

OMOLOLU JOHN IDOWU

Professor and Extension Agronomist

Departments: Extension Plant Sciences & Plant and Environmental Sciences

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EDUCATION AND TRAINING

Ph.D. in Land Management, Cranfield University, England

M.Sc. in Agronomy, University of Gottingen, Germany

B.Sc. Soil Sciences (First Class Honors), University of Ife, Nigeria

RESEARCH INTERESTS

- Soil health management in agroecosystems
- Reduced tillage management in arid and semiarid farming systems
- Cover cropping strategies for arid and semiarid farming systems
- Soil amendments impacts on soil quality and moisture retention
- Glandless cotton management and agronomic optimization
- Soil fertility management for arid and semiarid field crop production

RESEARCH AND PROFESSIONAL EXPERIENCE

Professor and Extension Agronomist **2020**

Associate Professor & Extension Agronomist **2015**

Assistant Professor & Extension Agronomist **2009**

New Mexico State University, Las Cruces, NM.

- Research and extension interests include improving field crop production in New Mexico through sustainable cultural practices and soil health management.

Research Associate **2004 - 2009**

Cornell University, Ithaca, NY.

- Conducted research and extension to support Northeastern USA growers on sustainable land management, soil health and reduced tillage.
- Involved in the development of the framework, interpretations and the software for the Comprehensive Assessment of Soil Health (CASH) test.

Research Fellow **1997 – 2003**

Institute of Agricultural Research and Training, Ibadan, Nigeria.

- Worked on tillage management, soil and nutrient losses, fertilizer management, land use effect on soil properties and soil variability.

SELECTED PUBLICATIONS**A. RESEARCH PUBLICATIONS**

1. Nagila, A., Schutte, B. J., Sanogo, S., **Idowu, O. J.**, 2021 (*in press*). Chile pepper sensitivity to mustard seed meal applied after crop emergence. *HortScience*.
2. Schutte, B. J., Sanchez, A., Beck, L. L., **Idowu, O. J.**, 2021. False seedbeds reduce labor requirements for weeding in chile pepper. *HortTechnology*, <https://doi.org/10.21273/HORTTECH04732-20>
3. Darapuneni, M. K., **Idowu, O. J.**, Sarihan, B., Dubois, D. W., Grover, K., Sanogo, S., Djaman, K., Lauriault, L. M., 2021 (*in press*). Growth characteristics of summer cover crop grasses and their relation to soil aggregate stability and wind erosion control in arid Southwest. *Applied Engineering in Agriculture* Vol. 37(1): 11-23.
4. Mpanga, I.K. and **Idowu, O.J.**, 2021. A decade of irrigation water use trends in Southwest USA: The role of irrigation technology, best management practices, and outreach education programs. *Agricultural Water Management*, 243, p.106438.
5. **Idowu, O.J.**, Sultana, S., Darapuneni, M., Beck, L., Steiner, R. and Omer, M., 2020. Tillage Effects on Cotton Performance and Soil Quality in an Irrigated Arid Cropping System. *Agriculture*, 10(11), p.531.
6. Musfiq-Us-Salehin, S., Ghimire, R., Angadi, S.V. and **Idowu, O.J.**, 2020. Grass Buffer Strips Improve Soil Health and Mitigate Greenhouse Gas Emissions in Center-Pivot Irrigated Cropping Systems. *Sustainability*, 12(15), p.6014.
7. Omer, M., **Idowu, O.J.**, Brungard, C.W., Ulery, A.L., Adedokun, B. and McMillan, N., 2020. Visible Near-Infrared Reflectance and Laser-Induced Breakdown Spectroscopy for Estimating Soil Quality in Arid and Semiarid Agroecosystems. *Soil Systems*, 4(3), p.42.
8. Zhang, J., Wedegaertner, T., **Idowu, O. J.**, (2020) Registration of Glandless ‘NuMex COT 17 GLS’ Upland Cotton Cultivar with Fusarium Wilt Race 4 Resistance. *Journal of Plant Registrations* 14(1), pp.1-9.
9. Antosh, E., **Idowu, O.J.**, Schutte, B. and Lehnhoff, E. (2020) Winter Cover Crops Effects on Soil Properties and Sweet Corn Yield in Semi-Arid Irrigated Systems *Agronomy Journal* 112(1), pp.92-106
10. Omer, M. F., **Idowu, O. J.**, Ulery, A. L., VanLeeuwen, D., Guldan, S. J., Marsalis, M.M, and Ghimire, R. (2020) Impacts of Selected Management Practices on Soil Quality in an Irrigated Arid Agroecosystem. *Journal of Soil and Water Conservation* 75(2), pp.143-152.
11. Elias, E.H., Flynn, R., **Idowu, O.J.**, Reyes, J., Sanogo, S., Schutte, B.J., Smith, R., Steele, C. and Sutherland, C., 2019. Crop Vulnerability to Weather and Climate Risk: Analysis of Interacting Systems and Adaptation Efficacy for Sustainable Crop Production. *Sustainability*, 11(23), p.6619.

12. Oluwatosin, G.A., Are, K.S., Adeyolanu, O.D. and **Idowu, O.J.**, 2019. Characteristics and agricultural potential of soils with plinthic materials in the savanna ecology of south western Nigeria. *Archives of Agronomy and Soil Science*, pp.1-18.
13. **Idowu, O.J.**, Sultana, S., Darapuneni, M., Beck, L. and Steiner, R., 2019. Short-term Conservation Tillage Effects on Corn Silage Yield and Soil Quality in an Irrigated, Arid Agroecosystem. *Agronomy*, 9(8), p.455.
14. Darapuneni, M.K., Lauriault, L.M., Dodla, S.K., **Idowu, O.J.**, Grover, K., Martinez, G., Djaman, K. and Angadi, S.V., 2019. Temporal variations in plant and soil characteristics following strip-till manure application. *Soil and Tillage Research*, 194, p.104350.
15. Kwabena Addae Sarpong, Ali Amiri, Sterling Ellis, **Omololu John Idowu**, and Catherine E. Brewer (2019) Short-term leachability of salts from Atriplex-derived biochars. *Science of the Total Environment* 688 (2019) 701–707.
16. Rajan Ghimire, Binod Ghimire, Abdel O. Mesbah, Upendra M. Sainju, and **Omololu J. Idowu** (2019) Soil Health Response of Cover Crops in Winter Wheat-Fallow System. *Agronomy Journal*, 111:2108-2115.
17. Darapuneni, M.K., **Idowu, O.J.**, Lauriault, L.M., Dodla, S.K., Pavuluri, K., Ale, S., Grover, K. and Angadi, S.V., (2019) Tillage and Nitrogen Rate Effects on Corn Production and Residual Soil Characteristics. *Agronomy Journal* 111:1-9.
18. Zhang, J., Wedegaertner, T., **Idowu, O. J.**, Sanogo, S., Flynn, R. P., Hughs, S. E., Jones, D. C. (2019) Registration of a Glandless ‘Acala 1517-18 GLS’ Cotton. *Journal of Plant Registrations* 2019 13: 1: 12-18.
19. Omer, M., **Idowu, O.**, Ulery, A., VanLeeuwen, D. and Guldán, S., 2018. Seasonal Changes of Soil Quality Indicators in Selected Arid Cropping Systems. *Agriculture*, 8(8), p.124.
20. Ghimire, R., Ghimire, B., Mesbah, A.O., **Idowu, O.J.**, O’Neill, M.K., Angadi, S.V. and Shukla, M.K., 2018. Current status, opportunities, and challenges of cover cropping for sustainable dryland farming in the Southern Great Plains. *Journal of crop improvement*, 32(4), pp.579-598.
21. Thapa, V.R., Ghimire, R., Mikha, M.M., **Idowu, O.J.** and Marsalis, M.A., 2018. Land Use Effects on Soil Health in Semiarid Drylands. *Agricultural & Environmental Letters*, 3(1).
22. **Idowu, O. J.**, Sanogo, S., Brewer, C. E. (2017). Short term impacts of pecan waste byproducts on soil quality in texturally different arid soils. *Communications in Soil Science and Plant Analysis*, 48(15), 1781-1791
23. Zhang, J., **Idowu, O. J.**, Flynn, R. P., Wedegaertner, T., Hughs, S. E. (2016) Transgressive Segregation in an Acala Glanded × Acala Glandless Hybrid for the Development of Glandless Cotton Germplasm., *Journal of Cotton Science*, 20(2), 145-153

24. Zhang, J., **Idowu, O. J.**, Flynn, R. P., Hughs, S. E., Jones, D., Wedegaertner, T. (2016). Registration of glandless ‘NuMex COT 15 GLS’ cotton. *Journal of Plant Registrations*, 10(3), 223-227.
25. Zhang, Y., **Idowu, O.J.**, Brewer, C.E. (2016) Using Agricultural Residue Biochar to Improve Soil Quality of Desert Soils. *Agriculture* 2016, 6(1), 10
26. **Idowu, O. J.**, Kircher, P. D. (2016). Soil Quality of Semiarid Conservation Reserve Program Lands in Eastern New Mexico. *Arid Land Research and Management*, 30(2) 153-165
27. Angadi, S., Gowda, P., Cutforth, H. W., **Idowu, O. J.** (2016). Circles of live buffer strips in a center pivot to improve multiple ecosystem services and sustainability of irrigated agriculture in the Southern Great Plains. *Journal of Soil and Water Conservation* 71(2) pp. 44A-49A.
28. **Idowu, O. J.**, Lombard, K. A., Hyder, D., Ulery, A. L. (2015). Soil Quality of a Semi-Arid Pasture Irrigated with Reverse Osmosis Wastewater-A Case Study from Northern New Mexico. *Journal of Water Resource and Protection*, 7(14), 1121-1130.
29. Iqbal, M., **Idowu, O.J.**, Hassan, A., Khan, A. and Amjad, M (2014). Dairy manure and nitrogen fertilizer effects on residual nitrate and phosphate, and wheat yield in a sandy clay loam soil. *Journal of Plant Nutrition*, 37(4), 562-574.
30. Zhang, J., **Idowu, O. J.**, Wedegaertner, T., Hughs, S. E. (2014). Genetic variation and comparative analysis of thrips resistance in glandless and glanded cotton under field conditions. *Euphytica*, 199, 373-383.
31. Santillano-Cázares, J., Carmona-Victoria, M., Contreras-Govea, F., **Idowu, O. J.**, Albrecht, K. A. (2014). Applicability of Predictive Equations for Alfalfa Quality to Southwest USA and Northern Mexico. *Crop Science*, 54, 2880–2885.
32. **Idowu, O. J.**, Zhang, J., Flynn, R. P., Pierce, J. B., Wedegaertner, T. (2014). Comparative performance of a glandless Acala cultivar and two glanded Acala cultivars in New Mexico. *Journal of Cotton Science*, 18, 122-128.
33. Zhang, J., **Idowu, O. J.**, Wedegaertner, T., Hughs, S. E. (2014). Genetic variation and selection within glandless cotton germplasm. *Euphytica*, 198(1), 59-67.
34. Moebius-Clune, B. N., **Idowu, O. J.**, Schindelbeck, R. R., van Es, H. M., Wolfe, D. W., Abawi, G. S., Gugino, B. K. (2011). Developing Standard Protocols for Soil Quality Monitoring and Assessment. In Bationo, A.; Waswa, B.; Okeyo, J.M.; Maina, F.; Kihara, J.M. (Ed.), *Innovations as Key to the Green Revolution in Africa: Exploring the Scientific Facts* (pp. 1363)
35. Moebius-Clune, B. N., van Es, H., **Idowu, O. J.**, Schindelbeck, R. R., Kimetu, J. M., Ngoze, S., Lehmann, J., Kinyangi, J. M. (2011). Long-term soil quality degradation along a cultivation chronosequence in western Kenya. *Agriculture, Ecosystems and Environment*, 141, 86–99.

36. **Idowu, O.J.**, H.M. van Es, G.S. Abawi, D.W. Wolfe, R.R. Schindelbeck, B.N. Moebius-Clune and B.K. Gugino. (2009) Use of an integrative soil health test for evaluation of soil management impacts. *Renewable Agriculture and Food Systems* 24: 214-224.
37. Schindelbeck, R.R., H.M. van Es, G.S. Abawi, D.W. Wolfe, T. L. Whitlow, B.K. Gugino, **O.J. Idowu**, and B.N. Moebius. (2008) Integrated Assessment of Soil Quality for Landscape and Urban Management. *Landscape and Urban Planning* 88: 73-80
38. **Idowu, O.J.**, H.M. van Es, G.S. Abawi, D.W. Wolfe, J.I. Ball, B.K. Gugino, B.N. Moebius, R.R. Schindelbeck and A.V. Bilgili (2008) Farmer-Oriented Assessment of Soil Quality using Field, Laboratory, and VNIR Spectroscopy Methods. *Plant and Soil* 307:243-253.
39. **Idowu O.J.** and Oluwatosin G.A. (2008) Hydraulic Properties in Relation to Morphology of a Tropical Soil with Hardened Plinthite under Three Land Use Types. *Tropical and Subtropical Agroecosystems* 8: 145 – 155.
40. B.N. Moebius, H.M. van Es, R.R. Schindelbeck, **O.J. Idowu**, J.E. Thies, and D. J. Clune. (2007) Evaluation of Laboratory-Measured Soil Physical Properties as Indicators of Soil Quality. *Soil Science* 172, 11: 895–912.

B. EXTENSION PUBLICATIONS

1. **Idowu, O. J.**, Ghimire, R., Flynn, R. P., Ganguli, A. C. (2020). Executive Summary: Soil Health-Importance, Assessment, and Management. Circular 694A (pp. 2). Las Cruces, NM: New Mexico State University, Cooperative Extension Service.
https://aces.nmsu.edu/pubs/_circulars/CR694B.pdf
2. **Idowu, O. J.**, Ghimire, R., Flynn, R. P., Ganguli, A. C. (2020). Soil Health-Importance, Assessment, and Management. Circular 694B (pp. 16). Las Cruces, NM: New Mexico State University, Cooperative Extension Service.
https://aces.nmsu.edu/pubs/_circulars/CR694B.pdf
3. Tom Isakeit, Mauricio Ulloa, Robert Hutmacher, **John Idowu**, Robert Nichols (2019) Identification and Management of Fusarium Wilt Race 4 of Cotton in Texas and New Mexico. <https://www.cottoninc.com/wp-content/uploads/2019/02/FOV-4-Bulletin.pdf>
4. Tom Isakeit, Mauricio Ulloa, Robert Hutmacher, **John Idowu**, Robert Nichols (2019) Fusarium Wilt Race 4 of Upland Cotton in Texas and New Mexico. Producer Handout. <https://www.cottoninc.com/wp-content/uploads/2019/04/FOV-4-Two-page-Producer-Handout.pdf>
5. **Idowu, O. J.**, Beck, L. L. (2018) Harvest Aid Chemicals for New Mexico Cotton. NMSU Cooperative Extension Service. Guide A-240 http://aces.nmsu.edu/pubs/_a/A240.pdf
6. **Idowu, O. J.**, Brewer, C. E. (2018). Biochar for Arid and Semi-Arid Agricultural Soils. NMSU Cooperative Extension Service. Circular 690.
https://aces.nmsu.edu/pubs/_circulars/CR690.pdf

7. Flynn, R. P., **Idowu, O. J.** (2017). CR687: Managing Organic Matter in Farm and Garden Soils. NMSU Cooperative Extension Service. Circular 687.
<http://aces.nmsu.edu/pubs/circulars/CR687.pdf>
8. **Idowu, O. J.**, Angadi, S., Darapuneni, M. K., Ghimire, R. (2017). Reducing Tillage in Arid and Semi-Arid Cropping Systems: An Overview. NMSU Cooperative Extension Service. Guide A-152. <http://aces.nmsu.edu/pubs/a/A152.pdf>
9. **Idowu, O. J.**, Flynn, R. P. (2015). Growing Plants in Caliche Soils. Guide A-151. NMSU, Cooperative Extension Service. <https://aces.nmsu.edu/pubs/a/A151.pdf>
10. Flynn, R. P., **Idowu, O. J.** (2015). Nitrogen Fixation by Legumes. Guide A-129. NMSU, Cooperative Extension Service. <https://aces.nmsu.edu/pubs/a/A129.pdf>
11. **Idowu, O. J.**, Grover, K. Principles of cover cropping for arid and semi-arid farming systems. (2014) Guide A-150 NMSU, Cooperative Extension Service.
<https://aces.nmsu.edu/pubs/a/A150.pdf>
12. **Idowu, O. J.**, Kircher, P. D. Soil Quality of CRP Lands in Eastern New Mexico. (2014) Guide A-149 NMSU, Cooperative Extension Service.
<https://aces.nmsu.edu/pubs/a/A149.pdf>
13. **Idowu, O. J.**, Angadi, S. (2013). Understanding and Managing Soil Compaction in Agricultural Fields. Circular 672 NMSU, Cooperative Extension Service.
<https://aces.nmsu.edu/pubs/circulars/CR672.pdf>
14. **Idowu, O. J.**, Grover, K., Marsalis, M. A., Lauriault, L. M. (2013). Reducing Harvest and Post-harvest Losses of Alfalfa and Other Hay. Circular 668 NMSU, Cooperative Extension Service. <https://aces.nmsu.edu/pubs/circulars/CR668.pdf>
15. **Idowu, O. J.**, Flynn, R. P. (2013). Understanding Soil Health for Production Agriculture in New Mexico. Guide A148 NMSU, Cooperative Extension Service.
<https://aces.nmsu.edu/pubs/a/A148.pdf>
16. **Idowu, O. J.**, Marsalis, M. A., Flynn, R. P. (2012). Agronomic Principles to Help with Farming during Drought Periods (vol. Guide A-147). Las Cruces, NM: Cooperative Extension Service, New Mexico State University. <http://aces.nmsu.edu/pubs/a/A147.pdf>
17. Robert Schindelbeck, **John Idowu**, Harold van Es. (2008) The Link Between Soil Health and Reduced Tillage. What's Cropping Up? 18, (3) 8-10.
http://css.cals.cornell.edu/cals/css/extension/upload/WCUVol18No3_May-Jun2008-2.pdf
18. Robert Schindelbeck, **John Idowu**, Harold van Es, George Abawi, David Wolfe, Beth Gugino (2008) How to Interpret and Use the Cornell Soil Health Test Report What's Cropping Up? 18, (1) 1-4.
<http://css.cals.cornell.edu/cals/css/extension/upload/WCUvol18no1jan-Feb2008.pdf>
19. **John Idowu**, Harold van Es, Robert Schindelbeck, George Abawi; David Wolfe; Janice Thies; Beth Gugino; Bianca Moebius; Dan Clune. (2006) Soil Health Assessment and Management: The Concepts. What's Cropping Up? Vol. 16 No 2 (a newsletter for field

crops and soils in NY)

<http://www.css.cornell.edu/extension/WCU/Vol16No22006Mar-Apr.pdf>

20. **John Idowu**, Bianca Moebius, Harold van Es, Robert Schindelbeck, George Abawi; David Wolfe; Janice Thies; Beth Gugino; Dan Clune. (2006). Soil Health Assessment and Management: Measurements and Results. What's Cropping Up? Vol. 16 No 3 (a newsletter for field crops and soils in NY)

<http://www.css.cornell.edu/extension/WCU/Vol16No32006May-June.pdf>

C. PROCEEDINGS PUBLICATIONS

1. Mohammed F. Omer, Colby W Brungard, **Omololu J. Idowu**, April L. Ulery, Nancy McMillan, Steven J. Guldan, Dawn VanLeeuwen, and Bidemi Adedokun. (2019) Measuring Soil Quality Using Spectroscopic Techniques. 5th Global Workshop on Proximal Soil Sensing Conference Proceedings, Columbia, MO, May 28-31, 2019. https://docs.wixstatic.com/ugd/8dcedd_4763e8b0465944e0b965dba92fb999ae.pdf
2. **Idowu, O.J.**, Leinauer, B., Serena, M., Bosland, W.K., Omer, M. (2018) Surfactants and Irrigation Regimen Effects on Soil and Plant Health in Arid Turfgrass System. European Turfgrass Society Conference Proceedings, Manchester, UK, July 2-4, 2018.
3. **Idowu, O.J.**, Zhang, J.F., Pierce, J.B., Omer, M., Wedegaertner, T.C. (2018) Impacts of Potassium Fertilization on New Glandless Cultivars Developed for New Mexico. Beltwide Cotton Conference Proceedings, San Antonio, TX, January 3-5, 2018.
4. Zhang, J., **Idowu, O.J.**, Flynn, R.P, Wedegaertner, T.C. (2018) Progress in Breeding for Glandless Cotton in New Mexico. Beltwide Cotton Conference Proceedings, San Antonio, TX, January 3-5, 2018.
5. Sultana, S., **Idowu, O.J.**, Darapuneni, M. Zhang, J.F., Omer, M., Wedegaertner, T.C. (2018) Reduced Tillage Effects on Cotton Growth and Yield in New Mexico. Beltwide Cotton Conference Proceedings, San Antonio, TX, January 3-5, 2018.
6. Brewer, C.E., Sarpong, K.A., Amiri, A., Smith, M.B., **Idowu, O.J.** 2017. Effects of Pyrolysis Conditions on Leaching of Salts from Halophyte Biochars. In 2017 ASABE Annual International Meeting (p. 1). American Society of Agricultural and Biological Engineers.
7. Sanchez, A., Schutte, B. J., Beck, L. L., **Idowu, O. J.** (2017). Stale Seedbeds for Summer Annual Weeds in New Mexico (vol. 57, pp. 9). Proceedings of the 57th Annual Meeting of the Weed Science Society of America.,
8. Pierce, J.B., Monk, P.E, **Idowu, O. J.** (2017). Predation of Sentinel Eggs in Cotton and Sorghum in New Mexico, Beltwide Cotton Conference Proceedings, San Antonio, TX, January 4-6, 2017.
9. **Idowu, O.J.**, J. Zhang, J.B. Pierce, R.P. Flynn, and T.C. Wedegaertner (2016) Performance of new glandless cotton lines as a function of soil type and nitrogen rates. Beltwide Cotton Conference Proceedings, New Orleans, LA, January 4-7, 2016.

10. Angadi, S., Begna, S., **Idowu, O. J.**, Ghimire, R. (2015). Strategies to Improve Resiliency of Semiarid Cropping Systems under Future Climate. *Climate Smart Agriculture*: (pp. 8). University of Agriculture, Raichur, India.
11. Sanogo, S., Lujan, P., **Idowu, O. J.**, American Phytopathological Society (APS), and APS Pacific Division annual meeting, American Phytopathological Society (APS)/APS-Pacific Division, Pasadena, CA, "Reduction in the population of *Phytophthora capsici* and disease severity in chile pepper by extracts from pecan shell and husk tissues". (August 2015).
12. **Idowu, O.J.**, J. Zhang, J.B. Pierce, R.P. Flynn, and T.C. Wedegaertner (2015) Impact of Deficit Irrigation on Selected Glandless Cultivars in New Mexico. Beltwide Cotton Conference Proceedings, San Antonio, TX, January 5-7, 2015.
13. Pierce, J. B., Monk, P., **Idowu, O. J.** (2015). Predation of Sentinel Bollworm Eggs in Glanded and Glandless Cotton in New Mexico (vol. 2015) Beltwide Cotton Conferences, pp. 278-282. 2015 Beltwide Cotton Conferences, San Antonio, TX, January 5-7, 2015.
14. **Idowu O.J.**, K.A. Lombard, D. Hyder, and A.L. Ulery (2014) Indicators of Soil Quality in a Wastewater-Amended Semi-Arid Soil. Innovation in Soil-Based Onsite Wastewater Treatment Conference (SSSA) April 7-8, 2014).
15. Pierce J. B., Monk, P. E., Garnett, A., Flynn, R. P. and **Idowu, O. J.** (2014) Glandless Cotton in New Mexico: Beet Armyworm, *Spodoptera exigua* and Bollworm, *Helicoverpa zea* Development, Field Damage and Potential for Biological Control. Beltwide Cotton Conference Proceedings, National Cotton Council, (New Orleans, LA, January 7, 2014).
16. **Idowu, O.J.**, R.P. Flynn, J.B. Pierce, J. Zhang, Jodi Sheffler and T.C. Wedegaertner. (2013) Evaluation of Three Cultivars of Glandless Cotton in New Mexico. Beltwide Cotton Conference Proceedings (San Antonio, TX, 2013)
17. **Idowu, O.J.**, R.P. Flynn, J.B. Pierce, J. Zhang and T.C. Wedegaertner (2013) Planting Date and Fertilizer Rate Effects on Selected Cotton Cultivars in New Mexico. Beltwide Cotton Conference Proceedings (San Antonio, TX, 2013)
18. Andrew Garnett, Jane Breen Pierce, Patricia E Monk, **O. J. Idowu** and R. P. Flynn (2013) Glandless Cotton in New Mexico: Impact of Nitrogen on Gossypol Associated Resistance to Cotton Bollworm and Beet Armyworm. Beltwide Cotton Conference Proceedings (San Antonio, TX, 2013)

D. ABSTRACTS/POSTERS/ORAL PRESENTATIONS

1. Omer, M., Guldán, S. J., VanLeeuwen, D., Pietrasiak, N., Idowu, O. J., Ulery, A. L., Soil Biological Measurements Under Different Management Systems in an Irrigated Arid Agroecosystem. International Annual Meeting, ASA-CSSA-SSSA. (November 2020)
2. Pruitt, D. J., Idowu, O. J., Angadi, S., Darapuneni, M. K., Sanogo, S., Guar growth and yield as affected by nitrogen and phosphorus inputs, International Annual Meeting, ASA-CSSA-SSSA. (November 2020).

3. Mohammed F. Omer, Colby W Brungard, **Omololu J. Idowu**, April L. Ulery, Nancy McMillan, Steven J. Guldan, Dawn VanLeeuwen, and Bidemi Adedokun. (2019) Measuring Soil Quality Using Spectroscopic Techniques. 5th Global Workshop on Proximal Soil Sensing Conference Proceedings, Columbia, MO, May 28-31, 2019.
4. **Idowu O.J.** (2019) Sustainable Land Management in Arid Agroecosystems. Fifteenth International Conference on Environmental, Cultural, Economic & Social Sustainability, Vancouver, Canada, (January 18, 2019).
5. Mohammed Nasir Omer, **O. J. Idowu**, Colby W Brungard, April L. Ulery, Dawn VanLeeuwen, Steven J. Guldan (2019) Visible Near-Infrared Reflectance and Laser-Induced Breakdown Spectroscopies for Assessment of Arid Soil Quality. International Soils Meeting San Diego, CA, (January 8, 2019).
6. Murali Darapuneni, Leonard M. Lauriault, **O.J. Idowu** (2019) Temporal Variations of Plant and Soil Characteristics in Dryland Sorghum Following Single Application of Cattle Manure Under Strip till Management. International Soils Meeting San Diego, CA, (January 9, 2019).
7. Emily Creegan, Robert P. Flynn, Catherine E. Brewer, **O.J. Idowu**, Richard Heerema, Ram Acharya (2019) Community-to-Farm Organic Waste Utilization: Developing and Analyzing Waste-to-Resource Compost Programs. International Soils Meeting San Diego, CA, (January 8, 2019).
8. Vesh R. Thapa, Rajan Ghimire, Maysoon M. Mikha, **O.J. Idowu**, Mark A. Marsalis, Abdel O. Mesbah, Babu Ram Khanal (2019) Land Use Effects on Selected Soil Quality Indicators in Semiarid Drylands. International Soils Meeting San Diego, CA, (January 8, 2019).
9. **Idowu, O.J.**, Leinauer, B., Serena, M., Bosland, W.K., Omer, M. (2018) Surfactants and Irrigation Regimen Effects on Soil and Plant Health in Arid Turfgrass System. European Turfgrass Society Conference Proceedings, Manchester, UK, July 2-4, 2018.
10. Sifat Sultana, **Omololu J. Idowu**, Murali Darapuneni, Jinfa Zhang and Mohammed Nasir Omer (2018) Effects of Tillage Methods on Cotton Growth and Yield in New Mexico. 2018 Western Society of Crop Science Annual Meeting, Laramie, WY June 19-20, 2018.
11. Bilgi Sarihan, Murali Darapuneni, **Omololu John Idowu**, Dave Dubois and Kulbhushan Grover (2018) Impacts of Selected Summer Cover Crops on Wind Erosion Control. 2018 Western Society of Crop Science Annual Meeting, Laramie, WY June 19-20, 2018.
12. **Idowu, O.J.**, Zhang, J.F., Pierce, J.B., Omer, M., Wedegaertner, T.C. (2018) Impacts of Potassium Fertilization on New Glandless Cultivars Developed for New Mexico. Beltwide Cotton Conference Proceedings, San Antonio, TX, January 3-5, 2018.
13. Sultana, S., **Idowu, O.J.**, Darapuneni, M. Zhang, J.F., Omer, M., Wedegaertner, T.C. (2018) Reduced Tillage Effects on Cotton Growth and Yield in New Mexico. Beltwide Cotton Conference Proceedings, San Antonio, TX, January 3-5 2018.

14. Thapa, V., Ghimire, R., **Idowu, O. J.**, Marsalis, M. A., Soil Health Under Diverse Land Use Systems in the Drylands of Eastern New Mexico. (2017) Ogallala Water Second Annual Meeting, Manhattan KS, (November 2017).
15. Omer, M. N., **Idowu, O. J.**, Ulery, A. L., VanLeeuwen, D., Guldan, S. J., Pietrasiak, N., Marsalis, M. A. (2017) Impacts of Crop Management Systems on Arid Land Soil Quality. International Annual Meeting, ASA-CSSA-SSSA, Tampa, FL. (October 24, 2017).
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17. **Idowu, O. J.**, Darapuneni, M. K., Omer, M. (2017) Reduced Tillage for Cotton in Irrigated Desert Southwest. Beltwide Cotton Conference, National Cotton Council, Dallas, TX. (January 4-6, 2017).
18. Pierce, J.B., Monk, P.E, **Idowu, O. J.** (2017) Predation of Sentinel Eggs in Cotton and Sorghum in New Mexico. Beltwide Cotton Conference, National Cotton Council, San Antonio, TX. (January 4-6, 2017).
19. **Idowu, O. J.**, Zhang, J.F., Flynn, R.P., Pierce, J.B. Wedegaertner, T.C. (2016) Performance of New Glandless Cotton Lines as a Function of Soil Type and Nitrogen Rates. Beltwide Cotton Conference, National Cotton Council, New Orleans, LA. (January 5-7, 2016).
20. Pierce, J.B., Monk, P.E, Richman, D., **Idowu, O. J.**, (2016) Control of Insect Pests in Glandless Cotton: The Role of Biological Control in New Mexico. Beltwide Cotton Conference, National Cotton Council, New Orleans, LA. (January 5-7, 2016).
21. Sarpong, K. A., Amiri, A., **Idowu, O. J.**, Smith, M., Brewer, C. E. (2016) Evaluating Salt Sequestration in the Biochar of Halophytes. Phoenix, AZ: ASA-CSSA-SSSA 2016 Meeting. <https://scisoc.confex.com/crops/2016am/webprogram/Paper100969.html>
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26. Omer, M. F., **Idowu, O. J.**, Grover, K., Al-Ibraheemi, N., Schutte, B. J., Sanogo, S. (2016) Suitable Legumes for Cover Cropping in the Irrigated Arid Southwest. 2016 Western Crop Science Society Albuquerque, NM.
27. Brewer, C. E. and **Idowu, O. J.**, (2016) Biochars in the Desert Southwest: Challenges and Opportunities. The Synergy of Science and Industry: Biochar's Connection to Ecology, Soil, Food, and Energy, US Biochar Initiative, Corvallis, OR. (August 24, 2016).
28. Pierce, J. B., Monk, P., **Idowu, O. J.** (2016) Predation of Sentinel Bollworm (*Helicoverpa zea*) Eggs in Glanded and Glandless Cotton in New Mexico. Entomological Society of America, Southwestern Branch Annual Meeting, Tyler, TX. (pp. 41).
29. **Idowu, O. J.** (2015) Prospect of Strip Tillage in the Irrigated Desert Southwest. ASA-CSSA-SSSA Meeting, Agronomy Society of America, Minneapolis, MN. (November 2015).
30. Deb, S., Serena, M., **Idowu, O. J.**, McMillan, M., Duttle, A., Leinauer, B., (2015) Surfactants Effects on Water Retention and Flow in Subsurface Drip Irrigated Unsaturated Soils. ASA, CSSA and SSSA Annual Meetings, Crop Science Society of Agronomy, Minneapolis, MN. (November 2015).
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32. Oluwatosin, G. A., Adeyolanu, O. D., **Idowu, O. J.**, Are, K. S., Adelana, A. O., Ande, O. T., Denton, A. O. (2015) Plinthite as Indicator of Soil Degradation: An Experience from the Savannah Ecology of South Western Nigeria. ASA-CSSA-SSSA Meeting, Agronomy Society of America, Minneapolis, MN. (November 2015).
33. **Idowu, O. J.** Sanogo, S. (2015) Effects of Pecan Waste Products on Soil pH and Soil-borne Pathogens in the Arid Southwest ASA-CSSA-SSSA Meeting, Agronomy Society of America, Minneapolis, MN. (November 2015).
34. Pierce, J.B., Monk, P.E., **Idowu O.J.** (2015) Sentinel Egg Predation in Glandless Cotton in New Mexico. Southwestern Entomological Society Association Meeting, Tulsa, OK, (February 23-26, 2015).
35. **Idowu, O. J.**, Zhang, J.F., Pierce, J.B. Flynn, R.P., Wedegaertner, T.C. (2015) Impact of Deficit Irrigation on Selected Glandless Cultivars in New Mexico Beltwide Cotton Conference, National Cotton Council, San Antonio, TX. (January 5-7, 2015).
36. Larson Z., Barrick, B., Abdelraheem, A., Sanogo, S., Pierce, J., Flynn, R., **Idowu, J.**, Zhang, J., Wedegaertner, T. (2015) Evaluation of New Glandless Cotton Lines for Thrips

- and Verticillium Wilt Resistance National Cotton Council, San Antonio, TX. Beltwide Cotton Conference, (January 5-7, 2015).
37. Pierce, J.B., Monk, P.E, **Idowu, O. J.** (2015) Predation of Sentinel Bollworm Eggs in Glanded and Glandless Cotton in New Mexico. Beltwide Cotton Conference, National Cotton Council, San Antonio, TX. (January 5-7, 2015).
 38. **Idowu, O. J.**, (2014) Water Availability and Other Challenges Facing Cover Cropping in Irrigated Areas of the Southwest. ASA-CSSA-SSSA Annual Meeting, Long Beach, CA. (November 4, 2014).
 39. **Idowu, O. J.**, Schutte, B. J., Uchanski, M. E., Grover, K. (2014) Crop Performance, Weed Community and Soil Changes in an Irrigated Organic Transition Field in the Southwestern USA. ASA-CSSA-SSSA Annual Meeting, Long Beach, CA. (November 3, 2014).
 40. **Idowu, O. J.**, Sanogo, S. (2014) Impacts of Pecan Waste Products on the Quality of Semiarid Soils ASA-CSSA-SSSA Annual Meeting, Long Beach, CA. (November 3, 2014).

E. TECHNICAL REPORTS/MANUAL

1. Sarpong, K., Brewer, C. E., **Idowu, O. J.**, (2018) Biochar for Desalination Concentrate Management, New Mexico Water Resources Research Institute Technical Completion Report No. 377, U.S. Department of Interior, Bureau of Reclamation, Technical Service Center, Water and Environmental Services Division, Water Treatment Engineering Research Team, Denver, Colorado. 24 pp.
<https://nmwri.nmsu.edu/wp-content/uploads/2015/technical-reports/tr377.pdf>
2. Moebius-Clune, B.N., D.J. Moebius-Clune, B.K. Gugino, **O.J. Idowu**, R.R. Schindelbeck, A.J. Ristow, H.M. van Es, J.E. Thies, H.A. Shayler, M.B. McBride, K.S.M Kurtz, D.W. Wolfe, and G.S. Abawi, (2016). Comprehensive Assessment of Soil Health – The Cornell Framework, Edition 3.2, Cornell University, Geneva, NY.
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3. Brewer, C.E. and **Idowu O.J.** (2015) Design of Pyrolyzer-desalination Unit Interface for Distributed Biochar and Clean Water Production. 2011-2015 Final Report - Cooperative Agreement No. R10AC80283, U.S. Department of Interior, Bureau of Reclamation, Technical Service Center, Water and Environmental Services Division, Water Treatment Engineering Research Team, Denver, Colorado. pp. 360-443
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STUDENT ADVISING – GRADUATE COMMITTEES**Doctoral Committee Chair:**

1. Student: Mohammed Omer, **Graduated**
2. Student: Anita Rodriguez, **Graduated**

Master's Thesis Committee Chair/Co-Chair

1. Student: Mohammed Omer, **Graduated**
2. Student: Nazar Al-Ibraheemi, **Graduated**
3. Student: Bilgi Sarihan, **Graduated**
4. Student: Sifat Sultana, **Graduated**
5. Student: Lindsay Keller, **Graduated**
6. Student: Darien Pruitt, 2018 – present

Thesis/Dissertation Committee Membership

1. Brian L. Barrick (MSc. Student), **Graduated**
2. Andrew Garnett (MSc. Student), **Graduated**
3. Kwabena Sarpong, (MSc. Student), **Graduated**
4. Eric Antosh (MSc. Student), **Graduated**
5. Adriana Sanchez (MSc. Student), **Graduated**
6. Vesh Thapa (MSc. Student), **Graduated**
7. David Hebert (MSc. Student), **Graduated**
8. Elijah Wade (MSc. Student), **Graduated**
9. Asmita Nagila (MSc. Student), **Graduated**
10. Prashasti Agarwal (MSc. Student), **Graduated**
11. Jagdeep Singh (MSc. Student), **Graduated**
12. Ali Amiri, (PhD. Student), **Graduated**
13. Ivan Tellez (MSc. Student), 2019 – present
14. Ryan Zowada (PhD. Student) 2017 - present
15. Hanan Ellassbli (PhD. Student) 2018 - present
16. Vesh Thapa (PhD. Student) 2018 – present
17. Yi Zhu (PhD. Student) 2018 – present
18. Paramveer Singh (PhD. Student) 2018 – present

SELECTED GRANT FUNDING

1. **Idowu, O. J.** (Co-Principal), Serena, M. (Co-Principal), Leinauer, B. (Principal), Sponsored Research, "Surfactants for Water Conservation and Their Impact on Soil Health", Rocky Mountain Environmental Golf Institute. Total Award: \$15,000.00, (May 1, 2018 - April 30, 2021).

2. **Idowu, O. J.** (Co-Principal), Sanogo, S. (Co-Principal), Schutte, B. J. (Principal), Sponsored Research, "On-farm investigation of stale seedbeds with biofumigation for improved management of weeds and soil-borne disease", Western SARE Program Total Award: \$ 63,910.00, (July 1, 2018 - June 30, 2020).
3. **Idowu, O. J.** (Co-Principal), Thomas, S. (Co-Principal) Pietrasiak, N. (Co-Principal), Schutte, B. J. (Co-Principal), Sanogo, S. (Co-Principal), Libbin, J. D. (Co-Principal), Lehnhoff, E. A. (Principal), "Cover Crops in the Southwest: Obtaining Ecosystem Services while Minimizing Water Use", USDA/NIFA/ Agriculture and Food Research Initiative, Total Award: \$150,000.00, (February 1, 2018 - January 31, 2020).
4. **Idowu, O. J.** (Principal), Walker, S. (Co-Principal), Sponsored Research, "2018 Implementation of SARE Professional Development Plan in New Mexico", Utah State University, Total Award: \$37,965.00, (October 1, 2017 - March 31, 2019).
5. **Idowu, O. J.** (Principal), Gutierrez, P. (Co-Principal), Angadi, S. (Co-Principal), Brewer, C. E. (Co-Principal), Grover, K.K. (Co-Principal), Holguin, F. (Co-Principal), Sponsored Research, "Sustainable Bioeconomy for Arid Regions" USDA/NIFA, Total Award: \$ 2,897,647.00, (October 1, 2017 - September 30, 2022).
6. **Idowu, O. J.** (Co-Principal), Steele, C. M. (Co-Principal), Gutierrez, P. (Principal), Sponsored Research, "Managing for Climate Change: Climate Masters Outreach and Extension (CMOE)", USDA/NIFA/ Agriculture and Food Research Initiative, Total Award: \$249,937.00, (September 30, 2016 - October 1, 2017).
7. **Idowu, O. J.** (Co-Principal), Angadi, S. (Principal), Sponsored Research, "Circles of Live Buffer Strips in Center Pivot Irrigation for Multiple Ecosystem Services in the Southern Great Plains", USDA/NIFA/ Agriculture and Food Research Initiative, Total Award: \$145,205.00, (March 15, 2016 - March 14, 2018).
8. **Idowu, O. J.** (Co-Principal), Brewer, C. E. (Principal), Sponsored Research, "Internal Award - Biochar for Desalination Concentrate Management", Total Award: \$74,377.00, (April 15, 2016 - April 14, 2017).
9. **Idowu, O. J.** (Co-Principal), Rockstraw, D. A. (Co-Principal), Ulery, A. L. (Co-Principal), Brewer, C. E. (Principal), Sponsored Research, "Sustainable Use of Biomass Resources in a Semi-Arid Landscape: Connecting Chem. Eng, Soil Science, and Extension", USDA/NIFA, Total Award: \$241,000.00, (July 15, 2015 - July 14, 2020).
10. **Idowu, O. J.** (Principal), Flynn, R. P. (Co-Principal), Zhang, J. (Co-Principal), Pierce, J. B. (Co-Principal), Sponsored Research, "Yield Potential, Fiber Quality and Adaptability of Glandless Cotton in New Mexico", Cotton Incorporated, Total Award: \$ 270,164.00, (January 1, 2010 - December 31, 2017).

MEMBERSHIP OF PROFESSIONAL ORGANIZATIONS AND SOCIETIES

- Soil Science Society of America
- American Society of Agronomy
- Soil and Water Conservation Society
- eOrganic Community of Practice
- eXtension Community of Practice

HONORS & AWARDS

- NMSU Distinguished Extension Award (2019)
- Distinguished Cooperative Extension Specialist Service Award (2019)
- Organic Educator of the Year Award (2013)
- Commonwealth Scholarship and Fellowship Plan Award (1993-1996)
- German Academic Exchange Service Award (1985-1990)
- Nigerian National Merit Scholarship Award (1980-1984)
- Obafemi Awolowo University Merit Award (1980-1984)