**Vaughn Thomas Seymour Reed**

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# Education:

**Doctor of Philosophy in Soil Science (2021)**, Plant and Soil Sciences Department, Oklahoma State University, Stillwater, OK

**Master of Science in Plant and Soil Science (2018)**, Plant and Soil Sciences Department, Oklahoma State University, Stillwater, OK

**Bachelor of Science in Agriculture (2016)**, Hutson School of Agriculture, Murray State University, Murray, KY

# Professional Experience:

**Assistant Professor (2022-Present),** Plant and Soil Sciences Department, Mississippi State University, Starkville, MS  
60% Research and 40% Teaching. Research efforts are focused on soil fertility and nutrient management of Mississippi crops. Teaching efforts are focused on upper level soil fertility and soil science classes.

**Post-Doctoral Scholar (2021-2022),** Plant and Soil Science Department, University of Kentucky, Lexington, KY  
Conducting statistical analysis, designing field trials, publishing independent research in peer-reviewed journals, and presenting research pertaining to spatial variability of Phosphorus availability in corn.

**Graduate Research Assistant (PhD) (2018-2021),** Plant and Soil Science Department, Oklahoma State University, Stillwater, OK  
*Effect of N rate and timing on Winter Wheat Grain Yield and N content across varying environments.  
Use of On-Farm Nitrogen Trials to Update SBNRC Using Greenseeker Sensors.   
Assessment of OSU Recommendations for Potassium in Soybeans.*

**Graduate Research Assistant (MS) (2016-2018)**, Plant and Soil Science Department, Oklahoma State University, Stillwater, OK  
*On-Farm Evaluation of Double Crop Fertility Management in Oklahoma.*

# Peer reviewed Journal Publications

1. Finch, B., Souza, J. L. B., **Reed, V.,** Sharry, R., Smith, M., Arnall, B. 2023. Evaluation of Nitrogen and Cropping System Management in Continuous Winter Wheat Forage Production Systems. MDPI Agronomy. <https://doi.org/10.3390/agronomy13010262>
2. Souza, J. L. B., Antonangelo, J., Zhang, H., **Reed, V.,** Finch, B., Arnall, B. 2023. Impact of long-term fertilization in no-till on the stratification of soil acidity and related parameters. Soil and Tillage Research. <https://doi.org/10.1016/j.still.2022.105624>
3. **Reed, V.,** Souza, J. L. B., Lofton, J., Arnall, B. 2022. On farm evaluation of preplant soil test P and K in double-crop soybeans. Agrosystems, Geosciences & Environment. e20307. <https://doi.org/10.1002/agg2.20307>
4. **Reed, V.**, Finch, B., Souza, J., Watkins, P., Arnall, B. Soil sampling depth impact on phosphorus yield response prediction in winter wheat. 2022. Agricultural & Environmental Letters (A&EL). <https://doi.org/10.1002/ael2.20067>
5. Finch, B., **Reed, V.**, Williams, J., Sharry, R., Arnall, B. Impact of in-furrow fertilizer on winter wheat grain yield and mineral concentration. 2022. The Journal of Agricultural Science. <https://doi.org/10.1017/S0021859622000557>
6. Dhillon, J., Li, X., Bheemanahalli, R., **Reed, V.** Mississippi State and County Level Yield Gap in Corn Production. 2022. Agricultural & Environmental Letters (A&EL). <https://doi.org/10.1002/ael2.20092>
7. Souza, J. L. B., Antonangelo, J. A., Oliviera, A., **Reed, V.,** Arnall, B. Recovery of Grain Yield and Protein with Fertilizer Application Post Nitrogen Stress in Winter Wheat (Triticum aestivum L.) 2022. MDPI Agronomy. <https://doi.org/10.3390/agronomy12092024>
8. **Reed, V.**, Sutradhar, A.K., Arnall, B., Lofton, J. Evaluation of Temporal Variability on Tissue Nutrient Concentrations of Canola. 2022. Agrosystems, Geoscience, & Environment (AGE). <https://doi.org/10.1002/agg2.20235>
9. **Reed, V.**, Finch, B., Souza, J. L. B., Arnall, B. Predicting Winter Wheat Grain Yield using Fractional Green Canopy Cover. 2021. International Journal of Agronomy (IJA). <https://doi.org/10.1155/2021/1443191>
10. **Reed, V.**, Arnall, B., Souza, J. L. B., Watkins, P. 2021. Evaluation of Incorporated Phosphorus Fertilizer Recommendations on No-Till Managed Winter Wheat. Crop, Forage & Turfgrass Management (CFTM). <https://doi.org/10.1002/cft2.20133>

# Journal Articles in Progress:

**Reed, V.**, J. Fridgen, J. McGrath. Impact of depth of soil sample on soil test analyses results of immobile nutrient availability and soil acidity. *Under internal review.* *Targeted at Agrosystems, Geosciences, and Environment (AGE).*

**Reed, V.***,* J. Fridgen, J. McGrath, C. Bolster. Spatial Yield Response to Application of Phosphorus Fertilizer. *Under external review. Targeted at Agronomy Journal (AJ).*

**Reed, V.***,* B. Finch, J. Souza, P. Watkins, B. Arnall. Fate of surface applied Phosphorus in No-Till managed winter wheat. *In progress. Targeted at Agronomy Journal (AJ).*

# Professional Presentations:

**Reed, V.**, J. Fridgen, J. McGrath. 2022. *Are our Fertilizer Recommendations Accurate Enough for Variable Rate Tech?* (Oral Presentation). ASA-CSSA-SSSA Societies Meeting. Baltimore, MD.

**Reed, V.**, B. Arnall, E. Kreuger, J. Souza, B. Finch. 2021. *Predicting Winter Wheat Grain Yield Using Fractional Green Canopy Cover* (Oral Presentation). ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah.

**Reed, V.**, B. Arnall, J. Souza, B. Finch, M. Smith, R. Sharry, H. Lovewell. 2021. *Relationship Between Tissue Nutrient Concentration and Yield in Winter Wheat* (Oral Presentation). ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah.

**Reed, V**., 2020. *Use of on-farm Winter Wheat Nitrogen Rate and Timing Studies to update SBNRC* (PhD Poster and Oral Presentation). ASA-CSSA-SSSA Societies Meeting.

**Reed, V.**, B. Finch, J. L. B. Souza, B. Arnall. March 2020. *Results from the First Year of On-Farm N Rate and Timing Studies* (PhD Poster Presentation). Great Plains Soil Fertility Conference, Denver, CO.

**Reed, V.,** B. Arnall. November 2019. *Development of Regional Dependency Component of SBNRC in Oklahoma: Results from Year 1* (PhD Oral Presentation). ASA-CSSA-SSSA Societies Meeting, San Antonio, TX.

**Reed, V.,** B. Arnall, J. Lofton, H. Zhang, R. Jones, B. Ballagh, J. Souza. November 2018. *On-Farm Evaluation of Double Crop Fertility Management in Oklahoma* (PhD Oral Presentation). ASA-CSSA-SSSA Societies Meeting, Baltimore, MD.

**Reed, V.**, J. Souza, B. Arnall, B. Raun, B. Figueiredo. August 2018. *Influence of Recent Studies on the Extension and Implementation of SBNRC* (Oral Presentation). Nitrogen Use Efficiency Conference, Manhattan, KS.

**Reed, V.,** B. Arnall, B. Ballagh, J. Souza, B. Rutter, J. Lofton, H. Zhang. November 2017. *On-Farm Evaluation of Double Crop Fertility Management in Oklahoma* (M.S. Poster Presentation). ASA-CSSA-SSSA Societies Meeting, Tampa, FL.

# Extension Publications:

**Reed, V.**, B. Rutter, J. Abit, R. Sharry, R. Harvey. 2018. Grain Drill Fertilizer Calibration. PSS-2282.

# Extension Related Presentations:

**Reed, V.** February 2023. *Phosphorus and Potassium Fertilizer Considerations for Sweet Potato Production.* Sweet Potato Production Workshop. Pittsboro, MS.

**Reed, V.,** J. McGrath. February 2022. *Managing N and P with Precision in light of Current Fertilizer Prices*.Kentucky Agriculture Training School (KATS) February 2022 Meeting. Princeton, KY.

**Reed, V.,** J. Fridgen, J. McGrath. February 2022. *Using Precision Ag to Improve Input Management: Understanding Crop and Soil Response to Fertilizers.* 2022 UK Extension Winter Wheat Meeting. Hopkinsville, KY.

**Reed, V.**, J. Fridgen, J. McGrath. December 2021. *Using Precision Ag to Improve Input Management: Understanding Crop and Soil Response to Fertilizers*. 2021 Kentuckiana Crop Production Seminar. French Lick, IN.

**Reed, V.,** B. Arnall. April 2021. *Tissue Sampling and Nutrient Recommendations* (Extension Presentation). Advanced Nutrient Management Spring CEU presentation series. Stillwater, OK

**Reed, V.**, B. Arnall. February 2020. *Fertilizers and Nutrient Management*. In-Service Training for County Extension personnel. Stillwater, OK.

**Reed, V.,** B. Arnall, J. Souza, B. Finch. January 2020. *Managing N in Wheat to Maximize Quality and Optimize Yield*. Dicamba Application Requirements Training. Cherokee, OK.

**Reed, V.** and B. Arnall. April 2019*. Nutrient Management Research Updates*. South Central Research Station Field Day, Chickasha, OK.

**Reed, V.**, J. Souza, B. Arnall, B. Raun, B. Figueiredo. December 2018. *Influence of Recent Studies on the Extension and Implementation of SBNRC*. Winter Crops School, Stillwater, OK.

# Abstracts, Proceedings, and Presentations:

**Reed, V.**, B. Arnall, E. Kreuger, J. Souza, B. Finch. 2021. *Predicting Winter Wheat Grain Yield Using Fractional Green Canopy Cover*. ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah. Abstract and Proceedings.

**Reed, V.**, B. Arnall, J. Souza, B. Finch, M. Smith, R. Sharry, H. Lovewell. 2021. *Relationship Between Tissue Nutrient Concentration and Yield in Winter Wheat*. ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah. Abstract and Proceedings.

Finch, B., **V. Reed**, J. Souza, M. Smith, R. Sharry, H. Lovewell, B. Arnall, J. Rogers. 2021. *Does Intensifying Forage Cropping Systems Change Soil Nitrogen and Carbon Concentrations*. ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah. Abstract and Proceedings.

Sharry, R., M. Smith, **V. Reed**, B. Finch, H. Lovewell, J. Souza, B. Arnall. 2021. *Influence of Soil pH on Cotton Production*. ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah. Abstract and Proceedings.

Smith, M., R. Sharry, **V. Reed**, B. Finch, J. Souza, H. Lovewell, B. Arnall. 2021. *Effect of Delayed N Application in Grain Sorghum.* ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah. Abstract and Proceedings.

Finch, B., M. Smith, R. Sharry, J. Souza, **V. Reed**, H. Lovewell, B. Arnall, J. Rogers. 2021. *Evaluation of Intensive Forage Crop Management on Forage Yield and Quality Parameters*. ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah. Abstract and Proceedings.

Lovewell, H., B. Finch, J. Souza, M. Smith, R. Sharry, G. Toler, **V. Reed**, B. Arnall. 2021. *Phosphorus and Potassium Fertility in a Wheat-Double Crop Soybean System*. ASA-CSSA-SSSA Societies Meeting. Salt Lake City, Utah. Abstract and Proceedings.

Sharry, R., **V. Reed**, B. Finch, M. Smith, J. Souza, S. Byrd, B. Arnall. 2021. *Impact of Soil Acidity on Cotton Production*. Beltwide Cotton Conference. Abstract.

**Reed, V.**, B. Finch, J. L. B. Souza, B. Arnall. 2020. *Results from the First Year of On-Farm N Rate and Timing Studies.* Great Plains Soil Fertility Conference. Abstract and Proceedings. Denver, CO.

**Reed, V,** and B. Arnall. 2020. *On-Farm Evaluation of a Pre-plant Soil Test As a Predictor of Nutrient Response in Double Cropping systems in Oklahoma*. ASA-CSSA-SSSA Societies Meeting. Abstract.

**Reed, V**., 2020. *Use of on-farm Winter Wheat Nitrogen Rate and Timing Studies to update SBNRC*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Sharry, R., **V. Reed**, B. Finch, M. Smith, J. Souza, S. Byrd, B. Arnall. 2020. *Impact of Soil Acidity on Cotton Production.* Beltwide Cotton Conference. Abstract.

Sharry, R.**, V. Reed,** J. Souza, M. Smith, B. Finch, B. Arnall. 2020. *Effect of Nitrogen and Sulfur Application on Winter Wheat Grain Nitrogen*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Sharry, R., M. Smith, **V. Reed,** B. Finch, J. Souza, B. Arnall. 2020. *Impact of Soil Acidity on Cotton Production*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Souza, J., **V. Reed,** B. Finch, R. Sharry, M. Smith, B. Arnall. 2020. *Effect of Rate on Winter Wheat Recovery from Nitrogen Deficiency*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Souza, J., **V. Reed,** B. Finch, R. Sharry, M. Smith, B. Arnall. 2020. *The Loss Potential of Urea When Surface Applied to Winter Wheat over a Growing Season*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Smith, M., B. Arnall, R. Sharry, **V. Reed,** B. Finch. 2020. *Effects of Delayed N Application in Grain Sorghum Yield. ASA-CSSA-SSSA Societies Meeting*. Abstract.

Finch, B., **V. Reed,** J. Souza, B. Arnall. 2020. *Evaluating Method of Anthesis Nitrogen Application in Hard Red Winter Wheat*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Finch, B., **V. Reed,** J. Souza, B. Arnall, J. Rodgers. 2020. *Evaluation of Nitrogen Management Strategies for 365 Day Graze-Out Systems in Central Oklahoma*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Souza, J., **V. Reed,** E. Archilia, B. Finch, B. Arnall. 2019. *Response to Timing of Nitrogen Fertilization in Winter Wheat Under Limited and Unlimited Nitrogen Rates*. ASA-CSSA-SSSA Societies Meeting. Abstract.

**Reed, V.,** B. Arnall. 2019. *Development of Regional Dependency Component of SBNRC in Oklahoma: Results from Year 1*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Smith, M., J. Souza, **V. Reed,** B. Arnall. 2019. *Impact of Source on Ideal Nitrogen Timing in Winter Wheat in Oklahoma.* ASA-CSSA-SSSA Societies Meeting. Abstract.

Souza, J., **V. Reed,** B. Finch, B. Arnall. 2019. *Stratification of Soil Characteristics in Long Term Winter Wheat Fertility Studies after 9 years of No-Till Management in Oklahoma*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Finch, B., **V. Reed**, B. Arnall. 2019 *Impact of Post-Feekes 6 Nitrogen Application in Winter Wheat Forage Production*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Sharry, R., B. Arnall, **V. Reed**. 2019. *Impact of Soil Acidity on Cotton Production*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Souza, J., B. Ballagh, **V. Reed,** B. Arnall. 2018. *Impact of Nitrogen Fertilizer Application Timing on Winter Wheat*. ASA-CSSA-SSSA Societies Meeting. Abstract.

**Reed, V.,** B. Arnall, J. Lofton, H. Zhang, R. Jones, B. Ballagh, J. Souza. 2018. *On-Farm Evaluation of Double Crop Fertility Management in Oklahoma*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Ballagh, B., B. Arnall, J. Souza, D. Marburger, **V. Reed,** B. Rutter. 2018. *Winter Wheat Topdressing Response to Nitrogen Method Variation*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Ballagh, B., B. Arnall, D. Marburger, J. Long, J. Souza, **V. Reed,** J. Abit, B. Rutter, L. Cegobias. 2017. *Drilling Nitrogen into Established Wheat Crop*. ASA-CSSA-SSSA Societies Meeting. Abstract.

**Reed, V.,** B. Arnall, B. Ballagh, J. Souza, B. Rutter, J. Lofton, H. Zhang. 2017. *On-Farm Evaluation of Double Crop Fertility Management in Oklahoma*. ASA-CSSA-SSSA Societies Meeting. Abstract.

Souza, J., **V. Reed,** J. Abit, B. Arnall. 2017. *Top-Dress N Application Timing in Wheat*. ASA-CSSA-SSSA Societies Meeting. Abstract.

# Honors and Awards:

Fall 2020/Spring 2021 - Tedrowe and Sandra Bowles Coulter Memorial Scholarship

Fall 2019/Spring 2020 - Tedrowe and Sandra Bowles Coulter Memorial Scholarship

Fall 2018/Spring 2019 - Tedrowe and Sandra Bowles Coulter Memorial Scholarship

Fall 2017/Spring 2018 - Tedrowe and Sandra Bowles Coulter Memorial Scholarship

May 2016 – Outstanding Undergraduate Research Scholar, Murray State University

May 2016 – Honors College Outstanding Senior, Murray State University

# Funding:

2023 - $5,000. Fertilizer Recommendation Support Tool (FRST). Cotton Potassium (K) Correlation/Calibration. **V. Reed.** *Accepted and Fully Funded February 2023****.***

$10,010. Mississippi Corn Promotion Board. Evaluation of Build-up Nutrient Management Strategies for Phosphorus and Potassium. **V. Reed,** C. Bryant, J. Dhillon, M. Mulvaney. *Accepted and Fully Funded February 2023.*

2022 - $26,429. OCP-North America. Nitrogen Loss from Fall-Applied Phosphorus Fertilizer. **V. Reed.** *Accepted and Fully Funded December 2022.*

$110,000. Mississippi Agricultural and Forestry Experiment Station Special Research Initiative. Impacts of in-season potassium fertilizer application on sweet potato yields. **V. Reed,** L. Harvey. *Accepted and Fully Funded November 2022.*

$17,855. Mississippi Soybean Promotion Board. Mississippi Irrigation Water Accumulating Salts in Soil and Potentially Limiting Soybean Growth. M. Mulvaney. **V. Reed**. D. Gholson. C. Bryant. *Accepted and Fully Funded July 2022*.

# Teaching Experience:

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| --- | --- | --- | --- | --- |
| Semester | Class Level | Course Title |  | Instructor of Record |
|  |  |  |  |  |
| Spring 2023 | Undergraduate/Graduate | PSS 4313/6313 Soil Fertility |  | Dr. Vaughn Reed |
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# Professional Societies:

ASA- American Society of Agronomy (2016-present)

CSSA- Crop Science Society of America (2016-present)

SSSA- Soil Science Society of America (2016-present)

Reviewer – Agrosystems, Geoscience, and Environment (AGE) (2019-present)

Reviewer – Crop, Forage, and Turgrass Management (CFTM) (2020-present)

Reviewer – Journal of Soil and Water Conservation (JSWC) (2022-present)

Reviewer – Soil Science Society of America Journal (SSSAJ) (2022-present)

# Graduate Student Committees

Jason Eberhard – Ph.D. Committee Member.

Curt Knight – M.S. Committee Member

Praveen Gajula – M.S. Committee Member