

CURRICULUM VITAE

Sukhbir Singh, Ph.D.

Assistant Professor of Vegetable Production Systems

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Department of Plant and Soil Science

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EDUCATION

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| Ph.D. (2013-2016) | Plant and Environmental Science, New Mexico State University, Las Cruces, NM, USA |
| M.S. (2011-2013) | Plant and Environmental Science, New Mexico State University, Las Cruces, NM, USA |
| M.S. (2008-2010) | Agronomy, Punjab Agricultural University, Ludhiana, PB, India |
| B.S. (2004-2008) | Agronomy, Punjab Agricultural University, Ludhiana, PB, India |
| Diploma (2002-2004) | General Agriculture, Punjab Agricultural University, Ludhiana, PB, India |

PROFESSIONAL EXPERIENCE

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| Jan 2018 - Present | Assistant Professor of Vegetable Production Systems, Department of Plant and Soil Science, Texas Tech University, Lubbock, TX |
| Mar 2016 - Dec 2017 | Research Assistant Professor of Soil and Water Agroecology, Department of Plant and Soil Science, Texas Tech University, Lubbock, TX |
| Jun 2013 - Feb 2016 | Graduate Research Assistant, Department of Plant and Environmental Sciences, New Mexico State University, Las Cruces, NM |
| Aug 2011 - May 2013 | Teaching Assistant, Department of Plant and Environmental Sciences, New Mexico State University, Las Cruces, NM |
| Dec 2010 - Jun 2011 | Research Associate, Department of Soils, Punjab Agricultural University, Ludhiana, PB, India |

RESEARCH EXPERIENCE

Texas Tech University, Lubbock, TX, USA: March 2016-Present:

- Involved in multi-institutional and collaborative research projects of crop physiology, cropping systems, crop modeling, and irrigation water management in various crops such as cucumber, pumpkin, lettuce, basil, sweet corn, eggplant, bell pepper and hemp.

- The aim of vegetable research is to sustain economic vegetable production for supplying quality vegetables to consumers, and to support local food and farm to table type movements with an emphasis on urban or small acreage systems.
- The aim of hemp research is to provide an alternative crop option that fits well in the declining water situation of the Southern High Plains and is beneficial to growers, stakeholders, and industrialists.

TEACHING

Teaching Responsibilities

- PSS 1411: Principles of Horticulture. (Spring and Fall) 4 credits, 100% responsibility. January 2018 - December 2020.
- PSS 4320-001: Sustainable Agriculture. (Fall-odd) 3 credits, 100% responsibility.
- PSS 4320-D01: Sustainable Agriculture. (Fall-odd) 3 credits, 100% responsibility.
- PSS 5320-001: Sustainable Crop Production Concepts. (Fall-odd) 3 credits, 100% responsibility.
- PSS 5320-D01: Sustainable Crop Production Concepts. (Fall-odd) 3 credits, 100% responsibility.
- PSS 4323-001: Organic Crop Production Systems. (Fall-even) 3 credits, 100% responsibility.
- PSS 4323-D01: Organic Crop Production Systems. (Fall-even) 3 credits, 100% responsibility.
- PSS 5322-001: Organic Farming Practices. (Fall-even) 3 credits, 100% responsibility.
- PSS 5322-D01: Organic Farming Practices. (Fall-even) 3 credits, 100% responsibility.
- PSS 4340: Irrigation Management Seminar. (Fall) 3 credits, 3% responsibility.

Teaching Experience – Graduate Teaching Assistant

Assisted in labs; graded exams, quizzes and labs, and organized field trips:

- Agro 450: Sustainable Crop Production: Jan 2013 - May 2013:
Lab Instructor: Involved in a project of salinity management in organic farming systems. Project compared physical and chemical properties of soil between organic and conventional farming systems. Project helped the students to get firsthand experience in collection and analysis of soil samples from organic and conventional farms at different depths.
- Hort 241: Floriculture Field Practicum: Jan 2013 - May 2013:
Lab Instructor: Guided students to collect, process and selling of flowers.
- Agro 365: Principles of Crop Production: Aug 2012 - Dec 2012:
Lab Instructor: Conducted a cover crop management study with the help of students. Students were personally involved in the project from planting to harvest. In addition to data collection, project gave the students an opportunity to monitor and maintain their plots so that they can understand the real challenges of the field research.
- Soil 312L: Soil Management and Fertility Laboratory: Jan 2012 - May 2012:
Lab Instructor: Conducted a greenhouse study to demonstrate nutrient deficiency symptoms in different crop plants (Beans, Chili, Corn etc.) to the students. Made different nutrient

solutions to irrigate plants to develop symptoms. Students got the chance to identify different nutrient deficiency symptoms in crop plants practically.

Teaching Workshop: Web conferencing workshop with Quality Matters

Quality Matters (QM) is one of the premier organizations promoting quality online teaching and learning

- Workshop 1: Measurable, Precise, Consistent and Clear Objectives (WCCO) - July 18, 2018
- Workshop 2: Aligning Instructional Materials, Activities & Tools with Objectives (WCAMATO) - July 19, 2018.
- Workshop 3: Connect Your Learning Objectives to Assessments (WCOA) - July 19, 2018.

PUBLICATIONS

Peer-Reviewed Journal Papers - In Progress

1. Singh, M., **S. Singh**, S. Deb and G. Ritchie. Root distribution, soil water depletion, and water productivity of sweet corn under deficit irrigation and biochar application. *Agricultural Water Management*. Accepted.
2. Regmi, A., S. Poudyal, **S. Singh**, C. Coldren, N. Moustaid-Moussa, and C. Simpson. Biochar influences phytochemical concentrations of Viola cornuta flowers. *Sustainability*. Submitted.
3. Kathi, S., H. Laza, **S. Singh**, L. Thompson, W. Li, and C. Simpson. Vitamin C biofortification of broccoli microgreens and resulting effects on nutrient composition. *Frontiers in Plant Science*. Submitted.
4. Kathi, S., H. Laza, **S. Singh**, L. Thompson, W. Li, and C. Simpson. Trends in agronomic biofortification of horticultural crops (2012-2022): a systematic review. *Global Food Security*. Submitted.
5. Venkataramani, S., A. Kafle, M. Singh, **S. Singh**, C. Simpson, and M. G. Siebecker. Greenhouse cultivation of cucumber (*Cucumis sativus*) in soilless media amended with biochar and compost. *Scientia Horticulturae*. In-preparation.
6. Shaik, A., and **S. Singh** et al. Comparison of organic eggplant yields under open-field and high tunnel production systems in Texas. *HortScience*. In-preparation.
7. Shaik, A., and **S. Singh** et al. Use of Biofertilizer for improving growth and yield of soilless organic cucumber production. *HortScience*. In-preparation.
8. Bajwa, P., **S. Singh**, M. Singh, and V. Parkash. Variety evaluation and influence of temperature on seed germination of industrial hemp. *Industrial Crops and Products*. In-preparation.

Published Peer-Reviewed Journal Papers

1. Kathi, S., H. Laza, **S. Singh**, L. Thompson, W. Li, and C. Simpson. 2022. Increasing vitamin C through agronomic biofortification of arugula microgreens. *Scientific Reports* 12:13093. doi.org/10.1038/s41598-022-17030-4.

2. Pabuayon, I. L. B., **S. Singh**, and G. Ritchie. 2022. Guar resilience in water-restricted production. *Crop Science* 62:1937-1947. [doi:10.1002/csc2.20796](https://doi.org/10.1002/csc2.20796).
3. Shaik, A., and **S. Singh**. 2022. Influence of arbuscular mycorrhizal fungi on physiology and yield of eggplant in organic soilless production system. *HortScience* 57:759-768. doi.org/10.21273/HORTSCI16612-22.
4. Singh, M., **S. Singh**, V. Parkash, G. Ritchie, R. Wallace, and S. Deb. 2022. Biochar implications under limited irrigation for sweet corn production in a semi-arid environment. *Frontiers in Plant Science* 13:853746. [doi:10.3389/fpls.2022.853746](https://doi.org/10.3389/fpls.2022.853746).
5. Regmi, A., **S. Singh**, N. Moustaid-Moussa, C. Coldren, and C. Simpson. 2022. The negative effects of high rates of biochar on violas can be counteracted with fertilizer. *Plants* 11:491. doi.org/10.3390/plants11040491.
6. Shaik, A., H. Singh, **S. Singh**, T. Montague, and J. Sanchez. 2022. Liquid organic fertilizers effects on growth and biomass of lettuce grown in soilless production system. *HortScience* 57: 447-452. doi.org/10.21273/HORTSCI16334-21.
7. Mohawesh, O., A. Albalasmeh, S. Deb, **S. Singh**, C. Simpson, N. Alkafaween, and A. Mahadeen. 2022. Effect of colored shading nets on the growth and water use efficiency of sweet pepper grown under semiarid conditions. *HortTechnology* 32: 21-27. doi.org/10.21273/HORTTECH04895-21.
8. Parkash, V., R. Saini, M. Singh and **S. Singh**. 2021. Comparison of the effects of ammonium nonanoate and an essential oil herbicide on weed control efficacy and water use efficiency of pumpkin. *Weed Technology* 36: 64-72. doi.org/10.1017/wet.2021.89.
9. Singh, M., P. Singh, **S. Singh**, R. Saini, and S. V. Angadi. 2021. A global meta-analysis of yield and water productivity responses of vegetables to deficit irrigation. *Scientific Reports* 11:22095. doi.org/10.1038/s41598-021-01433-w.
10. Mohawesh, O., A. Albalasmeh, M. Gharaibeh, S. Deb, C. Simpson, **S. Singh**, B. Al-Soub, and A. E. Hanandeh. 2021. Potential use of biochar as an amendment to improve soil fertility and tomato and bell pepper growth performance under arid conditions. *Journal of Soil Science and Plant Nutrition* 21: 2946-2956. doi.org/10.1007/s42729-021-00580-3.
11. Parkash, V., **S. Singh**, M. Singh, S. Deb, G. Ritchie, and R. Wallace. 2021. Effect of deficit irrigation on root growth, soil water depletion, and water use efficiency of cucumber. *HortScience* 56:1278-1286. doi.org/10.21273/HORTSCI16052-21.
12. Parkash, V., **S. Singh**, S. Deb, G. Ritchie, and R. Wallace. 2021. Effect of deficit irrigation on physiology, plant growth, and fruit yield of cucumber cultivars. *Plant Stress* 1:100004. doi.org/10.1016/j.stress.2021.100004.
13. Singh, A., S. Deb, **S. Singh**, P. Sharma, and J. Kang. 2020. Effects of non-leguminous cover crops on yield and quality of baby corn (*Zea mays* L.) grown under subtropical conditions. *Horticulturae* 6:21. doi.org/10.3390/horticulturae6020021.
14. Katuwal, K. B., Y. Cho, **S. Singh**, S. V. Angadi, M. Stamm, and S. Begna. 2020. Soil water extraction patterns and water use efficiencies of spring canola cultivars under growth-stage-

- based irrigation management. *Agricultural Water Management* 239:1-9. doi.org/10.1016/j.agwat.2020.106232.
15. Bhattarai, B., **S. Singh**, S. V. Angadi, S. Begna, R. Saini, and D. Auld. 2020. Spring safflower water use patterns in response to pre-season and in-season irrigation applications. *Agricultural Water Management* 228:2-11. doi.org/10.1016/j.agwat.2019.105876.
 16. Bhattarai, B., **S. Singh**, C. P. West, G. L. Ritchie, and C. L. Trostle. 2020. Effect of deficit irrigation on physiology and forage yield of forage sorghum, pearl millet, and corn. *Crop Science* 60:2167-2179. doi.org/10.1002/csc2.20171.
 17. Bhattarai, B., **S. Singh**, C. P. West, G. L. Ritchie, and C. L. Trostle. 2020. Water depletion pattern and water use efficiency of forage sorghum, pearl millet, and corn under water limiting condition. *Agricultural Water Management* 238:1-10. doi.org/10.1016/j.agwat.2020.106206.
 18. Parkash, V., and **S. Singh**. 2020. A review on potential plant-based water stress indicators for vegetable crops. *Sustainability* 12, 3945. doi.org/10.3390/su12103945.
 19. Parkash, V., and **S. Singh**. 2020. Potential of biochar application to mitigate salinity stress in eggplant. *HortScience* 55:1946-1955. doi.org/10.21273/HORTSCI15398-20.
 20. Saini, R. K., and **S. Singh**. 2019. Use of natural products for weed management in high-value crops: an overview. *American Journal of Agricultural Research* 4:25. [doi:10.28933/ajar-2018-11-2808](https://doi.org/10.28933/ajar-2018-11-2808).
 21. Saini, R. K., and **S. Singh**. 2019. Contribution of cover crops and reduced tillage systems for weed management in organic vegetable production. *American Journal of Agricultural Research* 4:24. [doi:10.28933/ajar-2018-11-2705](https://doi.org/10.28933/ajar-2018-11-2705).
 22. Pabuayon, I. L. B., **S. Singh**, K. Lewis, and G. Ritchie. 2019. Water extraction and productivity of cotton, sorghum, and sesame under deficit irrigation. *Crop Science* 59:1692-1700. [doi: 10.2135/cropsci2019.03.0143](https://doi.org/10.2135/cropsci2019.03.0143).
 23. Pabuayon, I. L. B., **S. Singh**, and G. Ritchie. 2019. Effects of deficit irrigation on yield and oil content of sesame, safflower, and sunflower. *Agronomy Journal* 111:3091-3098. [doi:10.2134/agronj2019.04.0316](https://doi.org/10.2134/agronj2019.04.0316).
 24. Bhattarai, B., **S. Singh**, C. P. West, and R. Saini. 2019. Forage potential of pearl millet and forage sorghum alternate to corn in water limiting condition of Texas High Plains - a review. *Crop, Forage & Turfgrass Management* 5:190058. [doi:10.2134/cftm2019.08.0058](https://doi.org/10.2134/cftm2019.08.0058).
 25. Singh, M., R. Saini, **S. Singh**, and S. P. Sharma. 2019. Potential of integrating biochar and deficit irrigation strategies for sustaining vegetable production in water limited regions: a review. *HortScience* 54:1872-1878.
 26. Katuwal, K. B., S. V. Angadi, **S. Singh**, Y. Cho, S. Begna, and M. R. Umesh. 2018. Growth stage based irrigation management on biomass, yield, and yield attributes of spring canola in the Southern Great Plains. *Crop Science* 58:2623-2632. [doi:10.2135/cropsci2018.02.0116](https://doi.org/10.2135/cropsci2018.02.0116).
 27. Eder, Z. P., **S. Singh**, D. Fromme, G. Collins, F. Bourland, and G. Morgan. 2018. Impact of cotton leaf and bract characteristics on cotton leaf grade. *Crop, Forage & Turfgrass Management* 4:170048. [doi:10.2134/cftm2017.07.0048](https://doi.org/10.2134/cftm2017.07.0048).

28. Eder, Z. P., **S. Singh**, D. Fromme, G. Collins, F. Bourland, and G. Morgan. 2017. Cotton harvest aid regimes and their interaction with cotton cultivar characteristics impacting leaf grade. *Agronomy Journal* 109:2714-2722. [doi:10.2134/agronj2017.03.0169](https://doi.org/10.2134/agronj2017.03.0169).
29. **Singh, S.**, K. J. Boote, S. V. Angadi, and K. Grover. 2017. Estimating water balance, evapotranspiration and water use efficiency of spring safflower using the CROPGRO model. *Agricultural Water Management* 185:137-144. doi.org/10.1016/j.agwat.2017.02.015.
30. **Singh, S.**, S. V. Angadi, K. Grover, R. S. Hilaire, and S. Begna. 2016. Effect of growth stage based irrigation on soil water extraction and water use efficiency of spring safflower cultivars. *Agricultural Water Management* 177:432-439. doi.org/10.1016/j.agwat.2016.08.023.
31. **Singh, S.**, S. V. Angadi, R. S. Hilaire, K. Grover, and D. M. VanLeeuwen. 2016. Spring safflower performance under growth stage based irrigation in the Southern High Plains. *Crop Science* 56:1878-1889. [doi:10.2135/cropsci2015.08.0481](https://doi.org/10.2135/cropsci2015.08.0481).
32. **Singh, S.**, K. J. Boote, S. V. Angadi, K. Grover, S. Begna, and D. Auld. 2016. Adapting the CROPGRO model to simulate growth and yield of spring safflower in semi-arid conditions. *Agronomy Journal* 108:64-72. [doi:10.2134/agronj15.0272](https://doi.org/10.2134/agronj15.0272).
33. **Singh, S.**, S. V. Angadi, K. Grover, S. Begna, and D. Auld. 2016. Drought response and yield formation of spring safflower under different water regimes in the semiarid Southern High Plains. *Agricultural Water Management* 163:354-362. [doi:10.1016/j.agwat.2015.10.010](https://doi.org/10.1016/j.agwat.2015.10.010).
34. **Singh, S.**, K. Grover, S. Begna, S. Angadi, M. Shukla, R. Steiner, and D. Auld. 2014. Physiological response of diverse origin spring safflower genotypes to salinity. *Journal of Arid Land Studies* 24:169-174.
35. Grover, K., M. Shukla, **S. Singh**, and S. Deb. 2013. Soil salinity in irrigated agricultural soils under organic farming system. *Ciencia en la Frontera* 11:11-17.
36. **Singh, S.**, H. S. Bajwa, and K. S. Saini. 2013. Growth and yield of *Bt* cotton hybrids (*Gossypium hirsutum* L.) as influenced by different sowing dates. *Indian Journal of Ecology* 40:163-165.

ABSTRACTS & PRESENTATIONS

1. Singh, M., S. Venkataramani, A. Kafle, **S. Singh**, C. Simpson, and R. Patino. 2022. Biochar-cotton burr compost mixtures can serve as sustainable substrates for soil-less cucumber production. Poster presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.
2. Shaik, A., M. Singh, **S. Singh**, M. G. Siebecker, T. Montague, R. Wallace, R. Stevens, and G. Ritchie. 2022. Meta-analysis of yield comparisons among organic and inorganic vegetable production systems. Poster presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.

3. Kafle, A., **S. Singh**, and M. Singh. 2022. Deficit irrigation and biochar effects on growth, physiology and yield of cucumber in West Texas. Poster presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.
4. Kafle, A., **S. Singh**, and M. Singh. 2022. Sweet corn yield and water productivity as influenced by growth-stage based irrigation and biochar application. Oral presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.
5. Singh, M., **S. Singh**, S. Deb, G. Ritchie, and R. W. Wallace. 2022. Can biochar improve root growth and water use efficiency of cucumber under deficit irrigation? Oral presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.
6. Saini, R., A. Singh, M. Singh, and **S. Singh**. 2022. Effect of different herbicides on industrial hemp phytotoxicity and biomass yield. Poster presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.
7. Kathi, S., **S. Singh**, W. Li, L. Thompson, H. Laza and C. Simpson. 2022. Foliar application of ascorbic acid in hydroponically grown arugula leafy greens. Poster presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.
8. Kathi, S., **S. Singh**, W. Li, L. Thompson, H. Laza and C. Simpson. 2022. Super-greens. Oral presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.
9. Kathi, S., **S. Singh**, W. Li, L. Thompson, H. Laza and C. Simpson. 2022. Supergreens. Oral presentation at the ASHS Annual Conference. July 30-August 3. Chicago, IL.
10. Regmi, A., C. Coldren, **S. Singh**, N. Moustaid-Moussa, and C. Simpson. 2022. Fertilization can reduce the stress of biochar. Poster presentation at Lone Star Horticulture Forum, TNLA. January 10. College Station, TX
11. Singh, M., **S. Singh**, and V. Parkash. 2021. Effect of biochar application on soil properties and sweet corn performance under deficit irrigation. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 7-10. Salt Lake City, UT.
12. Singh, M., and **S. Singh**. 2021. Physiological, morphological and yield responses of cucumber to deficit irrigation in a semi-arid environment. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 7-10. Salt Lake City, UT.
13. Singh, A., S.K. Deb, L.C. Slaughter, W. Guo, and **S. Singh**. 2021. Simulating root zone soil water dynamics in subsurface drip-irrigated cotton under cotton-weed interactions. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 7-10. Salt Lake City, UT.
14. Singh, A., S.K. Deb, L.C. Slaughter, W. Guo, and **S. Singh**. 2021. Modeling of soil water dynamics in cotton production systems using multi-model approach. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 7-10. Salt Lake City, UT.
15. **Singh, S.**, V. Parkash, and M. Singh. 2021. Root distribution, soil water depletion, and water use efficiency of cucumber cultivars under deficit irrigation. Oral presentation at the ASHS Annual Conference. August 5-9. Denver, CO.

16. Shaik, A., **S. Singh**, M. G. Siebecker, and R. Wallace. 2021. Yield and nutrient content of eggplant as influenced by arbuscular mycorrhizal fungi in organic soilless production system. Oral presentation at the ASHS Annual Conference. August 5-9. Denver, CO.
17. Shaik, A., **S. Singh**, and T. Montague. 2021. Effect of liquid organic fertilizers on growth and yield of butterhead lettuce in soilless production system. Poster presentation at the ASHS Annual Conference. August 5-9. Denver, CO.
18. Singh, M., **S. Singh**, V. Parkash, S. Deb, G. Ritchie, and R. Wallace. 2021. Water use efficiency, soil water depletion and root growth patterns in sweet corn under deficit irrigation and biochar application. Oral presentation at the ASHS Annual Conference. August 5-9. Denver, CO.
19. Singh, M., **S. Singh**, S. Deb, G. Ritchie, and R. Wallace. 2021. Physiology, growth and yield of sweet corn as affected by biochar application under deficit irrigation. Poster presentation at the ASHS Annual Conference. August 5-9. Denver, CO.
20. Parkash, V., R. Saini, M. Singh, and **S. Singh**. 2021. Physiology, yield, and water use efficiency of pumpkin as affected by organic weed control. Poster presentation at the ASHS Annual Conference. August 5-9. Denver, CO.
21. Regmi, A., C. Simpson, **S. Singh**, C. Coldren and N. Moustaid-Moussa. 2021. Effect of biochar rates on phytochemicals in viola. Poster presentation at the ASHS Annual Conference. August 5-9. Denver, CO.
22. Parkash, V., **S. Singh**, S. Deb, G. Ritchie, and R. Wallace. 2020. Physiology, yield and water-use efficiency of cucumber affected by deficit irrigation. Oral presentation at the ASHS Annual Conference. August 10-13. Orlando, FL. (Virtual).
23. Singh, M., **S. Singh**, V. Parkash, and S. Deb. 2020. Root growth responses of sweet corn to water deficit and biochar amendment. Poster presentation at the ASHS Annual Conference. August 10-13. Orlando, FL. (Virtual).
24. Singh, M., **S. Singh**, G. Ritchie, and R. Wallace. 2020. Potential of biochar amendment for enhancing cucumber productivity and physiology under reduced irrigation regimes. Oral presentation at the ASHS Annual Conference. August 10-13. Orlando, FL. (Virtual).
25. Singh, A., S. K. Deb, **S. Singh**, and W. Guo. 2020. A multi-model approach for analyzing soil water dynamics and root water uptake patterns of cotton grown under semiarid conditions. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 9-13. (Virtual).
26. Parkash, V., **S. Singh**, A. Singh, R. Saini, and B. Bhattarai. 2019. Effect of deficit irrigation and planting density on physiology, yield and water use of cucumber in semi-arid west-Texas. Poster presentation at the ASHS Annual Conference. July 21-25. Las Vegas, NV.
27. Saini R., A. Shaikh, A. Singh and **S. Singh**. 2019. Field evaluation of mustard and sunflower seed meal for weed management in pumpkin. Poster presentation at the ASHS Annual Conference. July 21-25. Las Vegas, NV.

28. Singh, M., S. P. Sharma, N. K. Sarao, **S. Singh**, and R. Saini. 2019. Identification of SSR markers linked to nuclear male sterility gene ms-1 in muskmelon (*Cucumis melo* L.). Poster presentation at the ASHS Annual Conference. July 21-25. Las Vegas, NV.
29. Bhattarai, B., **S. Singh**, C. P. West, C. Trostle, and G. L. Ritchie. 2019. Forage sorghum, pearl millet, and corn physiology, nutrient content, and yield under deficit irrigation. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 10-13. San Antonio, TX.
30. Bhattarai, B., **S. Singh**, C. P. West, C. Trostle, and G. L. Ritchie. 2019. Soil water extraction and water use efficiency of forage sorghum, pearl millet, and corn under deficit irrigation. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 10-13. San Antonio, TX.
31. Singh, A., S. Deb, **S. Singh**, and E. Escamilla. 2019. Soil moisture depletion in drip irrigated cotton under deficit irrigation practices in Texas High Plains. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 10-13. San Antonio, TX.
32. Singh, A., R. Saini, **S. Singh**, and S. Deb. 2019. Effect of mustard and sunflower seed meal on soil physical properties and yield in pumpkin. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 10-13. San Antonio, TX.
33. Pabuayon, I. L., **S. Singh**, and G. L. Ritchie. 2019. Comparison of the water use dynamics of cotton grown with sorghum under deficit irrigation. Poster presentation at the Beltwide Cotton Conferences. January 8-10. New Orleans, LA.
34. Singh, A., S. Deb, **S. Singh**, E. Escamilla, B. Bahattarai, and I.L. Pabuayon. 2019. Soil water depletion in drip irrigated forage crop under different levels of irrigation. Poster presentation at the SSSA Annual Meetings. January 6-9. San Diego, CA.
35. Singh, A., S. Deb, E. Escamilla and **S. Singh**. 2019. Modeling root water uptake patterns of cotton under deficit subsurface drip irrigation. Poster presentation at the SSSA Annual Meetings. January 6-9. San Diego, CA.
36. Pabuayon, I. L., **S. Singh** and G. L. Ritchie. 2018. Productivity of cotton and alternative oilseed crops subjected to water-limiting conditions in west Texas. Poster presentation at the ASA and CSSA International Annual Meetings. November 4-7. Baltimore, MD.
37. Bhattarai, B., **S. Singh**, C. P. West, G. L. Ritchie, and C. Trostle. 2018. Forage production potential of sorghum, pearl millet and corn under different irrigation regimes. Poster presentation at the ASA and CSSA International Annual Meetings. November 4-7. Baltimore, MD.
38. Pabuayon, I. L., **S. Singh**, and G. L. Ritchie. 2018. Soil water and water use dynamics of alternative crops with deficit irrigation. Oral presentation at the Southern Regional Branch of ASA 2018 Annual Meetings. February 4-6, 2018. Jacksonville, FL.
39. Pabuayon, I. L., **S. Singh**, and G. L. Ritchie (2018). Response of alternative oilseed crops to deficit irrigation in West Texas. Poster presentation at the Southern Regional Branch of ASA 2018 Annual Meetings. February 4-6, 2018. Jacksonville, FL.

40. Pabuayon, I. L., **S. Singh**, and G. L. Ritchie. 2017. Productivity of drought-tolerant alternative crops subjected to water-limiting conditions in west Texas. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. October 22-25. Tampa, FL.
41. Singh, A., S. K. Deb, **S. Singh**, and J. S. Kang. 2017. Effect of cover crops on yield, quality, and soil properties in no-till baby corn. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. October 22-25. Tampa, FL.
42. Begna, S. K. Katuwal, **S. Singh**, Y. Cho, and S. Angadi. 2017. Spring canola critical growth stages for water management. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. October 22-25. Tampa, FL.
43. Angadi, S., **S. Singh**, K. Katuwal, S. Begna, and D. Auld. 2017. Yield responses of different alternative crops to growth stage based irrigation management. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. October 22-25. Tampa, FL.
44. **Singh, S.**, S. Angadi, K. Grover, and K. J. Boote. 2017. Irrigation management and crop modeling in safflower. Oral presentation at the Annual Meeting of the Southern Branch of the American Society of Agronomy. February 5-7. Mobile, AL.
45. **Singh, S.**, K. J. Boote, S. Angadi, and K. Grover. 2016. Using the CROPGRO model for predicting water balance, evapotranspiration and water use efficiency of spring safflower. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 6-9. Phoenix, AZ.
46. Katuwal, K. B., Y. Cho, S. V. Angadi, S. Begna, and **S. Singh**. 2016. Assessing spring canola adoptability to the Southern High Plains using critical stage based irrigation and crop modeling approaches. Oral presentation at the Western Society of Crop Science Annual Meeting. July 12-13. Albuquerque, NM.
47. Angadi, S., S. Begna, **S. Singh**, and K. Grover. 2015. Deep rooted crops under center pivot irrigation: managing water stress. Poster presentation at the 3rd International Plant Physiology Congress. December 11-14. New Delhi, India.
48. **Singh, S.**, K. J. Boote, S. Angadi, K. Grover, S. Begna, and D. Auld. 2015. Field scale adaptation of the CROPGRO model for spring safflower. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 15-18. Minneapolis, MN.
49. **Singh, S.**, S. Angadi, K. Grover, R. Hilaire and S. Begna (2015). Seasonal water withdrawal patterns of spring safflower under growth stage based irrigation managements. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 15-18. Minneapolis, MN.
50. **Singh, S.**, K. J. Boote, S. Angadi, K. Grover, S. Begna, and D. Auld. 2015. Adapting the CROPGRO model for an industrial oilseed crop: Spring Safflower. Oral presentation at the International Conference in Industrial Crops and 27th Annual Meeting of the Association for the Advancement of Industrial Crops (AAIC). October 18-22. Lubbock, Texas.
51. **Singh, S.**, K. J. Boote, S. Angadi, K. Grover, S. Begna, and D. Auld. 2015. Simulating growth and yield of spring safflower using CROPGRO model in semiarid New Mexico. Oral presentation at the Western Society of Crop Science Annual Meeting. June 16-17. Logan, UT.

52. **Singh, S.**, K. Grover, S. Begna, S.V. Angadi, and D. Auld. 2014. Growth stage based irrigation management of spring safflower. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 2-5. Long Beach, CA.
53. **Singh, S.**, S.V. Angadi, S. Begna, and K. Grover. 2014. Water use depths across root zone of spring safflower in the Southern High Plains. Poster presentation at the Graduate Research and Arts Symposium. March 10-12. New Mexico State University, Las Cruces, NM.
54. **Singh, S.**, K. Grover, S. Begna, S. Angadi, M. Shukla, R. Steiner, and D. Auld. 2013. Effects of increasing salinity on the performance of spring safflower genotypes. Poster presentation at the Desert Technology 11 International Conference. November 19-22. San Antonio, TX.
55. **Singh, S.**, S.V. Angadi, S. Begna, and K. Grover. 2013. Spring safflower water extraction patterns under different irrigation management strategies in the Southern High Plains. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 3-6. Tampa, FL.
56. **Singh, S.**, K. Grover, S. Begna, and S.V. Angadi. 2013. Effects of pre-irrigation and irrigation levels on physiology and yield of spring safflower in the semi-arid Southern High Plains. Oral presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 3-6. Tampa, FL.
57. Grover, K., M. Shukla, **S. Singh**, and S. Deb. 2013. Soil salinity and related soil characteristics under long-term irrigated organic farming systems in desert southern US. Poster presentation at the ASA, CSSA, and SSSA International Annual Meetings. November 3-6. Tampa, FL.
58. **Singh, S.**, K. Grover, S. Begna, and S.V. Angadi. 2013. Spring safflower: contribution of root water extraction to its drought tolerance under semi-arid environment. Poster presentation at the 13th Annual University Research Council Fair. Oct. 4. New Mexico State University, Las Cruces, NM.
59. **Singh, S.**, K. Grover, S. Begna, and S.V. Angadi. 2013. Spring safflower physiology, growth and yield as affected by different irrigation management practices in semi-arid conditions. Oral presentation at the Western Society of Crop Science Annual Meeting. June. 11-12. Pendleton, OR.
60. **Singh, S.**, K. Grover, S. Begna, and S.V. Angadi. 2013. Response of spring safflower genotypes to water stress in semi-arid New Mexico. Poster presentation at the Second Annual Student Water Conference. April 4-5. Oklahoma State University Campus, Stillwater, OK.
61. **Singh, S.**, K. Grover, S. Begna, and S.V. Angadi. 2013. Response of spring safflower genotypes to water stress in semi-arid New Mexico. Poster presentation at the Graduate Research and Arts Symposium. March 11-13. New Mexico State University, Las Cruces, NM.
62. **Singh, S.** 2011. Effect of sowing dates on growth and yield of *Bt* cotton hybrids (*Gossypium hirsutum* L.). Poster presentation at the International Conference on Preparing Agriculture for Climate Change (ICPACC-2011). Feb. 6-8. Punjab Agricultural University, Ludhiana, India.

EXTENSION & OUTREACH

Talks

- Seed germination, seed dormancy and variety selection in vegetables. Vegetable Production Series organized by Texas A&M AgriLife and South Plains Food Bank, Lubbock, Texas, October 22, 2018.
- Evapotranspiration based irrigation management in cucumber (2018). Annual Field Day. Sep. 14. Quaker Farm at Lubbock, Texas Tech University.
- Advantages of alternative crops (2016). Annual Field Day. Sep. 30. Quaker Farm at Lubbock, Texas Tech University.
- Winter canola or spring canola ? (2015). Annual Field Day. Aug. 7. Agricultural Science Center at Clovis, New Mexico State University.
- Safflower: A stress tolerant alternative oil seed crop for the Southern High Plains (2013). Annual Field Day. Aug. 7. Agricultural Science Center at Clovis, New Mexico State University.
- Managing spring safflower irrigation (2012). Annual Field Day. Aug. 3. Agricultural Science Center at Clovis, New Mexico State University.

Articles and Pamphlets

- Pamphlet: Response of spring canola cultivars to water stress at different development stages in the Southern High Plains (2015). Annual Field Day. Aug. 7. Agricultural Science Center at Clovis, New Mexico State University.
- Pamphlet: Safflower: A stress tolerant alternative oil seed crop for the Southern High Plains (2013). Annual Field Day. Aug. 7. Agricultural Science Center at Clovis, New Mexico State University.
- Article [Punjabi (regional language)]: Kaur, L., B. Singh and **S. Singh** (2010). Saving of water at domestic and farming level. *Kheti Duniya*. 28 (33): 7.

AWARDS & HONORS

- **2022. Third place in the Early Career Award Competition.** American Society for Horticultural Science Annual Conference. July 30-August 3. Chicago, IL.
- **2022. Advisor to the Recipient of Outstanding Graduate Horticulture Student Award:** American Society for Horticultural Science.
- **2022. Advisor to the Recipient of Gerald O. Mott Award for Meritorious Graduate Students in Crop Science:** Crop Science Society of America.
- **2021. Advisor to the Recipient of “George Tereshkovich Outstanding Graduate Award”** - Plant and Soil Science, Texas Tech University.
- **2021. Outstanding Paper Award in C-6 Division of Crop Science Society of America.**
- **2021. Advisor to the Recipient of First Place in Agronomic Production Systems Division Graduate Student Poster Competition.** ASA, CSSA, and SSSA International Annual Meetings. November 7-10. Salt Lake City, UT.

- **2020. Advisor to the Recipient of “George Tereshkovich Outstanding Graduate Award”** - Plant and Soil Science, Texas Tech University.
- **2019. Advisor to the Recipient of Third Place in C-6 Division Robert F. Barnes M.S. Poster Contest.** ASA, CSSA, and SSSA International Annual Meetings. November 10-13. San Antonio, TX.
- **2018. Advisor to the Recipient of First Place in C-2 Graduate Student Poster Competition.** ASA and CSSA International Annual Meetings. November 4-7. Baltimore, MD.
- **2018. Advisor to the Recipient of Second Place in C-6 Division Robert F. Barnes M.S. Poster Contest.** ASA and CSSA International Annual Meetings. November 4-7. Baltimore, MD.
- **2016. Outstanding Graduate Student Paper Award (Ph.D., \$500):** New Mexico State University, NM.
- **2016. Honor of Maintaining the Highest Graduate Grade Point Average (Ph.D.), Honor to be One of the Top 5% Students of the University:** New Mexico State University Graduate School, NM.
- **2015. Best Oral Presentation Award in Evapotranspiration Measurement and Modeling (\$400):** ASA, CSSA, and SSSA International Annual Meetings. Minneapolis, MN.
- **2015. AASIO Outstanding Agricultural Graduate Student Award-2015 (\$200):** The Association of Agricultural Scientists of Indian Origin; ASA, CSSA, and SSSA International Annual Meetings. Minneapolis, MN.
- **2015. AAIC Best Oral Presentation Award:** International Conference in Industrial Crops and 27th Annual Meeting of the Association for the Advancement of Industrial Crops (AAIC), Lubbock, TX.
- **2015. Student Travel Award (\$1000):** International Conference in Industrial Crops and 27th Annual Meeting of the Association for the Advancement of Industrial Crops (AAIC), Lubbock, TX.
- **2015. Conference Travel Award (\$200):** New Mexico State University, NM.
- **2015. Secured Second Place in A.K. Dobrenz Student Oral Presentation Competition (\$175):** Western Society of Crop Science, 2015 annual Meeting, Logan, UT.
- **2015. Merit-based Enhancement Award (\$4000):** New Mexico State University, NM.
- **2015. Outstanding Graduate Student Paper Award (M.S., \$500):** New Mexico State University, NM.
- **2015. Gerald O. Mott Award for Meritorious Graduate Students in Crop Science:** The Crop Science Society of America.
- **2014. Marvin Wilson Memorial Scholarship (\$400):** New Mexico State University, NM.
- **2014. Awarded Certificate of Achievement:** DSSAT International Training Program, Griffin, GA.
- **2014. Outstanding Graduate Assistant Award (\$2000):** New Mexico State University, NM.

- **2013. Honor of Maintaining the Highest Graduate Grade Point Average (M.S.), Came under Top 5% Students of the University:** New Mexico State University Graduate School, NM.
- **2013. Distinguished Graduate Student Award:** Gamma Sigma Delta, The Honor Society of Agriculture.
- **2013. Conference Travel Award (\$150):** ASA, CSSA, and SSSA International Annual Meetings, Tampa, FL.
- **2013. Outstanding Graduate Student Poster Presentation Award:** 2013 Student Water Conference sponsored by National Science Foundation (NSF) and the Buchanan Family Trust, OSU, Still Water, OK.
- **2013. Conference Travel Award (\$250):** 2013 Student Water Conference sponsored by National Science Foundation (NSF) and the Buchanan Family Trust, OSU, Still Water, OK.
- **2013. Graduate Assistant Tuition Fellowships (~ \$12000 / 3 years):** New Mexico State University, NM.
- **2013. Conference Travel Award (\$350):** New Mexico State University, NM.
- **2012. Recognition of High Scholarship, Outstanding Achievement:** Gamma Sigma Delta, The Honor Society of Agriculture.
- **2012. Graduate Research Enhancement Grant (GREG) Award (~ \$45000 / 3 years):** New Mexico State University, NM.
- **2006. Best Folk Dancer of the University:** Punjab Agricultural University, PB, India.
- **2006. University Merit Certificate in Folk Dance:** Punjab Agricultural University, PB, India.
- **2005. College Merit Certificate in Folk Dance:** Punjab Agricultural University, PB, India.

RESEARCH GRANTS & CONTRACTS

Funded: Grants, Pre-proposals and Gift Money

- Bratcher, C., **S. Singh** et al. 2022. OAP- precipitation and irrigation management to optimize profits from crop production - OAP 3rd phase with TTU. USDA-ARS-OAP. Co-Investigator. \$48,000. My share: \$5,200.
- Trostle, C. and **S. Singh**. 2022. Industrial hemp fiber yield of dryland vs. limited irrigation. High Plains Underground Water Conservation District No. 1. Co-Investigator. \$18,000. My share: \$9,000.
- Bratcher, C., **S. Singh** et al. 2021. OAP- precipitation and irrigation management to optimize profits from crop production - OAP 3rd phase with TTU. USDA-ARS-OAP. Co-Investigator. \$262,723. My share: \$28,462.
- **Singh, S.** 2021. Assessing growth and yield of leafy greens grown with water utilizing the Superfluidix diffuser system. Superfluidix™ Inc. Principle Investigator. \$20,000. My share: \$20,000.

- Brown, A., M. Ballou, M. Plata, and **S. Singh**. 2021. Advanced multidisciplinary training in agricultural microbiome science. USDA-NIFA-HEC. Co-Investigator. \$150,000. My share: \$15,000.
- **Singh, S.** and R. Saini. 2021. Evaluation of industrial hemp cultivars for commercial production in Texas. Texas Hemp Growers Association. Principle Investigator. \$30,000. My share: \$18,000.
- Trostle, C. and **S. Singh**. 2021. Industrial hemp fiber yield of dryland vs. limited irrigation. High Plains Underground Water Conservation District No. 1. Co-Investigator. \$18,000. My share: \$9,000.
- **Singh, S.** and S. Deb. 2020. Biochar to improve water use efficiency and soil resilience in West Texas. USDA-AMS-SCBGP. Principle Investigator. \$72,000. My share: \$54,000.
- **Singh, S.** and R. Saini. 2019. Agronomic evaluation of different specialty crops. Group NIRE Renewable Energy. Principle Investigator. \$142,107. My share: \$113,685.
- West, C., **S. Singh** et al. 2019. Precipitation and irrigation management to optimize profits from crop production. USDA-ARS-OAP. Co-Investigator. \$213,468. My share: \$19,212.
- West, C., **S. Singh** et al. 2019. Water management to sustain the economic activity from the Ogallala aquifer on the southern high plains. USDA-ARS-OAP. Co-Investigator. \$188,003. My share: \$15,040.
- **Singh, S.**, C. West., and C. Trostle. 2017. Comparing forage potential of forage sorghum, pearl millet and corn under limited irrigation. High Plains Underground Water Conservation District No. 1. Principle Investigator. \$44,765. My share: \$40,288.
- **Singh, S.**, G. Ritchie, and D. Auld. 2016. Inclusion of alternative crops into cropping systems to extend the life of limited ground water. High Plains Underground Water Conservation District No. 1. Principle Investigator. \$44,921. My share: \$30,097.
- **Unrestricted Gifts:** Gifts and funding from agricultural-related private companies and associations.
 - 2022 - Hemp Seed Warehouse, Cumberland Furnace, TN: 2,500.
 - 2022 - Texas Earth, Inc., Idalou, TX: 7,000.
 - 2021 - AgroThrive, Inc., Morgan Hill, CA: \$20,000.
 - 2020 - Agro Research International, LLC., Sorrento, FL: \$2,000.
 - 2020 - United Supermarkets, Lubbock, TX: \$1,000.
 - 2020 - Escondido Minerals, LP, Austin, TX: \$35,000.
 - 2019 - Agro Research International, LLC., Sorrento, FL: 2,000.
 - 2019 - Coffey Forage Seeds, Inc., Plainview, TX: \$2,500.
 - 2018 - Nachurs Alpine Solutions®, Marion, OH: \$1,800.
 - 2017 - Coffey Forage Seeds, Inc., Plainview, TX: \$2,500.

Submitted: Grants and Pre-proposals

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Not Funded: Grants and Pre-Proposals

- Moustaid-Moussa, N., **S. Singh**, C. Simpson et al. 2022. GRow and EAT Leafy GREENS (GREAT GREENS): Sustainable Production of Leafy Greens for Health and Food Safety. USDA-NIFA-AFRI-SAS. Co-Investigator. \$10,000,000. My share: \$803,125.
- **Singh, S.**, R. Saini, N. Abidi, J. Shamshina, and C. Trostle. 2022. Optimizing Industrial Hemp Production System Efficiency in Texas High Plains. USDA-NIFA-AFRI. Principle Investigator. \$749,992. My share: \$374,996.
- Saini, R., **S. Singh**, S. Deb and L. Slaughter. 2022. Can Industrial Hemp be used as a Cover Crop in Vegetable Production Systems? USDA-NIFA-AFRI. Co-Investigator. \$722,682. My share: \$144,536.
- Simpson, C., **S. Singh**, H. Laza et al. 2022. GREAT - Guayule Rubber Production Efficiency Assessment in Texas. USDA-NIFA-AFRI. Co-Investigator. \$744,355. My share: \$178,645.
- **Singh, S.** and C. Trostle. 2022. Guar: a potential new vegetable crop for Texas. USDA-AMS-SCBGP. Principle Investigator. \$92,690. My share: \$83,090.
- Baath, G., **S. Singh** et al. 2022. Building a climate-smart sesame industry. USDA-NRCS-COMM. Co-Investigator. \$11,500,000. My share: \$587,029.
- Jagadish, K., **S. Singh**, D. McCallister et al. 2022. Energizing the forage-livestock industry to enhance agricultural productivity of the US Southern High Plains under a changing climate. USDA-NIFA-AFRI-SAS. Co-Investigator. \$10,000,000.
- Moustaid-Moussa, N., **S. Singh**, A. Echeverry et al. 2021. GRow and EAT Leafy GREENS (GREAT GREENS): Sustainable Production of Leafy Greens for Health and Food Safety. USDA-NIFA-AFRI-SAS. Co-Investigator. \$10,039,067. My share: \$803,125.
- **Singh, S.**, R. Saini, N. Abidi, J. Shamshina, and C. Trostle. 2021. Optimizing Industrial Hemp Production System Efficiency in Texas High Plains. USDA-NIFA-AFRI. Principle Investigator. \$750,000. My share: \$375,000.
- Saini, R., **S. Singh**, S. Deb and L. Slaughter. 2021. Industrial Hemp: Novel cover crop for vegetable production systems in the Texas High Plains. USDA-NIFA-AFRI. Co-Investigator. \$749,923. My share: \$149,985.
- Simpson, C., **S. Singh**, H. Laza et al. 2021. GREAT - Guayule Rubber Production Efficiency Assessment in Texas. USDA-NIFA-AFRI. Co-Investigator. \$749,995. My share: \$179,998.
- **Reyes, B.**, and S. Singh. 2021. Germplasm collection and characterization in support of hemp research and breeding for the semi-arid agroecology of the high plains. USDA-NIFA-SAC. Co-Investigator. \$499,971. My share: \$199,988.
- Singh, M., and **S. Singh**. 2021. Optimizing water use efficiency and quality of eggplant under diverse production systems. Southern SARE. Principle Investigator. \$15,159. My share: \$15,159.
- Li, W., C. Simpson, **S. Singh** and H. Laza. 2021. Sustainable rubber products: innovation, science and engineering = SuRPrISE. NSF-ERC. Co-Investigator. \$1,966,499. My share: \$196,649.

- **Singh, S.** and C. Trostle. 2021. Guar: a potential new vegetable crop for Texas. USDA-AMS-SCBGP. Principle Investigator. \$90,959. My share: \$82,959.
- Saini, R. and **S. Singh**. 2021. Evaluating biochar-cotton burr compost mixtures as renewable substrates for soil-less tomato production. USDA-AMS-SCBGP. Co-Investigator. \$82,226. My share: \$16,445.
- **Singh, S.**, and R. Saini. 2020. Effect of planting time and planting density on water use efficiency of industrial hemp. USDA-ARS-OAP. Principle Investigator. \$68,460. My share: \$50,331.
- Trostle, C., **S. Singh** and D. McAllister 2020. Industrial hemp fiber yield of dryland vs. limited irrigation production. USDA-ARS-OAP. Co-Investigator. \$83,120. My share: \$19,789.
- Singh, M., and **S. Singh**. 2020. Evaluating biochar-cotton burr compost mixtures as renewable substrates for soil-less tomato production. Southern SARE. Principle Investigator. \$14,127. My share: \$14,127.
- Plata Sanchez, M., **S. Singh** et al. 2020. Food safety risk profiling of agricultural water by environmental DNA (eDNA) and earth observation systems (EOS). NIH-FDA. Co-Investigator. \$1,249,996. My share: \$75,000.
- Saini, R., **S. Singh**, S. Deb and L. Slaughter. 2020. Aromatic plants as potential cover crops for sustainable vegetable production in the Texas High Plains. USDA-NIFA-AFRI. Co-Investigator. \$459,877. My share: \$137,963.
- Simpson, C., **S. Singh**, H. Laza et al. 2020. GREAT - Guayule Rubber production Efficiency Assessment in Texas. USDA-NIFA-AFRI. Co-Investigator. \$499,897. My share: \$109,977.
- **Singh, S.** and R. Saini. 2020. Evaluation of industrial hemp cultivars for commercial production in Texas. Texas Hemp Growers Association. Principle Investigator. \$202,570. My share: \$121,542.
- Burow, M., C. Trostle, **S. Singh** et al. 2020. Guar improvement and utilization in the U.S. southwest: GUAR-REP. USDA-NIFA-SCRI. Co-Investigator. \$1,955,840. My share: \$121,500.
- Simpson, C., **S. Singh** and H. Laza. 2020. SWAT- Sustainable R(W)ubber through advance technology - phase 2. DARPA. Co-Investigator. \$333,214. My share: \$116,625.
- Saini, R., **S. Singh**, S. Deb, L. Slaughter and R. Wallace. 2019. Aromatic plants as potential cover crops for sustainable vegetable production in the Texas High Plains. Southern SARE. Co-Investigator. \$279,601. My share: \$83,880.
- **Singh, S.** and Group NIRE. 2019. Energy-natural resource management and supervisory control of scalable small farm production systems. USDA-NIFA-SBIR. Principle Investigator. \$31,000. My share: \$31,000.
- Moustaid-Moussa, N., **S. Singh**, A. Echeverry et al. 2019. GRow and EAT Leafy GREENS (GREAT GREENS): Sustainable Production of Leafy Greens for Health and Food Safety. USDA-NIFA-AFRI-SAS. Co-Investigator. \$10,000,000. My share: \$500,000.

- Patino, R., W. Oldewage-Theron, **S. Singh**, A. Alpizar and C. Fedler. 2019. Alleviating food insecurity through community-based aquaponics in Kenya. USAID-Feed the Future Innovation Lab for Fish. Co-Investigator. \$678,339
- Canas-Carrell, J., and **S. Singh** et al. 2019. Scholars for Tomorrow in Rural Agribusiness and Nutrition (STRAN). USDA-NIFA-MSP. Co-Investigator. \$210,000. My share: \$23,100.
- **Singh, S.**, S. Loneragan, S. Longing, R. Saini and L. Slaughter. 2019. Advancing sustainable production practices and native pollinator conservation in Texas pumpkins. Southern SARE. Principle Investigator. \$257,941. My share: \$77,382.
- **Singh, S.**, S. Deb and R. Saini. 2019. Combining biochar application with deficit irrigation to improve water productivity of vegetable production in Texas. Underground Water Conservation District No. 1. Principle Investigator. \$45,949. My share: \$32,164.
- Saini R. and **S. Singh**. 2019. Water saving and weed suppression by combination of deficit irrigation and commercially-available organic products in watermelons. Underground Water Conservation District No. 1. Co-Investigator. \$40,660. My share: \$12,198.
- Deb, S. and **S. Singh**. 2019. Evaluation of potential recharge from irrigated cropping systems in Texas Southern High Plains. Underground Water Conservation District No. 1. Co-Investigator. \$61,734. My share: \$12,345.
- **Singh, S.** R. Saini and S. Deb. 2019. Improving water use efficiency and soil resilience for sustainable vegetable production in Texas. USDA-AMS-SCBGP. Principle Investigator. \$71,221. My share: \$49,855.
- Saini, R. and **S. Singh**. 2019. Evaluation of aromatic cover crops in high tunnel vegetable production system. USDA-AMS-SCBGP. Co-Investigator. \$67,103. My share: \$26,841.
- Moustaid-Moussa, N., **S. Singh**, A. Echeverry et al. 2018. GRow and EAT Leafy GREENS (GREAT GREENS): Sustainable Production of Leafy Greens for Health and Food Safety. USDA-NIFA-AFRI-SAS. Co-Investigator. \$10,000,000. My share: \$500,000.
- Weindorf, D., W. Guo, **S. Singh** et al. 2018. A proximal sensor tracking approach to the food energy water nexus. NSF-INFEWS. Co-Investigator. \$396,058. My share: \$59,409.
- Saini, R., **S. Singh**, S. Deb, L. Slaughter and R. Wallace. 2018. Aromatic plants as potential cover crops for sustainable vegetable production in the Texas High Plains. Southern SARE. Co-Investigator. \$260,347. My share: \$78,104.
- Saini, R. and **S. Singh**. 2018. Maximizing water use efficiency and weed control in pumpkin via different biodegradable mulches under drip irrigation. High Plains Underground Water Conservation District No. 1. Co-Investigator. \$46,701. My share: \$9,340.
- Deb, S., L. Slaughter, **S. Singh** et al. 2018. Integrating biochar amendment and deficit irrigation strategies to enhance soil physical quality, corn yield, and water use efficiency. USDA-ARS-OAP. Co-Investigator. \$113,956. My share: \$22,791.
- Saini, R and **S. Singh**. 2018. Combined application of mycorrhizal fungi and oxo-biodegradable mulching films to improve water-use efficiency and weed control in watermelon. USDA-ARS-OAP. Co-Investigator. \$96,111. My share: \$28,833.

- Slaughter, L., S. Longing, **S. Singh** et al. 2018. Influence of soil health management practices on soil-plant-pollinator interactions and ecosystem services in semi-arid production systems. USDA-NRCS-NHQ-CIG. Co-Investigator. \$340,708. My share: \$34,000.
- Saini, R., **S. Singh**, and R. Wallace. 2018. Integration of cover crops and conservation tillage systems for organic vegetable production in semi-arid west-Texas. USDA-AMS-SCBGP. Co-Investigator. \$150,117. My share: \$45,000.
- Sharma, L., A. Chatterjee, S. Bali, O. Walsh, R. Saini, **S. Singh**, and N. Macnack. 2018. Improve nitrogen use efficiency through soil and water management. USDA-NIFA-SCRI. Co-Investigator. \$2,551,026. My share: \$232,357.
- Burow, M., C. Trostle, **S. Singh** et al. 2018. Guar improvement and utilization in the U.S. southwest: a research and extension proposal. USDA-NIFA-SCRI. Co-Investigator. \$2,400,000. My share: \$164,937.
- **Singh, S.**, and G. Ritchie. 2017. Growth stage based irrigation management and crop modeling in sesame. USDA-ARS-OAP. Principle Investigator. \$75,655.
- **Singh, S.**, Y. Emendack, and C. Hayes. 2017. Enhancing dryland cropping and mitigating Ogallala aquifer decline in the Southern High Plains with early season grain sorghum. USDA-ARS-OAP. Principle Investigator. \$61,260.
- **Singh, S.**, C. West, Angadi, S., R. Ghimire, and G. Marek. 2017. Improve sustainability of Ogallala aquifer using circles of live buffer strips. USDA-ARS-OAP. Co-Investigator. \$60,798.
- Hellman, E., T. Montague, J.D. Booker, S. Deb, W. Guo, **S. Singh**, L. Slaughter, R.B. Williams, and D.M. McCallister. 2017. Irrigation scheduling of vineyards on the Texas High Plains for enhanced water use efficiency of a high value crop. USDA-ARS-OAP. Co-Investigator. \$187,478.
- **Singh, S.**, S. Vyavhare, and S. Deb. 2017. Physiological response of cotton to neonicotinic seed treatments under abiotic stress. Cotton Incorporated - Texas State Support Committee. Principle Investigator. \$41,934.
- **Singh, S.**, G. Ritchie, W. Guo, and C. West. 2017. Climate Smart Decision Support Tool for improving in-season decision making in the Texas High Plains. USDA-SRCH. Principle Investigator. \$75,000.
- **Singh, S.**, and G. Ritchie. 2017. Inclusion of alternative crops into cropping systems to extend the life of limited ground water. Stage 2. 2017 Olam Prize for Innovation in Food Security, Agropolis Foundation. Principle Investigator. \$50,000.
- **Singh, S.**, C. West, G. Ritchie, S. Deb, K. J. Boote, and S. Angadi. 2016. Guar response to drought stress: an integrated agronomic, physiological and crop modeling approach. USDA-NIFA-AFRI. Principle Investigator. \$499,840.
- Ritchie, G., S. Deb, H. Sari-Sarraf, V. Mendu, and **S. Singh**. 2016. Crop growth modeling using high throughput phenotyping and gene-to-phenotype analysis. USDA-NIFA-AFRI. Co-Investigator. \$500,000.

- **Singh, S.**, C. West, G. Ritchie, K. Lewis, S. Deb, and C. Adams. 2016. Impact of integrating winter cover crops into cotton producing cropping systems. USDA-ARS-OAP. Principle Investigator. \$215,050.
- West, C., **S. Singh**, R. Aiken, J. Bell, X. Lin, D. Min, and V. Corriher-Olson. 2016. Modeling teff as a dryland forage crop. USDA-ARS-OAP. Co-Investigator. \$123,149.
- Angadi, S., D. Auld, K. Grover, **S. Singh**, and V. Mendu. 2016. Continuing development of safflower as a new biomass energy crop for the lower great plains of North America. USDA-NIFA-SGP. Co-Investigator. \$187,500.

STUDENTS SUPERVISION

Graduate Students

Completed:

Committee Chair (6)

- Chair (Fall, 2018-Fall 2022): Manpreet Singh, Ph.D. student, Plant and Soil Science, Texas Tech University.
- Chair (Fall, 2018-Summer 2022): Azeez Shaik, Ph.D. student, Plant and Soil Science, Texas Tech University.
- Chair (Fall, 2018-Spring 2022): Sujatha Venkataramani, M.S. student, Plant and Soil Science, Texas Tech University.
- Chair (Fall, 2018-Fall, 2020): Ved Parkash, M.S. student, Plant and Soil Science, Texas Tech University.
- Chair (Spring, 2018-Fall, 2019): Bishwoyog Bhattarai, M.S. student, Plant and Soil Science, Texas Tech University.
- Co-chair (Fall, 2016-Spring, 2018): Irish Lorraine Pabuayon, M.S. student, Plant and Soil Science, Texas Tech University.

Committee Member (11)

- Committee member (Fall, 2022): Taiwo Osoko, M.S. student, Biological Sciences, Texas Tech University.
- Committee member (Fall, 2022): Atinderpal Singh, Ph.D. Plant and Soil Science, Texas Tech University.
- Committee member (Summer, 2022): Loron Brown, Ph.D. student, Animal and Food Sciences, Texas Tech University.
- Committee member (Summer, 2021): Abishkar Regmi, M.S. student, Plant and Soil Science, Texas Tech University.
- Committee member (Spring, 2021): Mary Staublin, M.S. Non-Thesis student, Plant and Soil Science, Texas Tech University.
- Committee member (Summer, 2020): Kathryn Radicke, Ph.D. student, Plant and Soil Science, Texas Tech University.
- Committee member (Fall, 2020): Manavi Singh, M.S. student, Plant and Soil Science, Texas Tech University.

- Committee member (Fall, 2019): Miranda Jones, M.S. Non-Thesis student, Plant and Soil Science, Texas Tech University.
- Committee member (Fall, 2019): Sharon Johnson, M.S. Non-Thesis student, Plant and Soil Science, Texas Tech University.
- Committee member (Summer, 2019): Atinderpal Singh, M.S. student, Plant and Soil Science, Texas Tech University.
- Committee member (Summer, 2019): Victoria Xiong, Ph.D. student, Plant and Soil Science, Texas Tech University.

In Progress:

Committee Chair (5)

- Chair (Fall, 2022-Present): Craig Hartsough, M.S. Non-Thesis student, Plant and Soil Science, Texas Tech University.
- Chair (Spring, 2022-Present): Preetaman Bajwa, M.S. student, Plant and Soil Science, Texas Tech University.
- Chair (Spring, 2021-Present): Arbnor Gashi, M.S. Non-Thesis student, Plant and Soil Science, Texas Tech University.
- Chair (Fall, 2020-Present): Arjun Kafle, Ph.D. student, Plant and Soil Science, Texas Tech University.
- Chair (Spring, 2018 - Present): Summer Loneragan, Ph.D. student, Plant and Soil Science, Texas Tech University.

Committee Member (2)

- Committee member (Spring, 2022-Present): Lauren Selph, Ph.D. student, Plant and Soil Science, Texas Tech University.
- Committee member (Spring, 2021-Present): Shivani Kathi, Ph.D. Plant and Soil Science, Texas Tech University.

Dean's Representative (3)

- Shipra Garg, (Summer, 2021), Ph.D. student, Chemistry and Biochemistry, Texas Tech University.
- Lingna Zhang, (Summer, 2019), Ph.D. student, Animal and Food Sciences, Texas Tech University.
- Nothabo Dube, (Summer, 2018), Ph.D. student, Plant and Soil Science, Texas Tech University.

Under Graduate Students

Student Research

- Eric Wouters (Spring 2022-present): Plant and Soil Science, Texas Tech University.
Research project: Optimizing the productivity of leafy greens and industrial hemp using aquaponics production system.
- Lee Fischel (Fall 2020-Summer 2022): Plant and Soil Science, Texas Tech University.

Research project: Growth and yield of greenhouse grown lettuce in response to secondary metabolite in organic soilless production system.

Student Internship

- Gary Pelletier (Summer 2021-Fall 2021): Plant and Soil Science, Texas Tech University.
- Rodney Darnell (Summer, 2017): Plant and Soil Science, Texas Tech University.

Student Assistant

- Bryan Quant (Summer 2022): Computer Science. Texas Tech University.
- Nelson Mora (Summer 2021): Industrial Manufacturing and Systems Engineering, Texas Tech University.
- Kamron Newberry (Spring 2019): Plant and Soil Science, Texas Tech University.
- Erik Farley-Talamantes (Summer, 2018): Mechanical Engineering, Texas Tech University.
- Furnell Forman (Summer, 2018): Computer Engineering, Texas Tech University.
- Eduardo Escamilla (Fall, 2017): Plant and Soil Science, Texas Tech University.

PROFESSIONAL SERVICE

Associate Editor

- Agronomy Journal: 2017-2019.

Conference Leadership

- Leader of ASA Crop Irrigation Strategies and Management Community: 2017-2018.
- Vice-leader of ASA Crop Irrigation Strategies and Management Community: 2016-2017.

Conference Session Moderator

- Session Moderator for "Water Utilization and Management" - Oral Session. American Society for Horticultural Science Annual Conference. August 7, 2021. Denver, CO.

Invited Judge

- Graduate student poster competition. American Society for Horticultural Science Annual Conference. July 30-August 3, 2022. Chicago, IL.
- The Amarillo Tri-State Exposition - Judged the Tri-State Fair in the Garden and Agronomy section. Sep14, 2019. Amarillo, TX
- Undergraduate Research Contest - Poster Section III. ASA, CSSA, and SSSA International Annual Meetings. Oct. 22-25, 2017. Tampa, FL.
- Graduate poster competition. Annual Meeting of the Southern Branch of the American Society of Agronomy. Feb. 5-7, 2017. Mobile, AL.
- Graduate poster competition (CSSA C3 division). ASA, CSSA, and SSSA International Annual Meetings. Nov. 6-9, 2016. Phoenix, AZ.
- Graduate poster competition (ASA Semiarid Dryland Cropping Systems Community). ASA, CSSA, and SSSA International Annual Meetings. Nov. 6-9, 2016. Phoenix, AZ.
- Graduate oral competition (CSSA C2/C4 division). ASA, CSSA, and SSSA International Annual Meetings. Nov. 6-9, 2016. Phoenix, AZ.

Invited Reviewer for Journal Papers

- HortTechnology

- HortScience
- Agronomy Journal
- Crop Science
- Crop and Pasture Science
- Extension Article
- Soil and Tillage Research
- Soil Science Society of America Journal
- Agricultural Water Management
- Irrigation and Drainage

Invited Reviewer for Grant Proposals

- Southern Sustainable Agriculture Research and Education: Reviewed Graduate Student Grant Proposals for the Southern SARE 2022 Research and Education grant cycle. (May 13, 2022 - July 1, 2022).
- Southern Sustainable Agriculture Research and Education: Reviewed Research and Education Proposals for the Southern SARE 2022 Research and Education grant cycle. (December 1, 2021 - December 12, 2021).
- New Mexico State University: Reviewed a hatch proposal. (September 8, 2021 - September 17, 2021).
- Tourism, Culture, Industry, and Innovation Government of Newfoundland and Labrador, Canada, Reviewer, Grant Proposal: Reviewed a Research Proposal "Sustainable production of engineered soils from local materials: A formulation, evaluation, and repurposing of engineered soils". (November 30, 2020 - December 2, 2020).
- USDA-ARS-OAP: 4 proposals

University/Department Service

- Served as hiring committee member for lecturer of local food production (2022).
- Served as judge for PSS Student Research Symposium Oral Session. April 18, 2022.
- Served as judge for NRM Research Day Poster Session. April 29, 2022.
- Vice president of Gamma Sigma Delta – Texas Tech University (2018 - Present)
- Served as committee chair of hiring committee for Horticulture instructor (2020)
- Served as hiring committee member for Assistant/Associate/Full Professor of Horticulture (2018 - 2019)
- PSS Award Committee Member (2016 – Present)
- PSS Farm Committee Member (2016 – Present)
- Guest lectures:
 - Year 2016 – PSS 1100 (Freshman and Transfer Student Seminar).
 - Year 2018 – PSS 5307 (Pesticide), PSS 6318 (Plant Science Research Methods), PSS 1100 (Freshman and Transfer Student Seminar).
 - Year 2019 – PSS 1100 (Freshman and Transfer Student Seminar).
 - Year 2020 – PSS 1100 (Freshman and Transfer Student Seminar).
 - Year 2021 – PSS 1100 (Freshman and Transfer Student Seminar).

- Year 2022 – PSS 1100 (Freshman and Transfer Student Seminar).

INVITED LECTURES

- **Singh, S.**, V. Parkash, and M. Singh (2021). Industrial hemp: a new alternative crop in the Texas High Plains. ASA, CSSA, and SSSA International Annual Meetings. Nov. 7-10. Salt Lake City, UT.
- **Singh, S.** (2019). Sustainable vegetable production. Obesity Research Cluster Meeting. May 8. Lubbock, TX.
- **Singh, S.** (2018). Seed germination, seed dormancy and variety selection in vegetables. Vegetable Production Series organized by Texas A&M AgriLife and South Plains Food Bank. Oct. 22. Lubbock, TX.
- **Singh, S.**, G. L. Ritchie, C. Thompson, C. Schaefer and N. Dube (2016). Plants and other soil moisture sensors in cotton. Symposium-Soil Moisture Sensing for Crop Health Assessment and Management. ASA, CSSA, and SSSA International Annual Meetings. Nov. 6-9. Phoenix, AZ.

SOCIETY MEMBERSHIPS

- American Society for Horticultural Science (2018 - Present)
- Pi Alpha Xi - the Honor Society of Horticulture (2018 - Present)
- Gamma Sigma Delta - the Honor Society of Agriculture (2013 - Present)
- Crop Science Society of America (2012 - Present)
- American Society of Agronomy (2012- Present)
- Soil Science Society of America (2012 - 2019)