

CURRICULUM VITAE

Rajan Ghimire, Ph.D.

New Mexico State University
Department of Plant and Environmental Sciences
Agricultural Science Center at Clovis
2346 State Road 288
Clovis, NM 88101

E-mail: rghimire@nmsu.edu
Phone: 575-985-2292

1. **EDUCATION**

Ph.D., Soil Science, 2013, University of Wyoming, Laramie, WY

M.Sc. Soil Science, 2006, Tribhuvan University, Nepal

B.Sc. Agriculture, 2004, Tribhuvan University, Nepal

2. **PROFESSIONAL EXPERIENCE**

Assistant Professor (Oct. 2015 – Date), New Mexico State University, Agricultural Science Center, Clovis, NM (Affiliated department: Plant and Environmental Sciences)

Postdoctoral Scholar (Jan. 2014 – Sept. 2015), Oregon State University, Columbia Basin Agricultural Research Center, Pendleton, OR

Research Associate Sr. (June 2013 – Dec. 2013), University of Wyoming, Department of Ecosystem Science and Management, Laramie, WY

Graduate Assistant (Aug. 2009 – May 2013), University of Wyoming, Department of Ecosystem Science and Management, Laramie, WY

Visiting Scientist (May – July 2008), Wageningen University and Research Centre/ Louis Bolk Institute, the Netherlands

Lecturer of Soil Science (June 2006 – July 2009), Tribhuvan University, Institute of Agriculture and Animal Sciences, Nepal

Senior Research Assistant (May 2006 – July 2009), Ecological Services Centre, Nepal.

Graduate Assistant (2004 – 2006), Tribhuvan University, Institute of Agriculture and Animal Sciences, Nepal

3. **LEADERSHIP**

Presiding Leader, 2021, Soil Carbon and Greenhouse Gas Emissions, American Society of Agronomy

Incoming Leader, 2020, Soil Carbon and Greenhouse Gas Emissions, American Society of Agronomy

Presiding Leader, 2019, Global Climate Change Community, American Society of Agronomy

Incoming Leader, 2018, Global Climate Change Community, American Society of Agronomy

Chair, 2018-2019, Scholarship management committee, Association of Nepalese Agricultural Professionals in Americas

Secretary and Treasurer, 2017-2019, Western Society of Crop Science

Scientific Committee Member, 2016-2019, International Conference on Mountains in the Changing World

Vice President, Center for Agricultural Research and Development Nepal, 2013-2018

4. HONORS AND AWARDS

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| 2020 | Emerging Scientist Award, Western Society of Crop Science |
| 2019 | Certificate of Top Article of 2019, Journal of Integrative Agriculture |
| 2017 | Certificate of Appreciation for Outstanding Contribution in Soil Science, Nepalese Society of Soil Science, Kathmandu, Nepal |
| 2013 | Student Travel Fellowship and Poster Awards (1st place), NSF-EPSCoR Workshop in Bioinformatics to Foster Collaborative Research |
| 2012 | Student Poster Award (2nd place) in the Western Society of Soil Science, Student Poster Award (3rd place) in the Great Plains Soil Fertility Conference, and Department of Ecosystem Science and Management Travel Award |
| 2011 | Gerald “Jerry” E. Schuman Graduate Fellowship in Soil Science, UW Excellence Award and Eldon and Josephine Johnston Family Graduate Fellowship for Research, and Department of Ecosystem Science and Management Travel Award |
| 2010 | Robert L. Lang Graduate Fellowship and Graduate Student International Travel Award |
| 2009 | Travel Award, University Grant Commission of Nepal for confere participation, Fourth World Congress on Conservation Agriculture, New Delhi, India |
| 2005-2006 | Research Fellowship, Soil Management – Collaborative Research Support Program (SM-CRSP), Cornell University, USA |
| 1998-2003 | Tribhuvan University Merit Scholarships for Undergraduate Studies |

5. PROFESSIONAL SOCIETIES

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| 2020 - Present | Soil and Water Conservation Society |
| 2018 - Present | American Geophysical Union |
| 2016 – Present | Nepalese Agricultural Professionals in the Americas |
| 2011– 2018 | Member of the American Association for the Advancement of Science |
| 2011 – Present | Member of honor society “Phi Kappa Phi” |
| 2010 - Present | Member of Soil Science Society of America |
| 2010 – Present | Member of the American Society of Agronomy |

2010 – Present	Member of “Gamma Sigma Delta” the Honor Society of Agriculture
2010 – 2012	Member of Soil and Water Conservation Society
2007 – 2015	Member of Society of Agricultural Scientists-Nepal

6. RESEARCH

Funded Grant Proposals (Total Involvement: \$12.63M; Ghimire share: \$912,064)

1. Alternative forage and perennial grains: demonstration of a regenerative solution for semiarid drylands. R. Ghimire, S. Angadi, and M. Marsalis, 2020-2024, \$200,000 (Ghimire **[PI]**: \$150,000).
2. Circular grass buffer strips for multiple ecosystem services. S. Angadi, R. Ghimire, J. Idowu, R. Acharya. USDA NIFA , 2020-2023, \$500,000 (Ghimire **[co-PI]**: \$75,000)
3. Soil health training for nmsu extension agents and SWCD technical staff in New Mexico. O.J. Idowu, R. Ghimire, R. Flynn, A. Ganguli. NM Department of Agriculture, 2020, \$39,000 (Ghimire **[co-PI]**)
4. Novel approach to quantify nitrogen mineralization and nitrous oxide emissions in semiarid cropping systems. NMSU College of ACES, Agricultural Experiment Station, 2019-2020, \$24,000 (Ghimire **[PI]**: \$24,000)
5. Sampling and analysis to address per- & poly-fluoroalkyl contaminants at NM dairies. K.C. Carroll, S. Ivey, R. Hagevoort, J. Jarvis, R. Ghimire. NMSU College of ACES, Agricultural Experiment Station, 2019-2020, \$50,000 (Ghimire **[co-PI]**: \$7,797)
6. Strategic tillage management in dryland cropping systems of New Mexico: demonstration and evaluation of agronomic and soil health benefits. R. Ghimire, M. Marsalis, and A.O. Mesbah. New Mexico NRCS, 2019-2023, \$175,000 (Ghimire **[PI]**: \$157,500)
7. Cover crops for improving soil health and forage production in eastern New Mexico. R. Ghimire, M. Marsalis, and A.O. Mesbah. New Mexico NRCS, 2018-2023, \$200,576 (Ghimire **[PI]**: \$150,432)
8. Improving soil health and ecosystem services through circular grass buffer strips, cover cropping, and crop diversification in New Mexico. R. Ghimire, S. Begna, S. Angadi, and A.O. Mesbah. New Mexico NRCS Conservation Innovation Grant. 2018-2021, \$97,998 (Ghimire **[co-PI]**: \$53,899).
9. Participatory approaches to agroecosystem resilience in times of drought (ARID): An example from the Southern Great Plains, Amy Ganguli, et al. USDA NIFA Resilient Agroecosystems, 2018-2022, 1.2M (Ghimire **[co-PI]**: \$70,000).
10. Sustaining agriculture through adaptive management to preserve the Ogallala Aquifer under a changing climate. M.A. Marsalis, S. Angadi, R. Ghimire (NMSU). Total funding: 10M, NMSU total: \$216,850 (Ghimire **[co-PI]**: \$145,289).

Publications

Summary: Google Scholar Citation: 679; H Index: 13; I10-Index: 18

Year	Journal papers	Book Chapter	Extension articles	Proceedings	Meeting abstracts	Other	Total
2021	1						
2020	5	3	-	-	6	-	
2019	10	3	1	-	11	-	24
2018	8	-	2	-	10	-	20
2017	7	2	2	-	9	-	20
2016	3	1	-	-	9	1	14
2015	2	-	1	1	6	3	13
2014	3	-	3	1	3	-	10
2013	1	-	3	1	1	-	6
2012	2	-	3	1	3	-	9
2011	-	-	4	2	4	-	10
2010	1	-	-	-	2	-	3
2009	1	-	-	1	1	-	3
2008	3	-	-	3	1	-	7
2007	2	-	-	-	-	-	2

Peer-reviewed Journal Papers (*graduate student paper)

1. *Thapa, V.R., **R. Ghimire**, V. Acosta-Martinez, M. Marsalis, and M. Schipanski. 2021. Cover crop biomass and species composition affect soil microbial community structure and enzyme activities in semiarid cropping systems *Applied Soil Ecology*. DOI: 10.1016/j.apsoil.2020.103735.
2. **Ghimire, R.**, and B.R. Khanal. 2020. Soil organic matter dynamics in semiarid agroecosystems transitioning to dryland. *PeerJ*
3. *Salehin, S.M., **R. Ghimire**, S. Angadi, O.J. Idowu, and A.O. Mesbah. 2020. Nitrogen management in dryland sorghum in Southern High Plains of USA. *Agrosystems, Geosciences and Environment*. DOI: 10.1002/agg2.20107
4. *Salehin, S.M., **R. Ghimire**, S.V. Angadi, O.J. Idowu. 2020. Grass buffer strips improve soil health and mitigate greenhouse gas emissions in center-pivot irrigated cropping systems. *Sustainability*. 12, 6014; DOI: 10.3390/su12156014
5. *Omer, M., O.J. Idowu, A. Ulery, D. VanLeeuwen, S. Guldán, M. Marsalis, **R. Ghimire**. 2020. Impacts of selected long-term management practices on arid soil quality. *Journal of Soil and Water Conservation*. 75: 143-152.
6. Sainju, U., **R. Ghimire**, U. Mishra, S. Jagadamma. 2020. Reducing nitrous oxide emissions and enhancing crop yield with crop rotation and nitrogen fertilization. *Nutrient Cycling in Agroecosystems*. 116: 381–395. DOI: 10.1007/s10705-020-10046-0.
7. Nilahyane, A., **R. Ghimire**, V.R. Thapa, and U. Sainju. 2020. Cover crop effects on soil carbon dioxide fluxes in a limited-irrigated cropping system. *Agrosystems, Geosciences, and Environment*. DOI: 10.1002/agg2.20012.
8. Acharya, R.N., **R. Ghimire**, A. GC, and D. Blayney. 2019. Effect of cover crop on-farm profitability and risk in the Southern High Plains. *Sustainability* 11(24), 7119. DOI: 10.3390/su11247119.

9. Bista, P., **R. Ghimire**, S. Machado, and L. Pritchett. 2019. Biochar effects on soil properties and wheat biomass vary with fertility management. *Agronomy*. 10.3390/agronomy9100623.
10. **Ghimire, R.**, P. Bista, and S. Machado. 2019. Long-term management effects and temperature sensitivity of soil organic carbon in grassland and agricultural soils. *Nature Scientific Reports*, (2019) 9:12151.
11. *Thapa, V.R., **R. Ghimire**, B. Duval, and M. Marsalis. 2019. Soil organic carbon and net ecosystem carbon balance in semiarid cropping systems. *Agrosystems, Geosciences, and Environment*. *Agrosystems, Geosciences & Environment*. 2:190022.
12. *Acharya, P., **R. Ghimire**, and Y. Cho. Linking soil health to crop production: Dairy compost application rates affect soil properties and sorghum biomass. *Sustainability* 2019, 11, 3552; DOI: 10.3390/su11133552.
13. **Ghimire, R.**, V.R. Thapa, A. Cano, and V. Acosta-Martinez. 2019. Soil organic carbon and microbial community responses to croplands and grasslands management. *Applied Soil Ecology*. 141: 30-37.
14. *Muhammad, I., U.M. Sainju, A. Khan, F. Zhao, **R. Ghimire**, X. Fu, and J. Wang. 2019. Regulation of soil CO₂ and N₂O emissions by cover crops: a meta-analysis. *Soil and Tillage Research*. 192: 103-122.
15. Mesbah, A.O., A. Nilahyane, B. Ghimire, L. Beck, **R. Ghimire**. 2019. Efficacy of cover crops on weed suppression, wheat yield, and water conservation in winter wheat-sorghum-fallow. *Crop Science*. 59: 1745-1752. DOI: 10.2135/cropsci2018.12.0753.
16. **Ghimire, R.**, B. Ghimire, A.O. Mesbah, U. Sainju, and O.J. Idowu. 2019. Cover crops effects on soil organic matter and nutrient dynamics in a winter wheat-summer fallow system. *Agronomy Journal*. 111: 2108-2115. DOI: 10.2134/agronj2018.08.0492.
17. Sainju, U., **R. Ghimire**, and G. Pradhan. 2019. Dryland agroecosystem nitrogen balance with tillage, cropping sequence, and nitrogen fertilization. *Journal of Plant Nutrition and Soil Science*. 182: 374-384. <https://doi.org/10.1002/jpln.201800630>.
18. *Thapa, V.R., **R. Ghimire**, M. Mikha, J. Idowu, and M. Marsalis. 2018. Land use systems effects on soil health in drylands. *Agricultural and Environmental Letters*. *Agricultural and Environmental Letters* 3:180022. DOI:10.2134/ael2018.05.0022.
19. **Ghimire, R.**, J.B. Norton, and U. Norton. 2018. Soil organic matter dynamics under irrigated perennial forage-annual crop rotation systems. *Grass and Forage Science*. 73: 907-917. <https://onlinelibrary.wiley.com/doi/10.1111/gfs.12378>.
20. Wang, J., **R. Ghimire**, X. Fu, U.M. Sainju, and W. Liu. 2018. Straw mulching increases precipitation storage rather than water use efficiency and dryland winter wheat yield. *Agricultural Water Management*. 206: 95-101. <https://doi.org/10.1016/j.agwat.2018.05.004>.
21. Cano, A., A. Nunez, V. Acosta-Martinez, M. Schipanski, **R. Ghimire**, C. Rice, C. West. 2018. Current knowledge and future research directions of soil health and water conservation in the Ogallala Aquifer region. *Geoderma*. 238: 109-118. <https://doi.org/10.1016/j.geoderma.2018.04.027>.
22. **Ghimire, R.**, B. Ghimire, A.O. Mesbah, M. O'Neill, J. Idowu, S. Angadi, and M.K. Shukla. 2018. Current status, opportunities, and challenges of cover cropping for sustainable dryland farming in the Southern Great Plains. *Journal of Crop Improvement*. 32: 579-598. DOI: 10.1080/15427528.2018.1471432.

23. Duval, B., **R. Ghimire**, M.D. Hartman, and M.A. Marsalis. 2018. Water and nitrogen management effects on semiarid sorghum production and soil trace gas flux under future climate. *PlosOne* 13(4): e0195782.
24. Rijal, J.P., R. Regmi, **R. Ghimire**, K. Puri, S Gyawly, and S. Poudel. 2018. Farmers' knowledge of pesticide safety and pest management: A case study of Vegetable Growers in Chitwan, Nepal. *Agriculture*, 8(1), 16. <http://www.mdpi.com/2077-0472/8/1/16>
25. **Ghimire, R.**, S. Machado, and P. Bista. 2018. Decline in soil organic carbon and nitrogen limits yield in wheat-fallow systems. *Plant and Soil*. 422: 423-435 DOI: 10.1007/s11104-017-3470-z.
26. *Ghimire, B. **R. Ghimire**, D. VanLeeuwen and A.O. Mesbah. 2017. Cover crop residue inputs and quality effects on soil organic matter mineralization. *Sustainability*, 9, 2316. <http://www.mdpi.com/2071-1050/9/12/2316>.
27. Bista, P., U. Norton, **R. Ghimire**, and J.B. Norton. 2017. Greenhouse gas fluxes, soil mineral N, and global warming potential in semi-arid winter wheat (*Triticum aestivum* L.)-fallow during drought. *Journal of Arid Environment*. 147: 103-113. DOI: 10.1016/j.jaridenv.2017.09.002
28. Sainju, U.M., B.L. Allen, A.W. Lenssen, and **R. Ghimire**. 2017. Root biomass, root/shoot ratio, and soil water content under perennial grasses with different nitrogen rates. *Field Crops Research*. 210: 183-191. DOI: 10.1016/j.fcr.2017.05.029.
29. Rawal, N., **R. Ghimire**, D.R. Chalise. 2017. Crop yield and soil fertility status of long-term rice-rice-wheat cropping systems. *International Journal of Applied Science and Biotechnology*. 5: 42-50. DOI: 10.3126/ijasbt.v5i1.17001.
30. **Ghimire, R.**, S. Machado, and P. Bista. 2017. Soil pH, soil organic carbon, nitrogen, and crop yield in wheat-fallow systems. *Agronomy Journal*. 109: 706–717. Doi: 10.2134/agronj2016.08.0462.
31. **Ghimire, R.**, U. Norton, P. Bista, A. Obour, and J.B. Norton. 2017. Soil organic matter, greenhouse gases, and net global warming potential of irrigated cropping systems. *Nutrient Cycling in Agroecosystems*. 107: 49-62. DOI: 10.1007/s10705-016-9811-0.
32. **Ghimire, R.**, S. Lamichhane, B.S. Acharya, P. Bista, and U.M. Sainju. 2017. Tillage, crop residue, and nutrient management effects on soil organic carbon in rice-based cropping systems. *Journal of Integrative Agriculture*. 16: 1-15. DOI: 10.1016/S2095-3119(16)61337-0.
33. Bista, P., S. Machado, S. **R. Ghimire**, S.J. Del-Grosso, and M. Reyes-Fox. 2016. Simulating soil organic carbon in a wheat-fallow system using the DAYCENT model. *Agronomy Journal*. 108: 2554-2565. Doi: 10.2134/agronj2016.04.0202.
34. **Ghimire, R.** and P. Bista. 2016. Crop diversification improves pH of acidic soils. *Journal of Crop Improvement*. 30: 657-667. DOI: 10.1080/15427528.2016.1219894.
35. **Ghimire, R.** 2016. Approaches in Cropping Systems Research and Challenges. *Advances in Plant and Agricultural Research*. 3(2): 00088. DOI: 10.15406/apar.2016.02.00088
36. **Ghimire, R.**, S. Machado, and K. Rhinart. 2015. Long-term crop residue and nitrogen management effects on soil profile carbon and nitrogen in wheat-fallow systems. *Agronomy Journal* 107: 2230-2240. DOI: 10.2134/agronj14.0601.

37. Bista, P., U. Norton, **R. Ghimire**, and J.B. Norton. 2015. Greenhouse gas fluxes and soil carbon and nitrogen following single summer tillage. *International Journal of Plant and Soil Science* 6: 183-193. DOI: 10.9734/IJPSS/2015/16234.
38. **Ghimire, R.**, J.B. Norton, P.D. Stahl, and U. Norton, 2014. Soil microbial substrate properties and microbial community responses under irrigated organic and reduced-tillage crop and forage production systems. *PLoS ONE* 9(8): e103901. DOI: 10.1371/journal.pone.0103901.
39. Paudel, B., B.S. Acharya, **R. Ghimire**, K.R. Dahal, and P.Bista. 2014. Adapting agriculture to climate change and variability in Chitwan, Nepal: long-term trends and farmers' perceptions. *Agricultural Research* 3: 165-174. DOI: 10.1007/s40003-014-0103-0.
40. **Ghimire, R.** J.B. Norton, and E. Pendall. 2014. Alfalfa-grass biomass, soil organic carbon, and total nitrogen under different management approaches in an irrigated agroecosystem. *Plant and Soil* 374: 173-184. DOI 10.1007/s11104-013-1854-2.
41. **Ghimire, R.**, J.B. Norton, U. Norton, J.P. Ritten, P.D. Stahl, and J.M. Krall. 2013. Long-term farming systems research in the central High Plains. *Renewable Agriculture and Food Systems* 28: 183–193. DOI 10.1017/S1742170512000208.
42. **Ghimire, R.**, K.R. Adhikari, Z. Chen, S.C. Shah, and K.R. Dahal. 2012. Soil organic carbon sequestration as affected by tillage and crop residue management in the rice-wheat system. *Paddy and Water Environment* 10: 95-102. DOI: 10.1007/s10333-011-0268-0.
43. Khatiwada, B.P., **R. Ghimire**, R. Adhikari, and S. Osti. 2012. Increasing crop water productivity through local crops and technologies: a case from the Chepang ethnic community of Nepal. *Hydro Nepal: Journal of Water, Energy, and Environment Special Issue: conference papers*. pp 50-54.
44. Bista, P., **R. Ghimire**, S.C. Shah, and K.R. Pande. 2010. Assessment of soil fertility management practices and their constraints in different geographic locations of Nepal. *Forum Geografic* 9: 41-48.
45. **Ghimire, R.**, R.K. Basnet, P. Bista, and B. RanaBhat. 2009. Soil quality cards for participatory soil quality assessment in organic and smallholder agriculture. *Forum Geografic* 8: 72-76.
46. **Ghimire, R.**, S.C. Shah, K.R. Dahal, J.M. Duxbury, and J.G. Lauren. 2008. Tillage and residue management effects on soil organic carbon sequestration in the rice-wheat cropping system of Nepal. *Journal of the Institute of Agriculture and Animal Science* 29: 21-26.
47. **Ghimire, R.**, 2008. Increasing resilience of community on climate change through the application of sloping agriculture land technology and eco-friendly agriculture in Jugedi Khola watershed, Nepal. *Forum Geografic* 7: 208 – 215.
48. Tiwari, S., R. B. Thapa, and **R. Ghimire**. 2008. Farmers' field school in potato: an effective tool for integrated crop management. *Journal of Plant Protection* 1: 115-121.
49. **Ghimire, R.**, K.R. Dahal, J.G. Lauren, J.M. Duxbury, and S.C. Shah. 2007. Tillage and crop residue management effects on soil organic carbon content in light and heavy soils of Chitwan, *Journal of Institute of Agriculture and Animal Science* 28: 27-32.

50. **Ghimire, R.**, S.C. Shah, K.R. Dahal, A.K. Shrestha, C. Adhikari, J. G. Lauren, and J.M. Duxbury. 2007. Equation for predicting soil organic carbon using loss on ignition for Chitwan valley soils. Institute of Agriculture and Animal Science Research Advances 1: 229-232.

Book Chapters

1. **Ghimire, R.**, P. Bista, and S. Machado. 2020. Crop yield limitation by soil organic matter decline: a case study from the US Pacific Northwest. *Assessing Land Degradation*.
2. **Ghimire, R.**, U. Sainju, and R. Acharya. 2020. Soil health for food security and agroecosystem resilience. In: D.P. Rasali, P.B. Bhandari, U. Karki, M.N. Parajulee, R.N. Acharya, and R. Adhikari (eds.), *Principles and Practices of Food Security: Sustainable, Sufficient, and Safe Food for Healthy Living in Nepal*. Association of Nepales Agricultural Professions of Americas. pp 230-244.
3. Sainju, U., **R. Ghimire**, G. Pradhan. 2019. Nitrogen Fertilization I: Impact on Crop, Soil, and Environment. In: E.C. Rigobelo and A.P. Serra (eds.), *Nitrogen Fixation*. Intech Open. London, UK. pp 69-92.
4. Sainju, U., **R. Ghimire**, G. Pradhan. 2019. Nitrogen Fertilization II: Management Practices to Sustain Crop Production and Soil and Environmental Quality. In: E.C. Rigobelo and A.P. Serra (eds.), *Nitrogen Fixation*. Intech Open. London, UK. pp 35-56.
5. Awale, R., **R. Ghimire**, S. Machado, and P. Bista. 2017. Soil health. In: C. Cruger and G. Yorgey (eds.), *Advances in Sustainable Dryland Farming in the Inland Pacific Northwest*. pp 47-98.
6. Bista, P., S. Machado, **R. Ghimire**, G. Yorgey, D. Wysocki. 2017. Conservation systems. In: C. Cruger and G. Yorgey (eds.), *Advances in Sustainable Dryland Farming in the Inland Pacific Northwest*. pp 99-124.
7. Angadi, S., S. Begna, M.R. Umesh, and **R. Ghimire**. 2016. Strategies to improve the resiliency of semiarid cropping systems under future climate. In: B.M. Chittapur, A.S. Halepyati, M.R. Umesh, and B.K. Desai (eds.), *Climate-Smart Agriculture: Status and Strategies*. University of Agricultural Sciences, Raichur, India. pp. 116-120.

7. EXTENSION/OUTREACH

Extension and Outreach Publications

1. **Ghimire, R.**, V.R. Thapa, and M.A. Marsalis. 2019. Cover crops in semiarid southern High Plains. *Ogallala Water Resource Guide Series*.
2. Acosta-Martinez, V., K.B. Bhandari, **R. Ghimire**, M. Schipanski, and A. Nunez. 2019. Soil Health. *Ogallala Water Resource Guide Series*. Retrieved from <http://ogallalawater.org/soil-health>.
3. **Ghimire, R.** 2018. In Kathy Wythe (Ed.). *Mixing it up: In the Ogallala Aquifer region, one size (of farming) doesn't fit all*. TxH2O Fall Newsletter 2018.
4. **Ghimire, R.** 2018. *Sustainably feeding current and future generations*. Scientia Global, <https://www.scientia.global/dr-rajan-ghimire-sustainably-feeding-current-and-future-generations/>.

5. Marsalis, M.A., T. Blaine, **R. Ghimire**. 2018. Ogallala Summit White Paper: New Mexico. Ogallala Summit, April 2018. <http://ogallalawater.org/ogallala-summit-april-2018-new-mexico-white-paper/>.
6. Cano, A., A. Nunez, V. Acosta-Martinez, M. Schipanski, **R. Ghimire**, and C. Rice. 2017. Linking soil health to water conservation in the Ogallala Aquifer region. Colorado Water, special issue – the Ogallala Water, November/December 2017.
7. **Ghimire, R.** and M.A. Marsalis. Farmers and Researchers Discussed Climate Risk and Drought Management Strategies at Regional Meeting. Plant & Environmental Sciences Departmental Newsletter, August 2017.
8. Idowu, J., S. Angadi, M.K. Darapuneni, and **R. Ghimire**. 2017. Reducing tillage in arid and semi-arid cropping systems. NMSU Cooperative Extension Services. Guide A-152. http://aces.nmsu.edu/pubs/_a/A152.pdf.
9. **Ghimire R.** and S. Machado. 2017. Soil acidification impacts crop yield in a wheat-fallow system. Crop and Soil. 50:14-16.
10. Norton, J., **R. Ghimire**, P. Stahl, J. Ritten, D. Peck, and U. Norton. 2014. Soil quality and the benefits of crop rotation, reduced tillage, and manure application in crop and forage systems. 2014 Field Days Bulletin, University of Wyoming, Laramie, WY.
11. Norton, U., P. Bista, **R. Ghimire**, and J.B. Norton. 2014. One-time summer tillage does not negate the long-term benefits of no-till. Crop and Soils, May-June 2014.
12. Norton, U., P. Bista, **R. Ghimire**, and J.B. Norton. 2014. One-time summer tillage of chemical fallow in a dryland winter wheat rotation does not negate long-term benefits accrued under no-till management Nutrient digest, Nutrient Management Newsletter for the Western US, Spring 2014.
13. Norton J.B. and **R. Ghimire**. 2013. Soil quality and the benefits of crop rotation, reduced tillage, and manure application. Nutrient digest, Nutrient Management Newsletter for the Western US, Fall 2013.
14. **Ghimire, R.**, U. Norton, J.B. Norton, and P. Bista. 2013. Greenhouse gas emissions from alternative management approaches of irrigated crop and forage production system. 2013 Field Days Bulletin, University of Wyoming, Laramie, WY.
15. Bista, P., U. Norton, **R. Ghimire**, J. Norton, and J. Meeks. 2013. Effect of Summer Tillage on Greenhouse Gas Emissions from Organic, Conventional, and No-Till Fallows in Dryland Winter Wheat Production. 2013 Field Days Bulletin, University of Wyoming, Laramie, WY.
16. Norton, J.B., **R. Ghimire**, U. Norton, J. Meeks, and S. Paisley. 2012. The sustainable agriculture systems. 2012 Field Days Bulletin, University of Wyoming, Laramie, WY.
17. Norton, J.B., **R. Ghimire**, E. Mukhwana, and D. Peck. 2012. Soil Quality under wheat-fallow, minimum-till, and no-till cropping systems. 2012 Field Days Bulletin, University of Wyoming, Laramie, WY.
18. Meeks, J., J.B. Norton, R. King, **R. Ghimire**, U. Norton, P. Bista, J. Ritten, D. Peck. 2012. The long-term project begins yielding results. Reflections Magazine. University of Wyoming, Laramie, WY.

19. Bista, P., U. Norton, **R. Ghimire**, and J.B. Norton. 2011. Greenhouse gas emissions from dryland winter wheat-fallow system under conventional, no-till, organic, and transition to organic management. 2011 Field days Bulletin, University of Wyoming, Laramie, WY.
20. **Ghimire, R.**, J.B. Norton, J. Meeks, and R. King. 2011. Soil organic matter and microbial dynamics of the SASP. 2011 Field Days Bulletin, University of Wyoming, Laramie, WY.
21. **Ghimire, R.**, J.B. Norton, P. Bista, and U. Norton. 2011. Trace gas emission from conventional, reduced-input, and organic approaches of the crop–range–livestock farming in Wyoming. 2011 Field Days Bulletin, University of Wyoming, Laramie, WY.
22. Gebault-King, R., J. Norton, J. Ritten, E. Arnould, M. Press, **R. Ghimire**, and J. Meeks. 2011. Soil Fertility Challenges in Northern High Plains Organic Farming Operations. 2011 Field Days Bulletin, University of Wyoming, Laramie, WY.

8. **STUDENT ADVISING**

Current Graduate Students/Postdocs

Name	Degree/training	Research	Year	Responsibility
Paramveer Singh	PhD	Grass Buffer	Summer 2019- Fall 2022	Member
Dr. Weikle Paye	PostDoc	Cropping Systems	March 2020 – March 2024	Advisor
Pramod Acharya	PhD	Soil health/forage production	Summer 2019- Spring 2023	Major advisor
Vesh R. Thapa	PhD	Cover crops/soil health	Fall 2018 – Summer 2021	Major advisor

Graduated Students/ Past Postdocs and Research Associates in Lab

- Sk. Musfiq-US- Salehin, M.S. (Fall 2018-Spring 2020), Soil organic carbon and nitrogen fractions, greenhouse gas emissions, and crop yield in semiarid cropping systems.
- Dr. Abdelaziz Nilahyane, Postdoctoral Associate (August 2018- September 2019), Soil water dynamics and forage quality in semiarid crop-forage systems.
- Pramod Acharya, M.S. (Fall 2017-Spring 2019), Cover crops and dairy compost effects on soil health and nutrient dynamics in Eastern New Mexico (Co-advised with Dr. Young Cho, ENMU).
- Carole Tuttle, Research Assistant (January – June 2019).
- Mikayla J. Allan, M.S. (Spring 2017-Fall 2018), Understanding soil spatial and temporal variability for forage corn production and hydrological modeling within New Mexico (Advisor).
- Vesh R. Thapa, M.S. (Fall 2016-Summer 2018), Agricultural management systems affect soil health and crop production in the drylands of eastern New Mexico (Advisor). Currently a Ph.D. Student at my Lab, PES NMSU.

- Dr. Ramesh Dhakal, Postdoctoral Research Associate (December 2016-November 2017), Dryland and limited irrigation cropping systems in eastern New Mexico, Research Associate (Co-supervised with Dr. Naveen Puppala), Currently Assistant Professor at Virginia State University
- Binod Ghimire, M.S. (Spring 2016-Fall 2017), Cover crop effects on soil organic matter dynamics, weed suppression, and wheat yield in a limited irrigated winter wheat-summer fallow system (co-advised with Dr. Mesbah), Currently a Ph.D. Student at the University of Illinois at Urbana-Champaign

Graduate Committee

- Apar GC, M.S. (Fall 2016-Summer 2018), Essays on food security, conflict, and production economics (committee member), Currently Ph.D. Student at Washington State University

Undergraduate Students

- Carissa Burns, summer 2015 (undergraduate, REACCH summer intern)
- Mikayla Allan, summer 2015 (undergraduate, REACCH summer intern)
- Rebecca Graham, summer 2014 (undergraduate, REACCH summer intern)
- Kristie A. Bear, 2010-2013, McNair fellow, summer 2013
- Pradeep Neupane, 2010-2012, Undergraduate lab assistant

Visiting Scholars

- Babu Ram Khanal, Agriculture and Forestry University, Nepal, 2018/19
- Yaquiong Fan, China Agricultural University, 2017

9. PROFESSIONAL SERVICES

- **Departmental Committee**
 - Department of Plant and Environmental Sciences Awards Committee, 2019/20
 - Search Committee – Assistant Professor of Alternative Crops and Industrial Hemp, 2019
 - Department of Plant and Environmental Sciences Graduate Study Committee, 2018/19-present
 - Department of Plant and Environmental Sciences Student Recruitment and Retention Committee, 2016/17-present
- **State-level committee**
 - Ad-hock steering committee, New Mexico Department of Agriculture “Healthy Soils Program”
- **Professional Committee**
 - Presiding Leader, Soil Carbon and Greenhouse Gas Emissions Community, 2021
 - Vice Leader, Soil Carbon and Greenhouse Gas Emissions Community, 2020

- Presiding Leader, Global Climate Change Community, 2019
- Vice Leader, Global Climate Change Community, 2018
- Secretary/Treasurer, Western Society of Crop Science, 2017-2019
- Soil and Water Conservation Scholarship Committee member 2017-2019
- Soil Science Applied Research Award Committee member 2017-2018
- **Journal Editor**
 - **Section Editor:** Sustainability
<https://www.mdpi.com/journal/sustainability/editors>, 2019 -2020
 - **Associate Editor:** Agronomy Journal, <https://dl.sciencesocieties.org/about-society/committees/A302/members>, 2019-2021
 - **Special Issue Editor:** Sustainability in the Mountains Region,
http://www.mdpi.com/journal/sustainability/special_issues/mountains_region, 2016-2017 (handled six papers in total, recommended publication of five papers)
 - **Review Editor:** Frontiers in Plant Science,
<http://journal.frontiersin.org/journal/plant-science>, 2015-2018
 - **Contributing Editor:** American Journal of Agricultural and Biological Sciences, <http://thescipub.com/journals/ajabs>, 2012-2014
- **Proposal Review**
 - NIMSS Multistate Proposal – 2020 (reviewed one proposal)
 - USDA-NIFA Small Business Research Initiative – 2020 (reviewed nine proposals)
 - USDA-NIFA Organic Research and Extension Initiative program – 2019 (reviewed 12 proposals)
 - Western Sustainable Agriculture Research and Education - 2019 (reviewed ten proposals)
 - USDA-NIFA Foundational Program – 2018 (reviewed 13 proposals)
 - USDA-NIFA Organic Research and Extension Initiative program – 2017 (reviewed 11 proposals)
- **Journal Papers Reviewed (10-15 papers per year since 2015)**
 - Agricultural Research
 - Agriculture, Ecosystem, and Environment
 - Agronomy (MDPI)
 - Agronomy Journal (>10)
 - Air, Water, and Soil Pollutions
 - American Journal of Agricultural and Biological Sciences
 - Archives of Agronomy and Soil Science
 - Arid Land Research and Management
 - European journal of soil biology
 - Frontiers in Environmental Science
 - Frontiers in Plant Science (>5)
 - Frontiers in Ecology and Evolution
 - Grassland science
 - Global Change Biology

- Greenhouse Gases: Science and Management
- Journal of the Institute of Agriculture and Animal Science
- Journal of Mountain Science
- Land Degradation and Development
- Mountain Science
- Nutrient Cycling in Agroecosystems (>5)
- Journal of Environmental Quality
- PlosOne
- Soil Science
- Soil Science Society of America (>5)
- Soil Use and Management
- Sustainability
- The World Scientific Journals
- Vedos Zone Journal

- **Graduate Student Oral/Poster Presentations Judging**

- SASES Club Poster Contest. ASA, CSSA, and SSSA, International Annual Meetings, Tampa, FL, 2017
- Soil Carbon and Greenhouse Gas Emissions Community. ASA, CSSA, and SSSA, International Annual Meetings, Phoenix, AZ, 2016
- Western Society of Crop Science Annual Meeting, Albuquerque, NM, 2016
- Greenhouse Gas Emissions Community. ASA, CSSA, and SSSA, International Annual Meetings, Minneapolis, MN, 2015
- Soil Biology and Biochemistry division. ASA, CSSA, and SSSA, International Annual Meetings, Long Beach, CA, 2014

- **Meeting Organizer/Session Chair**

- Special Session Symposium - Managing Limited Water Resources in a Changing Climate, ASA, CSSA, SSSA International Annual Meetings, San Antonio TX, 2019
- Symposium - Climate Smart Practices and Agricultural Resilience, ASA, CSSA, SSSA International Annual Meetings, San Antonio TX, 2019
- Global Climate Change General Session (oral session I and II), ASA, CSSA, SSSA International Annual Meetings, San Antonio TX, 2019
- Global Climate Change General Session (posters), ASA, CSSA, SSSA International Annual Meetings, San Antonio TX, 2019
- Symposium – Food-Water-Energy Nexus Approach for Climate Change Mitigation and Adaptation, ASA and CSSA International Annual Meetings, Baltimore, MD, 2018
- Global Climate Change: More Recent Observations and Adaptations Oral I (includes student competition), ASA and CSSA International Annual Meetings, Baltimore MD, 2018
- Soil Carbon and Greenhouse Gas Emissions Community. ASA, CSSA, and SSSA, International Annual Meetings, Tampa FL, 2017