, K.L.**, J.L. Foster, F.M. Hons, and T.J. Gentry. 2011. Carbon and nitrogen mineralization of whole and lipid extracted algae meal in soil. 2011 Annual ASA-CSSA-SSSA International Meetings. October 2011. San Antonio, TX. (poster presentation)
 168. **Rothlisberger, K.L.**, Hamid Shahandeh, F.M. Hons, and T.J. Moore. 2011. Chemical characteristics of sediments used for topsoiling a mine tailings pond and effects on plant growth. 2011 Annual ASA-CSSA-SSSA International Meetings. October 2011. San Antonio, TX. (oral presentation)
 169. **Rothlisberger, K.L.**, F.M. Hons, T.J. Gentry, and S.A. Senseman. 2010. Oilseed meal effects on the germination and survival of crop and weed species. 2010 Annual ASA-CSSA-SSSA International Meetings. November 2010. Second place poster presentation. Long Beach, CA. (poster presentation)

170. **Rothlisberger, K.L.**, T.J. Gentry, F.M. Hons, and S.A. Senseman. 2010. Oilseed meal effects on the germination and survival of crop and weed species. 2010 Texas A&M Agrilife Conference. January 2010. College Station, TX. (poster presentation)
171. **Rothlisberger, K.L.**, T.J. Gentry, F.M. Hons, and S.A. Senseman. 2009. Oilseed meal effects on the germination and survival of crop and weed species. Texas Plant Protection Conference. December 2009. Second place poster presentation. Bryan, TX. (poster presentation)

E. Popular Press Articles

1. Efficient fertilization is key in 2022. Southwest Farm Press. 9 November 2021.
2. Panhandle farmers look to balance economics and ecology. Texas Standard. 11 October 2021.
3. Regenerative agriculture evaluation gets underway in Texas and Oklahoma. AgriLife Today. 6 October 2021.
4. Carbon credits: How will they be measured? Southwest Farm Press. 2 September 2021.
5. Cover Crops: What to consider. Southwest Farm Press. 24 November 2020.
6. Researchers Evaluate Improvements in Texas Cotton Nutrition. Cotton Farming. 1 December 2020.

F. Videos and Other Media

1. Soil Health Curriculum Development – Video series. NRCS. September 2020.

X. PROFESSIONAL HONORS AND AWARDS

2021 Research Faculty Award. Awards in Excellence Program, Department of Soil and Crop Sciences, Texas A&M University.

2021 TWRI Faculty Fellow Program - 104B State Water Resources Institute Program. Department of Interior's U.S. Geological Survey. \$14,000 (\$14,000 to program).

The Dr. J. Tom Cothren Outstanding Young Cotton Soil Scientist Award, Agronomy, Physiology, and Soil - Beltwide Cotton Conference, 2019.

Tom Slick Senior Graduate Research Fellowship Award. College of Agriculture and Life Sciences, Texas A&M University, 2014.

Memorial Scholarship Ph.D. Graduate Student Award, American Society of Mining and Reclamation, 2013.

Soil and Crop Sciences Graduate Research Support Award, Texas A&M University, 2012.

Soil and Crop Sciences Graduate Teaching Support Award, Texas A&M University, 2011.

Patricia Nemec Consulting Scholarship in Agricultural Consulting, 2009.

IMC Graduate Research Assistantship Award, Aug 2008 - Dec 2010.

I acknowledge that the CV being submitted is the most current and is correct as of the date of the signature.

Sincerely,

A handwritten signature in blue ink that reads "Katie Lewis". The script is cursive and fluid, with the first name "Katie" and last name "Lewis" clearly distinguishable.