

LIST OF PUBLISHED PAPERS, TECHNICAL REPORTS, AND DISSERTATIONS WHERE
RZWQM/RZWQM2 WAS USED AS OF FEBURARY 2018

1. Abrahamson, D. A., D. E. Radcliffe, J. L. Steiner, M. L. Cabrera, J. D. Hanson, K. W. Rojas, H. H. Schomberg, D. S. Fisher, L. Schwartz, and G. Hoogenboom. Calibration of the Root Zone Water Quality Model for Simulating Tile Drainage and Leached Nitrate in the Georgia Piedmont. *Agron. J.* 2005 97: 1584-1602.
2. Abrahamson, D. A., D. E. Radcliffe, J. L. Steiner, M. L. Cabrera, D. M. Endale, and G. Hoogenboom. Evaluation of the RZWQM for Simulating Tile Drainage and Leached Nitrate in the Georgia Piedmont. *Agron. J.* 2006 98:644-654.
3. Ahmed, I., R. Rudra, K. McKague, B. Gharabaghi and J. Ogilvie. 2007. Evaluation of the Root Zone Water Quality Model (RZWQM) for Southern Ontario: Part I. Sensitivity Analysis, Calibration, and Validation. *Water Qual. Res. J. Canada*, 42(3), 202-218.
4. Ahmed, I., R. Rudra, K. McKague, B. Gharabaghi and J. Ogilvie. 2007. Evaluation of the Root Zone Water Quality Model (RZWQM) for Southern Ontario: Part II. Simulating Long-Term Effects of Nitrogen Management Practices on Crop Yield and Subsurface Drainage Water Quality. *Water Qual. Res. J. Canada*, 42(3), 219-230.
5. Ahuja, L. R., L. Ma, J. D. Hanson, and R. S. Kanwar. 1998. Application of the root zone water quality model for environment-water management in agricultural systems. In: L. S. Pereira and J. W. Gowing (eds.). *Water and the Environment: Innovative Issues in Irrigation and Drainage*. E&FN Spon, London. Pp3-11.
6. Ahuja, L. R., D. K. Cassel, R. R. Bruce, and B. B. Barnes. 1989. Evaluation of spatial distribution of hydraulic conductivity using effective porosity data. *Soil Sci.* 148:404-411.
7. Ahuja, L. R., D. G. DeCoursey, B. B. Barnes, and K. W. Rojas. 1993. Characteristics of macropore transport studied with the ARS root zone water quality model. *Trans. ASAE.* 36:369-380.
8. Ahuja, L.R., DeCoursey, D.G., Barnes, B.B., Rojas, K.W. 1991. Characteristics and importance of preferential macropore transport studied with the ARS Root Zone Water Quality Model. In proceedings of the National Symposium on Preferential Flow, ASAE pub 9:32-49. Chicago, IL, Dec. 16-17, 1991.
9. Ahuja, L. R., K. E. Johnsen, and G. C. Heathman. 1995. Macropore transport of a surface-applied bromide tracer: model evaluation and refinement. *Soil Sci. Soc. Am. J.* 59:1234-1241.
10. Ahuja, L. R., Q. L. Ma, K. W. Rojas, J. J. T. I. Boesten, and H. J. Farahani. 1996. A field test of root zone water quality model – pesticide and bromide behavior. *Pestic. Sci.* 48:101-108.
11. Ahuja, L.R., Rojas, K.W., Johnsen, K.E. 1991. Modeling the behavior of fertilizers and pesticides in relation to chemigation. In Proceedings of the FAO Expert Consultation on Fertigation/Chemigation, Cairo, Egypt UN-FAO, Rome. September 8-11, 1991.
12. Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). 2000. *The Root Zone Water Quality Model*. Water Resources Publications LLC. Highlands Ranch, CO. 372pp.
13. Ahuja, L. R., K. E. Johnsen, and K. W. Rojas. 2000. Water and chemical transport in soil matrix and macropores. Pp13-50. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). *The Root Zone Water Quality Model*. Water Resources Publications LLC. Highlands Ranch, CO.

14. Ahuja, L. R., F. Fiedler, G. H. Dunn, and J. G. Benjamin. 1998. Changes in soil water retention curves due to tillage and natural reconsolidation. *Soil Sci. Soc. Am. J.* 62:1228-1233.
15. Ahuja, L. R. and Ma, L. Parameterization of agricultural system models: Current Issues and techniques. In: Ahuja, L. R., Ma, L., and Howell, T. A. (eds.) *Agricultural System Models in Field Research and Technology transfer*. CRC Press. Boca Raton, FL. 2002. 273-316.
16. Ahuja, L. R. and Ma, L. Computer models to guide soil water management for plants. *Encyclopedia of Soil Science*. Lal, R. (ed). Marcel Dekker, Inc. NY. 2002. 218-222.
17. Ahuja, L. R., Andales, A. A., Ma, L., and Saseendran, S. A., Whole System Integration and Modeling Essential to Agricultural Science and Technology for the 21st Century. *J. Crop Improvement*. 19:73-103. 2007.
18. Ahuja, L. R., Kozak, J. A., Andales, A. A., Ma, L., 2007. Scaling parameters of the Lewis-Kostiakov ponded-water infiltration equation across soil texture classes. *Trans. ASABE*. 50(5):1525-1541.
19. Ahuja, L. R. and J. L. Hatfield. 2007. Integrating soil and crop research with system models in the Midwest USA: Purpose and overview of the special issue. *Geoderma*. 140:217-222.
20. Ahuja, L. R., Saseendran, S. A., and Ma, L., Nelsen, D. C., Trout, T. J., A. A. Andales, and N. C. Hansen. 2008. Use of a cropping system model for soil-specific optimization of limited water. Proceedings “9th International Conference on Precision Agriculture”. Denver, July 2008
21. Ahuja, L.R., **Ma, L.**, Saseendran, S.A., and Fang, Q. X. Models of agricultural systems to guide research and optimal management of soil-water-nutrient resources and enhance environmental quality under varying climatic conditions. *Aspects of Applied Biology 93: Integrated Agricultural systems: Methodologies, Modeling, and Measuring*. SAC, Edinburgh, UK. June 2-4, 2009. Edited by MacLeod et al. (Conference Proceedings). http://qs.aqvs.co.uk/aab/images/P&BF_Modelling.pdf
22. Ahuja, L. R., Ma, L., and T. R. Green. 2010. Effective Soil Properties of Heterogeneous Areas for Modeling Infiltration and Redistribution. *SSSAJ* 74:1469-1482.
23. Ahuja, L. R., Ma, L., Lascano, R., Saseendran, S. A., Fang, Q. X., Nielsen, D. C., Wang, E., Colaizzi, P. Syntheses of the Current Model Applications for Managing Water and Needs for Experimental Data and Model Improvements to Enhance these Applications. In: Ahuja, Ma, and Lascano (Eds). *Practical Applications of Agricultural System Models to Optimize the Use of Limited Water*. Adv. Agric. Systems Model. 5. ASA-SSSA-CSSA publication. Madison, WI. Pp399-437. 2014. (Book Chapter)
24. Ahuja, L. R., Anapalli, S. S., Ma, L. Biophysical System Models Advance Agricultural Research and Technology. In: Wendroth, O., Lascano, R., and Ma, L. (Eds). *Building Bridges Among Disciplines by Synthesizing and Quantifying Soil and Plant Processes for Whole Systems Modeling*. Adv. Agric. Systems Model. 8. ASA-SSSA-CSSA publication. Madison, WI. 2018. (accepted September 20, 2017. Book Chapter)
25. Akhand, N., A. Madani and R. Gordon. 2003. Application of RZWQM in Predicting Subsurface Drainage under Nova Scotia Conditions. *Canadian Water Resources Journal*. 28(1):1-20.
26. Aiken, R. M., G. N. Flerchinger, H. J. Farahani, and K. E. Johnsen. 1997. Energy balance simulation for subsurface and residue temperatures with incomplete cover. *Agron. J.* 89:404-415.
27. Al-Abed, N., H.Y.F. Ng , C.S. Tan, C.F. Drury, J.D. Gaynor, M. Sultani et T.W. Welacky. 1997. «Modelling nitrate in a tile-drained field using RZWQM». *Environnement Canada, Institut national de recherche sur les eaux, Burlington, Ontario, Collection de l'INRE no 97-187.*

28. Alves, I.; Cameira, M.R. .2002. Evapotranspiration estimation performance of Root Zone Water Quality Model: evaluation and improvement. *Agricultural Water Management* 57:61-73.
29. Alves, I.; Cameira, M.R. (2001) - Evapotranspiration in the Root Zone Water Quality Model: evaluation and improvement. In: Soares, A.A.; Saturnino, H.M. (eds) - *Environment and the Water: Competitive Use and Conservation Strategies for Water and Natural Resources* (selected papers of the 4th Inter-Regional Conference "Environment-Water: Competitive Uses and Conservation Strategies for Water and Natural Resources", Fortaleza, Brazil, Aug. 2001), ABID, pp. 311-319.
30. Amatya, D. M., Irmak, S., Gowda, P., Sun, G., Nettles, J. E., and Douglas-Mankin, K. R. Ecosystem evapotranspiration: Challenges in measurements, estimates, and modeling. *Trans. ASABE*. 59:555-560.
31. Anar, M. J., Lin, Z., Ma, L., Bartling, P. N. S., Teboh, J., and Ostlie, M., 2017. Analysis of parameter sensitivity and identifiability of Root Zone Water Quality Model (RZWQM) for dryland sugarbeet modeling. *Trans. ASABE*. 60:1995-2010.
32. Ascough II, J.C., Ma, L., Green, T.R., McMaster, G.S., and Vandenberg, B.C. RZWQM2-GIS: An integrated GIS and agricultural system modeling tool. *Environmental Modeling and Software*. 2007.
33. Ascough II, J.C., Green, T.R., Cipra, J.E., Vandenberg, B.C., Flynn, R.L., *Norman, J.B.*, Ahuja, L.R., and Ma, L. 2003. AgSimGIS: Integrated GIS and Agricultural System Modeling. *Proc. 2003 ESRI International User Conference*, San Diego, California. July 7-11. (Conference Proceedings) [<http://gis.esri.com/library/userconf/proc03/p0309.pdf>]
34. Ascough II, J.C., Green, T.R., Cipra, J.E., Ahuja, L.R., and Ma, L. 2004. [Space-time modeling of agricultural landscape variability using AgSimGIS](#). In: Ramirez, J.A. (Ed.), *Proc. Hydrology Days 2004*, March 10-12, Fort Collins, Colorado. Colorado State University, Fort Collins, Colorado. p. 10-21. (Conference Proceedings)
35. Ascough II, J.C., Green, T.R., Ahuja, L.R., Ma, L., and Vandenberg, B.C. 2005. Spatial water quality modeling framework development using ArcGIS 9. 2005 ASAE Annual International Meeting, Tampa, Florida, 17-20 July, Paper No. 052082. (Technical Report) [<http://asae.frymulti.com/request.asp?JID=5&AID=19886&CID=tf12005&T=2>]
36. Azevedo, A.S.O.N. 1998. Assessment and simulation of atrazine as influenced by drainage and irrigation. An interface between RZWQM and ArcView GIS. Doctor Thesis, Iowa State University, Ames, Iowa.
37. Azevedo, 1998. Atrazine transport through Iowa and Portuguese soils: Monitoring, Modeling, and Arcview GIS. Iowa State University, Ames, Iowa
38. Azevedo, A. S., R. S. Kanwar, P. Singh, L. R. Ahuja, and L. S. Pereira. 1997. Simulating atrazine using root zone water quality model for Iowa soil profiles. *J. Environ. Qual.* 26:153-164.
39. Azevedo, A. S., P. Singh, R. S. Kanwar, and L. R. Ahuja. 1997. Simulating nitrogen management effects on subsurface drainage water quality. *Agric. Systems*. 55:481-501.
40. Azevedo, A., R. Kanwar, and U. Tim. 1998. Developing an Interface Between RZWQM and ARCVIEW GIS. *GIS PLANET 1998 Annual Conference Proceedings*, Lisbon, Portugal, September 1998, CD-Rom.
41. Azevedo, A., R. S. Kanwar, and L. S. Pereira. 2000. Atrazine transport in irrigated heavy- and coarse-textured soils, Part II.: Simulation with the Root Zone Water Quality Model. *J. Agr. Eng. Res.* 76:341-354.

42. Azevedo, A. S., L. S. Pereira, and R. S. Kanwar. 2002. Assessment and simulation of atrazine in irrigated soils. *Irrigation and Drainage*. 51:257-264.
43. Bai L. J. Simulating the Effects of Swine Wastewater Irrigation on Soil-plant System with RZWQM Chinese Academy of Agricultural Sciences 2010 25-49.
44. Bakhsh, A., R. S. Kanwar, D. B. Jaynes, T. S. Colvin and L. R. Ahuja. 2001. Simulating Effects of Variable Nitrogen Application Rates on Corn Yields and NO₃-N Losses with Subsurface Drainage Water. *Transactions of the American Society of Agricultural Engineers (ASAE)* 44(2):269-276.
45. Bakhsh, A., R.S. Kanwar, D.B. Jaynes, T.S. Colvin, and L.R. Ahuja. 2001. Preferential Flow Effects on NO₃-N Losses with Tile Flow. In: *Proceedings of 2nd International Symposium on Preferential Flow: Water movement and Chemical Transport in the Environment*, held at Honolulu, Hawaii – January 3-5, 2001. pp. 41-44.
46. Bakhsh, A., J.L. Hatfield, R.S. Kanwar, L. Ma, and L.R. Ahuja. 2001. Evaluation of Root Zone Water Quality Model for simulation of nonpoint source pollution from Agricultural Lands. A paper presented at the 2001 ASAE Annual International Meeting, Sacramento, California, July 30-August 1, 2001. Paper No. 012187.
47. Bakhsh, A., J. L. Hatfield, R.S. Kanwar, L. Ma, and L.R. Ahuja. 2001. Simulating nitrate losses from Walnut Creek Watershed. A paper presented at the 2001 ASAE Mid Central Meeting, St. Joseph, MO, March 30-31, 2001. Paper No. MC01-405.
48. Bakhsh, A., R.S. Kanwar, D.B. Jaynes, T. S. Colvin, and L.R. Ahuja. 2000. Simulating the Impact of N-fertilizer Application rates on NO₃-N Losses with Subsurface Drainage Water and Crop Yield Using RZWQM. A paper presented at the 2000 ASAE Annual International Meeting Milwaukee, Wisconsin, July 9-12, 2000. Paper No. 002071.
49. Bakhsh, A., R. S. Kanwar, D. B. Jaynes, T. S. Colvin, and L. R. Ahuja. 2000. Using RZWQM to predict yield and NO₃-N losses with tile flow. Paper presented at the 2000 Mid-central ASAE meeting, Ramada Inn, St. Joseph, MO, April 28-29, 2000. Paper no. MC00-108.
50. Bakhsh, A. 1999. Use of site specific farming systems and computer simulation models for agricultural productivity and environmental quality, Iowa State University, Ames, Iowa
51. Bakhsh, A., R. S. Kanwar, and L. R. Ahuja. 1999. Simulating the effect of swine manure application on NO₃-N transport to subsurface drainage water. *Trans. ASAE*. 42:657-664.
52. Bakhsh, A., R. S. Kanwar, and L. R. Ahuja. 1998. Simulating the effects of manure application on water quality using RZWQM. In: *Proceeding of the conference on animal production system and the environment: An International Conference on Odor, Water Quality, Nutrient Management and Socioeconomic Issues*, July 19-22, 1998. Des Moines, Iowa, Vol. 1:445-456.
53. Bakhsh, A., Hatfield, J. L., Kanwar, R. S., Ma, L. and Ahuja, L. R. Simulating nitrate losses from Walnut Creek Watershed. *J. Environ. Quality*. 33:114-123. 2004.
54. Bakhsh, A., Ma, L., Ahuja, L. R., Hatfield, J. L., and Kanwar, R. S. Using RZWQM to Predict Herbicide Leaching Losses in Subsurface Drainage Water. *Trans. ASAE*. 47:1415-1426, 2004.
55. Barbash, J. E., and F. D. Voss. 2016. Design and testing of a process-based groundwater vulnerability assessment (P-GWAVA) system for predicting concentrations of agrichemicals in groundwater across the United States. USGS Scientific Investigations Report 2014-5189. U S Department of Interior. U. S. Geological Survey, Reston, Virginia. 210p. <http://dx.doi.org/10.3133/sir20145189>.

56. Bayless, E. R., P. D. Capel, J. E. Barbash, R. M. T. Webb, T. L. Connell Hancock, and D. C. Lampe. 2008. Simulated Fate and Transport of Metolachlor in the Unsaturated Zone, Maryland, USA. *J. Environ. Quality*. 37:1064-1072.
57. Behl, T. 1999. Modellierung der Wasser- and Stickstofftransportdynamik in der ungesättigten Bodenzone im Einzugsgebiet der Grundwassergewinnungsanlage 'Hennefer Siegbogen' mit dem Root Zone Water Quality Model (RZWQM). Dissertation. Vorgelegt dem Rat der Chemisch-Geowissenschaftlichen Fakultät der Friedrich-Schiller-Universität Jena Germany.
58. Borah, M. J. and P. K. Kalita. 1998. Evaluating RZWQM and LEACHM for agricultural chemical transport in two kansas soils. Paper presented at the July 12-16, 1998 ASAE annual international meeting, Orlando, Florida. Paper No. 982215. ASAE, St. Joseph, MI.
59. Borah, M. J. and P. K. Kalita. 1999. Development and evaluation of a macropore flow component for LEACHM. *Trans. ASAE*. 42:65-78.
60. Buchleiter, G. W., H. J. Farahani, and L. R. Ahuja. 1995 Model evaluation of groundwater contamination under center pivot irrigated corn in eastern Colorado. In: C. Heatwole (ed.): *Proceedings of the International Symposium on Water Quality Modeling*. Orlando, Florida. pp 41-50.
61. Cameira, M.R., P.L. Sousa; H.J.Farahani, L.R. Ahuja e L.S.Pereira. 1996. Simulation of water and nitrates in level basin fertigated maize using RZWQM. *Proceedings of the 16th International Congress on Irrigation and Drainage - Workshop on Crop-Water-Environment Models*", 17 Setembro, Cairo, Egypt.
62. Cameira, M. R. 1999. Water and nitrogen balance in irrigated corn in the Sorraia Valley. Discussion of the transfer processes and application of the model RZWQM98. Ph.D. thesis. Technical University of Lisbon, Agronomy Institute, Portugal.
63. Cameira, M. R., P. L. Sousa, H. J. Farahani, L. R. Ahuja, and L. S. Pereira. 1998. Evaluation of the RZWQM for the simulation of water and nitrate movement in level-basin, fertigated maize. *J. Agric. Engng. Res.* 69:331-341.
64. Cameira, M. R., L. R. Ahuja, R. M. Fernando, L. S. Pereira. 2000. Evaluating field measured soil hydraulic properties in water transport simulations using the RZWQM. *Journal of hydrology*. 236:78-90.
65. Cameira M.R.; Fernando R.M.; Pereira L.S. 2000. Assessment of NO₃-N losses under different management practices using a dual porosity model. In: Mermoud A, Musy A, Pereira LS, Ragab R (Eds) *Control of Adverse Impacts of Fertilizers and Agrochemicals* (Proc.Int. Workshop, Cape Town, Oct. 2000), South Africa Com. ICID, Pretoria: 89-99.
66. Cameira M.R.; Fernando R.M.; Pereira L.S. 2000. Monitoring water and NO₃-N in irrigated maize fields in the Sorraia Valley, Portugal. In: Mermoud A, Musy A, Pereira LS, Ragab R (Eds) *Control of Adverse Impacts of Fertilizers and Agrochemicals* (Proc.Int. Workshop, Cape Town, Oct. 2000), South Africa Com. ICID, Pretoria: 53-62.
67. Cameira, M.R.; Fernando, R.M. 2001. Modeling the impacts of the EC nitrate directive in the Portuguese vulnerable zones. Poster presented at the "4th Inter-regional conference Environment-Water: Competitive Use and Conservation Strategies for Water and Natural Sources" August 2001, Fortaleza , Brasil.
68. Cameira M.R., R.M. Fernando, L. Ahuja & L. Pereira. Simulating the Fate of Water in Field Soil –Crop Environment. *Journal of Hydrology*, 315:1-24. 2005.

69. Cameira, M. R., Fernando, R. M., Ahuja, L. R., and Ma, L. 2007. Simulating fate of nitrogen in field soil-crop environment in the Mediterranean Region. *Agricultural Water Management*. 90:121-136.
70. Cameira, M. R., A. Pereira, Ahuja, L. R., and Ma, L. 2014. Sustainability and Environmental Assessment of Fertigation in an Intensive Olive Grove under Mediterranean Conditions. *Agric. Water Management*. 146:346-360.
71. Chen, H., Zhang, X., Demars, C., Zhang, M., 2017. Numerical simulation of agricultural sediment and pesticide runoff: RZWQM and PRZM comparison. *Hydrological Processes*. 10.1002/hyp.11207. 31:2464-2476.
72. Chinkuyu, A., T. Meixner, T. Gish, and C. Daughtry. 2004. The importance of seepage zones in predicting soil moisture content and surface runoff using GLEAMS and RZWQM. *Trans. ASAE*. 47:427-438.
73. Chinkuyu, A., T. Meixner, T. Gish, and C. Daughtry. 2005. Prediction of pesticide losses in surface runoff from agricultural fields using GLEAMS and RZWQM. *Trans. ASAE*. 48:585-599.
74. Chinkuyu, A., T. Meixner, T. Gish, and A. P. Nejadhashemi. 2006. Prediction of NO₃-N losses in surface runoff from agricultural fields using GLEAMS and RZWQM. *Trans. ASAE*. 49:1779-1790.
75. Cook, S. M. F. 1996. Tillage and soil macropore structure: preferential transport of atrazine and rhodamine WT. Ph.D thesis. University of Minnesota.
76. Craft, K. J., J. Helmers, R. W. Malone, C. H. Pederson, and L. R. Schott. 2018. Effects of subsurface drainage systems on water and nitrogen footprints simulated with RZWQM2. *Trans. ASABE*. 61:245-261.
77. Deb, S. K., M. K., Shkla, and J. G. Mexal. 2012. Simulating deep percolation in flood-irrigated mature pecan orchards with RZWQM2. *Trans. ASABE*. 55:2089-2100.
78. DeCoursey, D.G., Rojas, K.W. 1990. RZWQM- A model for simulating the movement of water and solutes in the root zone. In: D.G. DeCoursey (ed.). *Proceedings of the International Symposium on Water Quality Modeling of Agricultural Non-Point sources*. Utah State University. Logan, UT. June 19-23, 1998. USDA, ARS-81 pp.813-821.
79. DeCoursey, D.G., Rojas, K.W. 1990. A Root Zone Water Quality Mode. (RZWQM). In *Proceedings, towards a Sustainable Agriculture for the Great Plains: A symposium*. Fort Collins, CO. January 19-20, 1989
80. DeCoursey, D.G., Rojas, K.W., Ahuja, L.R. 1989. Potentials for non-point source groundwater contamination analyzed using RZWQM. ASAE Paper No. 892562, presented at 1989 International Meeting of ASAE. New Orleans, La. December 12-15, 1989.
81. Ding, D., Y. Zhao, B. Sun, J. He and H. Feng. Suitability analysis of nitrogen fertilizer management on dryland of loess plateau based on root zone water quality model. *Trans. Chinese Soc. Agric. Engin.* 31:111-121. 2015.
82. Ding, D., Feng, H., Zhao, Y., Liu, W., Chen H., and He, J. Impact assessment of climate change and later-maturing cultivars on winter wheat growth and soil water deficit on the Loess Plateau of China. *Climatic Change*. 138:157-171. 2016.
83. Ding, J., Wu, J., Yang Y., He, J., and Feng, H. Simulation of effects of tillage pattern transformation on soil water conservation with RZWQM model. *Trans. Chinese Society of Agricultural Machinery*. 47:136-145. 2016.

84. Ellerbroek, D. A. 1993. Vadose zone transport of pesticides with macropore flow and spatial variability of parameters. Ph.D. thesis. Colorado State University, Fort Collins, CO.
85. Ellerbroek, D.A., D. S. Durnford, and J. C. Loftis. 1998. Modeling pesticide transport in an irrigated field with variable water application and hydraulic conductivity. *J. Environ. Qual.* 27:495-504.
86. Elsayed, M. L. M., Anapalli, S. S., Ahuja, L. R., Ma, L., Trout, T. J., and Andales, A. A. Modeling Current and Future Climate Effects on Winter Wheat Production in the Central Great Plains of the United States. In: Wendroth, O., Ma, L., and Lascano, R. (Eds). *Building Bridges Among Disciplines by Synthesizing and Quantifying Soil and Plant Processes for Whole Systems Modeling*. Adv. Agric. Systems Model. 8. ASA-SSSA-CSSA publication. Madison, WI. 2018. (accepted February 20, 2018. Book Chapter)
87. Esmaeili, Sara, N. R. Thomson, B. A. Tolson, B. J. Zebarth, S. H. Kuchta, and D. Neilsen. 2014. Quantitative global sensitivity analysis of the RZWQM to warrant a robust and effective calibration. *J. Hydrol.* 511:567-579.
88. Fang, Quanxiao, 2006, water and nitrogen behaviors and their effects on crop yield and environment in agro-ecosystem: experiments and modeling. Ph. D. thesis, Chinese Academy of Sciences.
89. Fang, Q., L. Ma, Q. Yu, L. R. Ahuja, R. W. Malone, and G. Hoogenboom. 2009. Irrigation strategies to improve the water use efficiency of wheat-maize double cropping systems in China. *Agricultural Water Management.* 97:1165-1174.
90. Fang, Q., L. Ma, Q. Yu, R. W. Malone, S. A. Saseendran, and L. R. Ahuja. 2008. Modeling Nitrogen and Water Management Effects in a Wheat-Maize Double-Cropping System *J. Environ. Qual.* 37(6):2232-2242.
91. Fang, QuanXiao; Yu Qiang; and Wang JianLin. 2009. Simulating soil water dynamics and its effects on crop yield using RZWQM-CERES in the North China Plain. *Acta Agronomica Sinica.* 35:1122-1130.
92. Fang, Q. X., T.R. Green, L. Ma, R. W. Malone, R.H. Erskine, and L.R. Ahuja. 2010. Optimizing soil hydraulic parameters in RZWQM2 using automated calibration methods. *SSSAJ.* 74:1897-1913.
93. Fang, Q. X., Malone, R. W., **Ma, L.**, Jaynes, D. B., Green, T. R., and Ahuja, L. R. Modeling controlled tile flow, N application rate, and weather effects on N loss to streams. *Agric. Water Management* (Accepted Nov. 7, 2011). 2012.
94. Fang, Q. X. 2012. Optimizing and uncertainty evaluation of soil and crop parameters in root zone water quality model. *Trans. CSAE.* 28:118-123.
95. Fang, Q. X., Ma, L., Yu, Q., Hu, C. S., X. X. Li, R. W. Malone, and Ahuja, L. R. 2013. Quantifying climate and management effects on regional N leaching and crop yield in the North China Plain. *J. Environ. Qual.* 42:1466-1479.
96. Fang, Q. X., Ma, L., Flerchinger, G. N., Qi, Z., Ahuja, L. R., Xing, H. T., Li, J., and Yu, Q. 2014. Modelling Evapotranspiration and Energy Balance in a Wheat-Maize Cropping System Using the Revised RZ-SHAW Model. *Agric. Forest Meteorol.* 194:218-229.
97. Fang, Q. X., Ma, D. C. Nielsen, T. J. Trout, and L. R. Ahuja. Quantifying crop yield and water use efficiency in response to growth-stage based irrigation scheduling and seasonal water availability. In: Ahuja, Ma, and Lascano (Eds). *Use of System Models to Optimize Limited Water Resources and Nitrogen Management*. ASA-SSSA-CSSA publication. Madison, WI. Pp1-25, 2014. (Book Chapter)

98. Fang, Q. X., Ma, L., Halvorson, A. D., Malone, R. W., Ahuja, L. R., Del Grosso, S. and Hatfield, J. L. 2014. Simulating Greenhouse Gas emission in irrigated corn field using RZWQM. *Environ. Modeling & Software*. 72:56-70, 2015.
99. Fang, Q. X., Ma, L., Ahuja, L. R., Trout, T. J., Malone, R. W., and Zhang, H., Long-term simulation of growth stage-based irrigation scheduling for maize production under various water constraints in Northeastern Colorado. *Frontiers of Agricultural Science and Engineering*. 4:172-184, 2017. DOI : 10.15302/J-FASE-2017139.
100. Fang, Q. X., Ma, L., Qi, Z., He, L., S. H. Xu, I. Kisekka, M. W. Sima, R. W. Malone, and Yu, Q., Optimizing ET-based irrigation scheduling for wheat and maize with different water constraints. *Trans. ASABE*. 2017. 60:2054-2065.
101. Fang, Q. X., L. Ma, T. J. Trout, L. H. Comas, K. C. DeJonge, L. R. Ahuja, L. A. Sherrod, and R. W. Malone. Modeling N uptake under deficit irrigation conditions in the Central Great Plains. *Trans. ASABE*. 2017. 60:2067-2081.
102. Farahani, H. J. and D. G. DeCoursey 2000. Evaporation and transpiration processes in the soil-residue-canopy system. Pp51-80. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). *The Root Zone Water Quality Model*. Water Resources Publications LLC. Highlands Ranch, CO.
103. Farahani, H. J., G. W. Buchleiter, L. R. Ahuja, and L. A. Sherrod. 1999. Model evaluation of dryland and irrigated cropping systems in Colorado. *Agron. J.* 91:212-219.
104. Farahani, H. J. and L. R. Ahuja. 1996. Evapotranspiration modeling of partial canopy/residue-covered fields. *Trans. ASAE*. 39:2051-2064.
105. Farahani, H. J. and W. C. Bausch. 1995. Performance of evapotranspiration models for maize - bare soil to closed canopy. *Trans. ASAE* 38:1049-1059.
106. Farahani, H. J., L. R. Ahuja, G. A. Peterson, L. A. Sherrod, and R. Mrabet. 1995. Root zone water quality model evaluation of dryland/no-till crop production in eastern Colorado. In: C. Heatwole (ed.): *Proceedings of the International Symposium on Water Quality Modeling*. Orlando, Florida. pp 11-20.
107. Farahani, H. J., L. R. Ahuja, G. A. Peterson, L. A. Sherrod, and R. Mrabet. 1995. Modeling of dryland and irrigated corn production systems in eastern Colorado. *Proceeding of the Workshop on Computer Applications in Water management*. Great Plains Agricultural Council. May, Fort Collins, Colorado.
108. Farahani, H. J., L. R. Ahuja, Buchleiter, G.W. and G.A. Peterson. 1995. Mathematical modeling of irrigated and dryland corn production in eastern Colorado. *Proceeding of the Clean Water-Clean Environment -21st Century*. USDA Working Group on Water Quality, ASAE. March, Kansas City, Missouri.
109. Feng, G., H. Tewolde, L. Ma, K. R. Sistani, A. Adeli, and J. Jenkins. Simulating management of poultry litter on corn production and soil nitrogen balance in the Mid-Southern United State. *Soil Sci. Soc. Am. J.* .79:1804-1814. 2015.
110. Flerchinger, G. N., R. M. Aiken, K. W. Rojas, and L. R. Ahuja. 2000. Development of the Root Zone Water Quality Model (RZWQM) for over-winter conditions. *Trans. ASAE*. 43:59-68.
111. Flerchinger, G. N., R. M. Aiken, K. W. Rojas, L. R. Ahuja, K. E. Johnsen, and C. V. Alonso. 2000. Soil heat transport, soil freezing and snowpack conditions. Pp281-314. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). *The Root Zone Water Quality Model*. Water Resources Publications LLC. Highlands Ranch, CO.

112. Fox, G. A., R. W. Malone, G. J. Sabbagh, K. Rojas. 2004. Interrelationship of Macropores and Subsurface Drainage for Conservative Tracer and Pesticide Transport. *J. Environ. Qual.* 33:2281-2289.
113. Fox, G. A., G. J. Sabbagh, W. Chen, M. H. Russell. 2006. Uncalibrated modelling of conservative tracer and pesticide leaching to groundwater: comparison of potential Tier II exposure assessment models [electronic resource]. *Pest management science.* 62:537-550.
114. Fox, G.A., G.J. Sabbagh, R. Malone, and K.W. Rojas. 2007. Modeling parent and metabolite fate and transport in subsurface drained fields with directly connected macropores. *Journal of American Water Resources Association.* 43:1359-1372.
115. Fox, G.A., S. H. Pulijala, and G.J. Sabbagh. 2007. Influence of rainfall distribution on simulations of atrazine, metolachlor, and isoxaflutole/metabolite transport in subsurface drained fields. *J. Agric. Food Chem.* 55:5399-5407.
116. Fox, G. A., O. Akay, R. W. Malone, L. Ma, and G. Sabbagh. 2007. An improved express fraction for modeling macropore/subsurface drain interconnectivity. 2007 ASABE Annual International Meetings, Minneapolis, Minnesota. 17-2- June, 2007. Paper number 072139.
117. Gangwer, M. I., 2005. Modeling the field water balance on irrigation crop fields using Root Zone Water Quality Model. Ph. D. Dissertation. Department of Biosystems and Agricultural Engineering. Michigan State University.
118. Geisseler, D., P. A. Lazicki, G. S. Pettygrove, B. Ludwig, P. A. M. Bachand, W. R. Horwath. 2012. Nitrogen dynamics in irrigated forage systems fertilized with liquid dairy manure. *Agron. J.* 104:897-907.
119. Ghidry, F., E. E. Alberts, and N. R. Kitchen. 1999. Evaluation of RZWQM using field measured data from the Missouri MSEA. *Agron. J.* 91:183-192.
120. Gillette, K. L., **Ma, L.**, Malone, R. W., Fang, Q. X., Halvorson, A. D., Hatfield, J. L., and Ahuja, L. R. 2017. Simulating N₂O emissions in different tillage systems using RZWQM2. *Soil and Tillage Research.* 165:268-278.
121. Gillette, K., R. W. Malone, T. C. Kaspar, L. Ma, T. B. Parkin, D. B. Jaynes, Q. X. Fang, J. L. Hatfield, G. W. Feyereisen, K. C. Kersebaum. 2018. N loss to drain flow and N₂O emissions from a corn-soybean rotation with winter rye. *Science of the Total Environment.* 618:982-997.
122. Green, T.R., Ascough II, J.C., Ahuja, L.R., Ma, L., and Erskine, R.H. 2004. Model parameterization at different scales: How do we estimate and incorporate spatial information? Proc. Intl. Workshop on Applications, Enhancements and Collaborations of ARS RZWQM and GPFARM Models, April 20-22, Fort Collins, Colorado. pp. 60-61. (Conference Proceedings).
123. Gu, Z., Qi, Z., Ma, L., Gui, D., J. Xu, Q. Fang, Yuan, S., and G. Feng. 2017. Development of an irrigation scheduling software based on model predicted crop water stress. *Computer and Electronics in Agriculture.* 149:208-221.
124. Guzman, J. A. 2010. SOIL Pathogen fate and transport biopores: Facilitating *ESCHERICHIA COLI* transport. Ph. D. Dissertation. Oklahoma State University. Stillwater, OK.
125. Guzman, J. A. and G. Fox. 2012. Implementation of biopore and soil fecal bacteria fate and transport routines into the Root Zone Water Quality Model (RZWQM). *Trans. ASABE.* 55:73-84.
126. Han, E., V. Merwade, and G. C. Heathman. 2012. Application of data assimilation with the root zone water quality model for soil moisture profile estimation in the upper cedar creek, Indiana. *Hydrol. Process.* 26:1707-1719.

127. Hansen, S., M. J. Shaffer, and H. E. Jensen. 1995. Developments in modeling nitrogen transformations in soil. In: P. E. Bacon (ed). Nitrogen Fertilization in the Environment. Marcel Dekker, Inc. New York. pp83-107.
128. Hanson, J. D. 2000. Generic crop production model for the root zone water quality model. Pp81-118. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). The Root Zone Water Quality Model. Water Resources Publications LLC. Highlands Ranch, CO.
129. Hanson, J. D., K. W. Rojas, and M. J. Shaffer. 1999. Calibration and evaluation of the root zone water quality model. *Agron. J.* 91:171-177.
130. Hao Shilong, 2002, RZWQM model's adaptability research in North China Plain. Master thesis, Chinese Academy of Sciences.
131. Heathman, G.C., Starks, P.J., Ahuja, L.R. and Jackson, T.J. Assimilation of surface soil moisture to estimate profile soil water content. *J. Hydrology.* 279:1-17. 2003
132. Hebson, C. S. and D. G. DeCoursey. 1987. A model for assessing agricultural management impact on root zone water quality. Presented at 193rd ACS meeting (Symposium on surface runoff of chemicals from agricultural watersheds), April 5-10, 1987, Denver, CO.
133. Hebson, C.S., Rojas, K.W., Shaffer, M.J. 1988. Soil chemistry and organic matter/nitrogen cycling in the unsaturated zone. Groundwater Geochemistry Conference, National Well Water Association (sponsor), Denver, CO, Feb. 16-18, 1988.
134. Heilman, P., Malone, R. W., Ma, L., Hatfield, J. L., Ahuja, L. R., Ayen, J., Boyle, K., and Kanwar R. (2006). Decision support for nitrogen management in tile-drained agriculture. In: Voinov, A., Jakeman, A.J., Rizzoli, A.E. (eds). Proceedings of the iEMSS Third Biennial Meeting: "Summit on Environmental Modelling and Software". International Environmental Modelling and Software Society, Burlington, USA, July 2006. http://www.iemss.org/iemss2006/papers/s2/139_Heilman_1.pdf
135. Heilman, P., Malone, R. W., Ma, L., Hatfield, J. L., Ahuja, L. R., Boyle, K., and Kanwar, R. S. 2012. Getting the most from intensively monitored data for water quality decision support. *Agric. Systems.* 106:69-71.
136. Heilman, P., R. S. Kanwar, P., R. S. Kanwar, R. W. Malone, L. Ma, J. L. Hatfield and K. Boyle. 2012. The Nashua agronomic, water quality, and economic dataset. *J. Soil Water Conserv.* 67:502-512.
137. Hu, C., Saseendran S. A., Green, T. R., Ma, L., Li, X. and Ahuja, L. R. Evaluation of RZWQM for Irrigated Wheat-Corn Double Cropping Systems in North China Plain. *Vadose Zone Journal*, 5:493-505. 2006.
138. Hua, Y. 1995. The role of variable cracking on agrichemical transport at the Missouri MSEA site using the root zone water quality model. M.S. Thesis. University of Missouri-Columbia.
139. Islam, A., L. R. Ahuja, L. A. Garcia, L. Ma, S. A. Saseendran. and T. J. Trout. 2012. Modelling the Impact of Climate Change on Corn Yield using Multi-model Ensemble Climate Change Scenarios. *Agric. Water Management.* 110:94-108.
140. Islam, Adlul, Ahuja, L. R., Garcia, L. A. Ma, L., Saseendran, S. A. 2012. Modelling effect of climate change and elevated CO₂ on potential evapotranspiration demand using multi-model ensemble climate change scenarios. *Trans. ASABE.* 55:2135-2146.

141. Jaynes, D. B. and J. G. Miller. 1999. Evaluation of RZWQM using field measured data from Iowa MSEA. *Agron. J.* 91:192-200.
142. Jiang, Q., Qi, Z., Ma, L. and Fang, Q. X. A review on simulating hydrologic cycle and water quality in subsurface drained field using Root Zone Water Quality Model. In: Wendroth, O., Lascano, R., and Ma, L. (Eds). *Honoring the Contributions of Laj Ahuja: Building Bridges Among Disciplines by Synthesizing and Quantifying Soil and Plant Processes for Whole Systems Modeling.* Adv. Agric. Systems Model. 8. ASA-SSSA-CSSA publication. Madison, WI. 2017. (Book Chapter)
143. Johnsen, K. E., H. H. Liu, J. H. Dane, L. R. Ahuja, and S. R. Workman. 1995. Simulation fluctuating water tables and tile drainage with a modified root zone water quality model and a new model WAFLOWM. *Trans. ASAE.* 38:75-83.
144. Karlen, D. L., A. Kumar, R. S. Kanwar, C. A. Cambardella, and T. S. Colvin. 1998. Tillage system effects on 15-year carbon-based and simulated N budgets in a tile-drained Iowa field. *Soil & Tillage Research.* 48:155-165.
145. Kisekka, I., Schlegel, A., Vanderveer, M., and Ma, L. Effect of preplanting irrigation on corn yield, evapotranspiration, and profitability under limited water in semi-arid climate. *Agric. Water Manage.* 187:154-163. 2017.
146. Kladvko, E. J. T. C. Kaspar, D. B. Jaynes, R. W. Malone, J. Singer, X. K. Morin, and T. Searchinger. 2014. Cover crops in the upper midwestern United States: Potential adoption and reduction of nitrate leaching in the Mississippi River basin. *J. Soil Water Conserv.* 69:279-291.
147. Ko, Jonghan, L. R. Ahuja, Bruce Kimball, Saseendran Anapalli, L. Ma, T. R. Green, Gerard Wall, and Paul Pinter. 2010. Simulation of Climate Change Impacts on Wheat-Fallow Cropping Systems. *Agric. and Forest Meteorol.* 150:1331-1346.
148. Ko, Jonghan, L. R. Ahuja, S. A. Saseendran, T. R. Green, L. Ma, D. C. Nielsen, and Charles Walthall. 2011. Climate Change Impacts on Dryland Cropping Systems in the Central Great Plains, USA. *Climate Change.* 107: DOI 10.1007/s10584-011-0175-9. 2011.
149. Kozak, J. A., and Ahuja, L. R. Scaling of infiltration and redistribution across soil textural classes. *Soil Sci. Soc. Am. J.* 69:816-827. 2005.
150. Kozak, J., Ahuja, L. R., Ma, L., and Green, T. R. Scaling and estimation of evaporation and transpiration of water across soil texture classes. *Vadose Zone Journal.* 4:418-427. 2005.
151. Kozak, J., Ahuja, L. R., Green, T. R. and Ma, L. Effects of crop canopy and residue rainfall interception on water balance. *Hydrological Processes.* 21:229-241. 2007.
152. Kozak, J. A., R. Aiken, G. N. Flerchinger, D. C. Nielsen, L. Ma., and L. R. Ahuja. 2007. Quantifying Residue Architecture Effects on Soil Temperature and Water. *Soil & Tillage Research.* 95:84-96.
153. Kozak, J., Ma, L., Ahuja, L. R., Flerchinger, G. N., and Nielsen, D. C. 2006. Evaluating various water stress calculations in RZWQM and RZ-SHAW for corn and soybean production. *Agron. J.* 98:1146-1155.
154. Kumar, 1996. Simulating NO₃-N and atrazine concentrations in the subsurface drainage water using DRAINAGE model. Iowa State University, Ames, Iowa.
155. Kumar, A., R. S. Kanwar, P. Singh, and L. R. Ahuja. 1999. Evaluating of the root zone water quality model for predicting water and NO₃-N movement in an Iowa soils. *Soil and Tillage Res.* 50:223-236.

156. Kumar, A., R. S. Kanwar, and L. R. Ahuja. 1998. RZWQM simulation of nitrate concentrations in subsurface drainage from manured plots. *Trans. ASAE*. 41:587-597.
157. Kumar, A., R. S. Kanwar, and L. R. Ahuja. 1998. Evaluation of preferential flow component of RZWQM in simulating water and atrazine transport to subsurface drains. *Trans. ASAE*. 41:627-637.
158. Kumar, A., R. S. Kanwar, and L. R. Ahuja. 1997. Evaluation of RZWQM simulations for manure applications for a continuous corn field in Iowa. Paper presented at the 1997 Mid-central ASAE meeting, Ramada Inn, St. Joseph, MO, April 11-12, 1997. Paper no. MC97-119.
159. Kuzmanovski, V., Trajanov, A., Leprince, F., Džeroski, S., and Debeljak, M. 2015. Modeling water outflow from tile-drained agricultural fields. *Science of the Total Environment*. 505:390-401.
160. Landa, F. M., N. R. Fausey, S. E. Nokes, and J. D. Hanson. 1999. Evaluation of the root zone water quality model (RZWQM3.2) at the Ohio MSEA. *Agron. J.* 91:220-227.
161. Li G H, Zhang Y P, Hu K L. Modeling the effect of rainfall and irrigation on nitrate leaching and crop yield in wheat-maize cropping system in North China Plain. *Scientia Agricultura Sinica*, 2013, 46(3): 545-554. (in Chinese)
162. Li, L. R. W. Malone, L. Ma, T. C. Kaspar, D. B. Jaynes, S. A. Saseendran, K. R. Thorp, Q. Yu, and L. R. Ahuja. 2008. Winter Cover Crop Effects on Nitrate Leaching in Subsurface Drainage as Simulated by RZWQM-DSSAT. *Trans. ASABE*. 51(5):1575-1583.
163. Li, L., D. C. Nielsen, Yu, Q., Ma, L., and L. R. Ahuja. 2009. Seasonal variations of CWSI and its correlation with soil moisture, CO₂ flux, and canopy water use efficiency in the North China Plain. *Agric. Water Management*. 97:1145-1155.
164. Li, Y, H. Liu, and G. Huang. 2015. Evaluation of nitrogen and water management in winter wheat-summer maize cropping system in north china plain using RZWQM. *Trans. Chinese Society for Agricultural Machinery*. 46:111-120.
165. Li, Z., Ma, L., Flerchinger, G. N., Ahuja, L. R., Wang, H., and Li, Z. 2012. Simulation of over-winter soil water and soil temperature with SHAW and RZ-SHAW. *Soil Sci. Soc. Am. J.* 76:1548-1563.
166. Li, Z., and Z. Sun. 2016. Optimized single irrigation can achieve high corn yield and water use efficiency in the Corn Belt of Northeast China. 75:12-24.
167. LIU Hai-tao, HU Ke-lin, LI Bao-guo, REN Tu-sheng. Effects of Soil Profile Basic Properties on Water and Nitrogen Movement and Crop Yield. *Scientia Agricultura Sinica*. 2015,48(7):1348-1360 (in Chinese).
168. Ma, L., M. J. Shaffer, J. K. Boyd, R. Waskom, L. R. Ahuja, K. W. Rojas, and C. Xu. 1998. Manure Management in an Irrigated Silage Corn Field: Experiment and Modeling. *Soil Sci. Soc. Am. J.* 62:1006-1017.
169. Ma, L., H. D. Scott, M. J. Shaffer, and L. R. Ahuja. 1998. RZWQM simulations of water and nitrate movement in a manured tall fescue field. *Soil Sci.* 163:259-270.
170. Ma, L., L. R. Ahuja, M. J. Shaffer, J. D. Hanson, and K. W. Rojas. 1998. Parameterization, calibration, and sensitivity analysis of the RZWQM: A Synthesis. Paper presented at the July 12-16, 1998 ASAE annual international meeting, Orlando, Florida. Paper No. 982214. ASAE, St. Joseph, MI.
171. Ma, L., G. A. Peterson, L. R. Ahuja, L. Sherrod, M. J. Shaffer, and K. W. Rojas. 1999. Decomposition of surface crop residues in long-term studies of dryland agroecosystems. *Agronomy J.* 91:401-409.

172. Ma, L., J. C. Ascough, II, M. J. Shaffer, L. R. Ahuja, J. D. Hanson, and K. W. Rojas. 2000. Root Zone Water Quality Model sensitivity analysis using the Monte Carlo Simulations. *Trans. ASAE*. 43(4):883-895.
173. Ma, L., L. R. Ahuja, J. C. Ascough, II, M. J. Shaffer, K. W. Rojas, R. W. Malone, and M. R. Cameira. 2000. Integrating system modeling with field research in agriculture: Applications of Root Zone Water Quality Model (RZWQM). *Adv. Agron.* 71:233-292.
174. Ma, L., Shaffer, M. J., and Ahuja, L. R. 2001. Application of RZWQM for soil nitrogen management. In: Shaffer, M. J., Ma, L., and Hansen, S. (eds.) *Modeling Carbon and Nitrogen Dynamics for Soil Management*. CRC Press. p. 265-301.
175. Ma, L., Nielsen, D. C., Ahuja, L. R., Kiniry, J. R., Hanson, J. D. and Hoogenboom, G. 2001. An evaluation of RZWQM, CROPGRO, and CERES-maize for responses to water stress in the Central Great Plains of the U. S. In: Ahuja, L. R., Ma, L., and Howell, T. A. (eds.) *Agricultural System Models in Field Research and Technology Transfer*. CRC Press. Boca Raton, FL. 119-148.
176. Ma, L., Nielsen, D. C., Ahuja, L. R., Malone, R. M., Anapalli, S. S., Rojas, K. W., Hanson, J. D., and Benjamin, J. G. 2003. Evaluation of the RZWQM under various irrigation levels in Eastern Colorado. *Trans. ASAE*. 46:39-49.
177. Ma, L., Hoogenboom, G., Ahuja, L. R., Nielsen, D. C., and Ascough, J. C., II. Development and evaluation of RZWQM-CROPGRO hybrid for soybean production. *Agron. J.* 97:1172-1182. 2005.
178. Ma, L., Hoogenboom, G., Ahuja, L. R., Ascough, J. C., II, and Anapalli, S. S. Evaluation of RZWQM-CERES-maize hybrid for corn production. *Agric. Systems*. 87:274-295. 2006.
179. Ma, L., Malone, R. W., Heilman, P., Ahuja, L. R., Meade, T., Saseendran, S. A., Ascough, J. C. II, and Kanwar, R. S. Sensitivity of Tile Drainage Flow and Crop Yield on Measured and Calibrated Soil Hydraulic Properties. *Geoderma*. 140:284-296. 2007.
180. Ma, L. Malone, R. W., Heilman, P., Jaynes, D., Ahuja, L. R., Saseendran, S. A., Kanwar, R. S., and Ascough, J. C., II. RZWQM simulated effects of crop rotation, tillage, and controlled drainage on crop production and nitrate-N loss in drain flow. *Geoderma*, 140:297-309.
181. Ma, L., Malone, R. W., Heilman, P., Ahuja, L. R., R. S. Kanwar, D. L. Karlen, C. A. Cambardella, S. A. Saseendran. 2007. RZWQM simulation of long-term crop production, water and nitrogen balances in Northeast Iowa. *Geoderma*, 140:247-259. 2007.
182. Ma, L., L. R. Ahuja, and R. W. Malone. 2007. Systems modeling for soil and water research and management: Current status and needs in the 21st century. *Trans. ASABE* 50(5):1705-1713.
183. Ma, L., R. W. Malone, D. B. Jaynes, K. R. Thorp, and L. R. Ahuja. 2008. Simulated Effects of Nitrogen Management and Soil Microbes on Nitrate-N Loss in Tile Drainage and Crop Production. *SSSAJ*. 72:1594-1603.
184. Ma, L., G. Hoogenboom, S. A. Saseendran, P. N. S. Bartling, L. R. Ahuja, and T. R. Green. 2009. Estimates of soil hydraulic property and root growth factor on soil water balance and crop production. *Agron. J.* 101:572-583.
185. Ma, L., Ahuja, L. R., Saseendran, S. A., Malone, R. W., Green, T. R., Nolan, B. T., Bartling, P. N. S., Flerchinger, G. N., Boote, K. J., and Hoogenboom, G. A Protocol for parameterization and calibration of RZWQM2 in field research. In: Ahuja, L. R. and Ma, L. (Eds). *Methods of Introducing System Models into Agricultural Research*, SSSA book series. 2011. Pp1-64.

186. Ma, L., T. J. Trout, L. R. Ahuja, W. C. Bausch, S. A. Saseendran, R. W. Malone, and D. C. Nielsen. 2012. Simulating maize responses to irrigation water and crop ET based irrigation scheduling with RZWQM2.. *Agricultural Water Management*. 103:140-149.
187. Ma, L., G. N. Flerchinger, L. R. Ahuja, T. J. Sauer, J. H. Prueger, R. W. Malone, and J. L. Hatfield. 2012. Simulating the Surface Energy Balance in a Soybean Canopy with SHAW and RZ-SHAW Models. *Trans. ASABE*. 55:175-179.
188. Ma, L., L. R. Ahuja, B. T. Nolan, R. W. Malone, T. J. Trout, and Z. Qi,. 2012. Root Zone Water Quality Model (RZWQM2): Model Use, Calibration and Validation. *Trans. ASABE*. 55:1425-1446.
189. Ma, L., Ahuja, L. R., Trout, T. J., Nolan, B. T., and Malone, R. W. Simulating Maize Yield and Biomass with Spatial variability of Field Capacity. *Agron. J.* 108:171-184. 2016.
190. Ma, L., Ahuja, L. R., A. Islam, T. J. Trout, S. A. Saseendran, and Malone, R.W. 2017. Modeling Yield and Biomass Responses of Maize Cultivars to Climate Change under Full and Deficit Irrigation. *Agric. Water Manage.* 180:88-98.
191. Ma, Q. L. 1998. A systematic evaluation of pesticide runoff from a corn field and a golf course fairway: Experimental Assessment vs Gleams, Opus, PRZM2, and RZWQM model simulations. Ph. D. Dissertation. University of Georgia, Athens, GA.
192. Ma, Q. L., L. R. Ahuja, K. W. Rojas, V. F. Ferreira, and D. G. DeCoursey. 1995. Measured and RZWQM predicted atrazine dissipation and movement in a field soil. *Trans. ASAE*. 38:471-479.
193. Ma, Q. L., L. R. Ahuja, R. D. Wauchope, J. G. Benjamin, and B. Burgoa. 1996. Comparison of instantaneous equilibrium and equilibrium-kinetic sorption models for simulating simultaneous leaching and runoff of pesticides. *Soil Sci.* 161:646-655.
194. Ma, Q. L., R. D. Wauchope, J. E. Hook, A. W. Johnson, C. C. Truman, C. C. Dowler, G. J. Gascho, J. G. Davis, H. R. Summer, and L. D. Chandler. 1998. Influence of tractor wheel tracks and crusts/seals on runoff: Observations and simulation with the RZWQM. *Agric. Systems*. 57:77-100.
195. Ma, Q. L., L. R. Ahuja, K. W. Rojas, M. J. Shaffer, J. D. Hanson, J. T. I. Boesten, G. McMaster, and V. A. Ferreira. 1993. Integrated-systems modeling of the effects of management on water quality: the root zone water quality model (RZWQM). *Agricultural research to protect water quality: proceedings of the conference February 21-24, 1993 Minneapolis, Minnesota, USA* / p.367-369.
196. Ma, Q. L., J. E. Hook, and R. D. Wauchope. 1999. Evapotranspiration predictions: a comparison among GLEAMS, Opus, PRZM-2, and RZWQM models in a humid and thermic climate. *Agric. Systems*. 59:41-55.
197. Ma, Q. L., Wauchope, R.D., Rojas, K.W., Ahuja, L.R., Ma, L., and Malone, R.W. The pesticide module of the Root Zone Water Quality Model (RZWQM): testing and sensitivity analysis of selected algorithms for pesticide fate and surface runoff. *Pest Manag. Sci.* 60:240-252. 2004.
198. Ma, Q. L., Wauchope, R. D., Ma, L., Rojas, K. W., Malone, R. W., and Ahuja, L. R. Test of the Root Zone Water Quality Model (RZWQM) for predicting runoff of atrazine, alachlor and fenamiphos species from conventional-tillage corn mesoplots. *Pesticide Manag. Sci.* 60:267-276. 2004.
199. Ma, Q. L., A. Rahman, T. K. James, P. T. Holland, D. E. McNaughton, K. W. Rojas, and L. R. Ahuja Modeling the Fate of Acetochlor and Terbutylazine in the Field Using the Root Zone Water Quality Model. *Soil Sci. Soc. Am. J.* 2004 68: 1491-1500.

200. Madani, A., R. Gordon, N. Akhand, J. Burney, and K. Caldwell. Performance of Rzwqm in Atlantic Canada. Pp. 850-856 in Proceedings of the World Congress of Computers in Agriculture and Natural Resources (13-15, March 2002, Iguacu Falls, Brazil) 701P0301. 2002.
201. Malone, R. W., L. Ma, L. R. Ahuja. And K. W. Rojas. 1999. Validation of the Root Zone Water Quality Model (RZWQM): A review. Presented at the July 18-22, 1999 ASAE Annual International Meeting, Toronto, Ontario, Canada. Paper no. 992145. ASAE, 2950 Niles Road, St. Joseph, MI 49085-9659 USA.
202. Malone, R. W., Ma, L., Ahuja, L. R., and Rojas, K. W. 2001. Evaluation of the Root Zone Water Quality Model (RZWQM): A Review. In: Parsons, J. E., Thomas, D. L., Huffman, R. L. (Eds.). Agricultural Non-point Source Water Quality Models: Their Use and Application. Southern Cooperative Series Bulletin #398, ISBN: 1-58161-398-9. 2001.
203. Malone, R. W., Shipitalo, M. J., Ma, L., Ahuja, L. R., and Rojas, K. W. 2001. Macropore component assessment of the Root Zone Water Quality Model (RZWQM) using no-till soil blocks. Trans. ASAE. 44:843-852.
204. Malone, R. W., Logsdon, S., Shipitalo, M. J., Weatherington-Rice, J., Ahuja, L. R., Ma, L. 2003. Tillage Effect on Macroporosity and Herbicide Transport in Percolate. Geoderma. 116:191-215.
205. Malone, R. W., Ahuja, L. R., Ma, L., Wauchope, R. D., Ma, Q. L., and Rojas, K. W. Application of the Root Zone Water Quality Model (RZWQM) to pesticide fate and transport: an overview. Pest Manag. Sci. 60:205-221. 2004.
206. Malone, R. W., Ma, L., Wauchope, R. D., Ahuja, L. R., Rojas, K. W., Ma, Q. L., Warner, R., and Byers, M. Modeling hydrology, metribuzin degradation and metribuzin transport in macroporous tilled and no-till silt loam soil using RZWQM. Pest Manag. Sci. 60:253-266. 2004.
207. Malone, R., Weatherington-Rice, J., Shipitalo, M., Fausey, N., Ma, L., Ahuja, L. R., Wauchope, R. D., and Ma, Q. L. Herbicide leaching as affected by macropore flow and within-storm rainfall intensity variation: a RZWQM simulation. Pest Manag. Sci. 60:277-285. 2004.
208. Malone, R. W., Ma, L., Heilman, P., Karlen, D. L., Kanwar, R. S. and J. L. Hatfield. Simulated N management effects on corn yield and tile-drainage N loss. Geoderma, 140:272-283. 2007.
209. Malone, R. W., Ma, L., Karlen, D., Meade, T., Meek, D., Heilman, P., Kanwar, R. S., Hatfield, J. L. 2006. Empirical Analysis and Prediction of Nitrate Loading and Crop Yield for Corn-Soybean Rotations. Geoderma. 140:223-234. 2007.
210. Malone, R. W., N. Huth, P. S. Carberry, L. Ma, Kaspar, T., D. L. Karlen, T. Meade, R. S. Kanwar, and Heilman, P. 2006. Evaluating and predicting agricultural management effects under tile drainage using modified APSIM. Geoderma. 140:310-322. 2007.
211. Malone, R. W. and L. Ma. 2008. N uptake effects on N loss in tile drainage as estimated by RZWQM. In: L. Ma, L. R. Ahuja, and T. Bruulsema. Quantifying and Understanding Plant Nitrogen Uptake for Systems Modeling. CRC press. P259-275.
212. Malone, R. W., D. Jaynes, L. Ma, B. T. Nolan, D. Meek, D. Karlen. 2010. Soil mineral N testing affects nitrate loss within a watershed: an RZWQM simulation with automatic parameter optimization (PEST). JEQ 39:1711-1723.
213. Malone, R. W., Meek, D., Ma, L., Jaynes, D., Nolan, B. T., and Karlen, D. 2011. Quality control of weather data for agricultural system model input. In: Ahuja, L. R. and Ma, L. (Eds). Methods of Introducing System Models into Agricultural Research, SSSA book series. 2011. Pp283-295.

214. Malone, R. W., Nolan, B. T., Ma, L., Kanwar, R. S., Peterson, C., and Heilman, P. 2014. Tillage and application rate affects atrazine transport to subsurface drainage with macropore flow: evaluation of RZWQM using a long-term field study. *Agric. Water Management*. 132:10-22.
215. Malone, R.W., Jaynes, D.B., Kaspar, T.C., Thorp, K.R., Kladvko, E., Ma, L., James, D.E., Singer, J., Morin, X., Searchinger, T. 2014. Potential water quality impact of fall-planted cover crops in the Midwest USA. *J. Soil Water Conserv.* 69:292-305.
216. Malone, R. W., Kersebaum, K. C., Kaspar, T. C., Ma, L., Jaynes, D. B., and Gillette, K. Winter rye as a cover crop reduces nitrate loss to subsurface drainage in central Iowa as simulated by HERMES. *Agric. Water Manage.* 184:156-169. 2017.
217. Malone, R. W., Obrycki, J., Karlen, D., **Ma, L.**, Kaspar, T., Jaynes, D., Parkin, T., Lence, S., Feyereisen, G., Fang, Q. X., and Gillette, K. 2018. Harvesting rye cover crop provides valuable biomass and decreases N loss to drainage. *Agricultural & Environmental Letters*. doi:10.2134/aerl2017.11.0041. 3:170041.
218. Mapfumo, E., D. S. Chanasyk, C. L. A. Chaikowsky. 2006. Simulation of soil water content on a small reclaimed watershed in northern Alberta using the Root Zone Water Quality Model (RZWQM). *Can. J. Soil Science*. 86:675-690.
219. Martin, D. L. and D. G. Watts. 1999. Application of the root zone water quality model in central Nebraska. *Agron. J.* 91:201-211.
220. Mattikalli, N. M., E. T. Engman, L. R. Ahuja, and T. J. Jackson. 1998. Microwave remote sensing of soil moisture for estimation of profile soil property. *Int. J. Remote Sensing*. 19:1751-1767.
221. McKague, K. J. 2003. Using Modelling Approach to Evaluate Nitrogen Fertilization Best Management Practices for Corn in Ontario. University of Guelph. M. S. Thesis.
222. McKague, K., R. Rudra, J. Ogilvie. USING RZWQM to Evaluate Nitrogen Fertilization BMPS for Corn Production in Ontario. Paper number 042185, 2004 ASAE Annual Meeting. 2004.
223. McKague, K., R. Rudra, S. I. Ahmed, B. Gharabaghi, and J. R. Ogilvie. Simulating effects of MERN and other BMPs on subsurface drainage water quality and crop yield in southern Ontario. *Canadian Biosystems Engineering*. 48:1.31-1.40. 2006.
224. Mottes, C., Lesueur-Jannoyer, M., Le Bail, M. and Malézieux, E. 2014. Pesticide transfer models in crop and watershed systems: A review. *Agron. Sustain. Develop.* 34:229-250.
225. Nielsen, D. C., Ma, L., Ahuja, L. R., and Hoogenboom, G. 2002. Simulating soybean water stress effects with RZWQM and CROPGRO models. *Agron. J.* 94:1234-1243.
226. Nielsen, D. C., Saseendran, S. A., **Ma, L.**, and Ahuja, L. R. Simulating the production potential of dryland spring canola in the central Great Plains. *Agron. J.* 104:1182-1188. 2012.
227. Nokes, S. E., F. M. Landa, and J. D. Hanson. 1996. Evaluation of the crop component of the root zone water quality model for corn in Ohio. *Trans. ASAE*. 39:1177-1184.
228. Nokes, S. E., F. M. Landa, and J. D. Hanson. 1995. Validation of the root zone water quality model (RZWQM) from a crop growth perspective. In: C. Heatwole (ed.) *Proceedings of the International Symposium on Water Quality Modeling*. ASAE. St. Joseph, MI.

229. Nolan, B. T., E. R. Bayless, C. T. Green, S. Garg, F. D. Voss, D. C. Lampe, J. E. Barbash, P. D. Capel, and B. A. Bekins. 2005. Evaluation of unsaturated-zone solute-transport models for studies of agricultural chemicals. USGS Report 2005-1196.
230. Nolan, B. T. L. J. Puckett, L. Ma, C. T. Green, E. R. Bayless, and R. W. Malone. 2010. Predicting Unsaturated Zone Nitrogen Mass Balances in Diverse Agricultural Settings of the United States. *JEQ* 39:1051-1065.
231. Nolan, B. T., Malone, R. W., Ma, L., and Green, C. T. Inverse modeling for automatic calibration of RZWQM2 to predict water quality. In: Ahuja, L. R. and Ma, L. (eds) *Methods of Introducing System Models into Agricultural Research*, 2011. Pp327-363.
232. Nolan, B. T., Malone, R. W., Gronberg, J. A., Thorp, K. R. and **Ma, L.** 2012. Verifiable metamodels for predicting N and water fluxes in the Corn Belt, USA. *ES&T*. 46:901-908.
233. Nolan, B. T., Malone, R. W., Barbash, J. E., Ma, L., and Shaner, D. L. 2015. Dat worth and prediction uncertainty for pesticide transport and fate models in Nebraska and Maryland, United States. *Pesticide Management Science*. DOI 10.1002/ps.3875. 71:972-985. 2015.
234. Ochoa, C.G., Fernald A.G., Guldán S.J., Shukla M.K. 2007. Deep percolation and its effects on shallow groundwater level rise following flood irrigation. *Trans. ASABE*. 50:73-81.
235. Qi, Z. M. J. Helmers, R. W. Malone, K. R. Thorp. 2010. Simulating long-term impacts of winter rye cover crop on hydrologic cycling and nitrogen dynamics for a corn-soybean crop system. *Trans. ASABE*. 54:1575-1588.
236. Qi, Z., L. Ma, M. J. Helmers, L. R. Ahuja, and R. W. Malone. 2012. Simulating NO₃-N concentration in tile drainage at various nitrogen application rates using RZWQM2. *J. Environ. Qual.* 41:289-295.
237. Qi, Z., Bartling, P. N. S., Jabro, J. D., Lensen, A.W., Ahuja, L. R., Ma, L. Allen, B. L. and Evans, R. G. 2013. Dryland water availability, management practices, and spring wheat production in Northern Plains. *Agron. J.* 105:37-50.
238. Qi, Z., Ma, L., W. C. Bausch, T. J. Trout, L. R. Ahuja, G. N. Flerchinger, and Q. X. Fang,. Simulating corn production, surface energy balance, and canopy temperature under full and deficit irrigation in eastern Colorado. *Trans. ASABE*. 59:623-633.) 2016.
239. Rojas, K. W. and L. R. Ahuja. 2000. Management practices. Pp245-280. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). *The Root Zone Water Quality Model*. Water Resources Publications LLC. Highlands Ranch, CO.
240. Rojas, K.W., Hebson, C.S. 1989. An unsaturated zone water quality model for management of agricultural systems. Proceedings of the IAHS Third Scientific Assemble, Symposium 7 in Baltimore, Maryland, May 1989.
241. Rojas, K.W., Hebson, B. S., DeCoursey, D.G. 1988. Modeling agricultural management subject to subsurface water quality constraints. Proceedings of the ASAE International symposium on Modeling Agricultural, Forest, and Rangeland Hydrology, Chicago, IL, Dec. 12-13, 1988, pp. 108-116.
242. Rojas, K.W., Hjelmfelt, A.T. 1991. Modeling Nitrogen Movement Through Loess Soils. In proceedings of the 1991 national Conference (W.F. Ritter, editor). Sponsored by the Irrigation and Drainage Division of the American Society of Civil Engineers and the Hawaii Section, ASCE. Honolulu, HI, July 22-26, 1991.

243. Rojas, K. W., L. Ma, J. D. Hanson, and L. R. Ahuja. 2000. RZWQM98 User Guide. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). The Root Zone Water Quality Model. Water Resources Publications LLC. Highlands Ranch, CO.
244. RZWQM Team, 1998. RZWQM: Simulating the effects of management on water quality and crop production. *Agri. Systems*, 57:161-195.
245. RZWQM Team, 1992. RZWQM Technical Documentation. GPSR technical Report No. 2. USDA-ARS, Great Plains Systems Research. Fort Collins, CO.
246. RZWQM Team, 1995. RZWQM User's Manual. GPSR Technical Report No. 5. USDA-ARS, Great Plains Systems Research. Fort Collins, CO.
247. Sabbagh, G. J., G. A. Fox, L. Ma, R. W. Malone, E. L. Arthur, and D. G. Dyer. 2007. Modeling pesticide fate and nonideal transport from a slow-release pesticide treated seed in a laboratory soil column. *Trans. ASABE*. 50:523-532.
248. Sandipta, KAR, and S. Samarendra. 2002. Dynamics of water and fertilizer N as influenced by dry and wetland tillage in low retentive permeable soil. 17th WCSS, 14-21 August 2002, Thailand.
249. Saravanathiiban, D. S. and M. V. Khire. 2015. Macropore flow modeling using the root zone water quality model. J. B. Anderson, M. Iskander, M. T. Suleiman, and D. F. Laefer (Eds). International foundations congress and equipment expo 2015; San Antonio, 17 March -21 March 2015. ASCE. (conference paper).
250. Saseendran, S. A. 2013. Enhancement of Agricultural System Models for Limited Irrigated Cropping Systems Research. Ph. D. Thesis. Colorado State University.
251. Saseendran, S. A., Nielsen, D. C., Ma, L., Ahuja, L. R. and Halvorson, A.D. Modeling nitrogen management effects on a winter wheat cropping system using RZWQM and CERES-wheat. *Agron. J.* 96:615-630.2004.
252. Saseendran, S. A., Ma, L., Nielsen, D. C., Vigil, M. F., and Ahuja, L. R. Simulating planting date effects on crop production using RZWQM and CERES-maize models. *Agron. J.* 97:58-71. 2005.
253. Saseendran, S. A., Nielsen, D. C., Ma, L., L. R. Ahuja, M. F. Vigil, J. G. Benjamin, A. D. Halverson. Effectiveness of RZWQM for simulating alternative Great Plains cropping systems. *Agron. J.* 97:1183-1193. 2005.
254. Saseendran, S. A., Ma, L., Malone, R. W., Heilman, P., L. R. Ahuja, and Kanwar, R. S. Simulating management effects on crop production, tile drainage, and water quality using RZWQM-DSSA. *Geoderma*, 140:260-271. 2007.
255. Saseendran, S. A., Ahuja, L. R., D. C. Nielsen, Trout, T., and Ma, L. 2008. Simulations of limited-water irrigation management options for corn in dryland agriculture. *Water Resour. Res.* 44: W00E02, doi:10.1029/2007WR006181.
256. Saseendran, S.A., Ahuja, L. R., Ma, L., Timlin, D., Stöckle, C. O., Boote, K. J., and Hoogenboom, G. Current water deficit stress simulations in selected agricultural system simulation models. Recent advances in understanding and modeling of water stress effects on plant growth processes. Volume 1: Advances in Agricultural Systems Modeling - Trans-disciplinary Research, Synthesis, and Applications. p1-38. 2008.
257. Saseendran, S. A., D. C. Nielsen, D. Lyon, L. Ma, D. G. Felter, D. D. Baltensperger, G. Hoogenboom, and L. R. Ahuja,. 2009. Modeling responses of dryland spring triticale, proso millet, and foxtail millet to initial soil water in the High Plains. *Field Crop Research*. 113:48-63.

- 258.Saseendran S.A., D.C. Nielsen, L. Ma, L.R. Ahuja, and M.F. Vigil. 2010. Simulating Alternative Dryland Rotational Cropping Systems in the Central Great Plains with RZWQM2. *Agron. J.* 102:1521-1534.
- 259.Saseendran S.A., D.C. Nielsen, L. Ma, and L.R. Ahuja. 2010. Adapting CROPGRO for simulating spring canola growth with both RZWQM2 and DSSAT4.0. *Agron. J.* 102:1606-1628.
- 260.Saseendran S.A., L. R. Ahuja, D.C. Nielsen, L. Ma, and D. Lyon. 2013. Simulated yield and profitability of five potential crops for intensifying the dryland wheat-fallow production system. *Agric. Water Management.* 116:175-192.
- 261.Saseendran, S. A., Ahuja, L. R., Ma, L., Trout, T. J., Andales, A. A., Chaves, J., and Ham, J. 2014. Nimah-Hanks approach for computing water uptake and water stress factors in RZWQM-CERES-maize model. *Agron. J.* 106:81-94.
- 262.Saseendran, S. A., Trout, T. J., Ahuja, L. R., Ma, L., McMaster, G. S., Andales, A. A., Chaves, J., and Ham, J. Quantification of crop water stress factors in limited irrigation experiments. *Agric. System* 137:191-205. 2015.
- 263.Saseendran, S. A. Trout, T. J., Ahuja, L. R., Ma, L., McMaster, G. S., Andales, A. A., Chaves, J., and Ham, J. Development of crop water production functions for corn in Colorado using RZWQM2 model. *Agric. Water Management.* 157:65-77, 2015.
- 264.Saseendran, S. A., L. R. Ahuja, L. Ma, and T. J. Trout. Modeling the effects of irrigation frequencies, initial water and nitrogen on corn yield responses for best management. In: Ahuja, Ma, and Lascano (Eds). *Practical Applications of Agricultural System Models to Optimize the Use of Limited Water.* Adv. Agric. Systems Model. 5. ASA-SSSA-CSSA publication. Madison, WI. pp 26-52. 2014. (Book Chapter)
- 265.Saseendran, S. A., L. R. Ahuja , P. H. Gowda, L. Ma, G. Marek, S. Evett, and T. Howell. Improved Prediction of Evapotranspiration to Enhance Water Productivity. *Agric. Water Management.* 2016. 177:274-283.
- 266.Saseendran, S. A., W. T. Pettigrew, K. N. Reddy, L. Ma, D. K. Fisher, and R. Sui. Climate Optimized planting windows for cotton in the lower Mississippi Delta region. *Agronomy.* 6(4), 46. doi: 10.3390/agronomy6040046.. 2016.
- 267.Schwartz, L. and L. M. Shuman. Predicting runoff associated nitrogen losses from turfgrass using the Root Zone Water Quality Model (RZWQM). *J. Environ. Qual.* 34:350-358. 2005.
- 268.Senft, D. 1997. RZWQM modeling effects of farm decisions. *Agricultural Research / July 1997.* v. 45 (7) p. 18-19
- 269.Shaffer, M. J., K. W. Rojas, D. G. DeCoursey, and C. S. Hebson. 2000. Nutrient chemistry processes--OMNI. Pp119-144. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). *The Root Zone Water Quality Model.* Water Resources Publications LLC. Highlands Ranch, CO.
- 270.Shaffer, M. J., K. W. Rojas, and D. G. DeCoursey. 2000. The equilibrium soil chemistry process -- SOLCHEM. Pp145-161. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). *The Root Zone Water Quality Model.* Water Resources Publications LLC. Highlands Ranch, CO.
271. Shipitalo, M. J., R. W. Malone, L. Ma, D. L. Shaner, B. T. Nolan, and R. S. Kanwar. Corn stover harvest increases herbicide movement to subsurface drains – Root Zone Water Quality Model simulations. *Pesticide Management Sci.* DOI 10.1002/ps.4087. 72:1124-1132, 2016.

272. Shrestha, S. and B. Manandhar. 2014. Evaluation of the Root Zone Water Quality Model (RZWQM) using field-measured data from the tropical zone, Thailand. *Water Air Soil Pollut.* 225:1958.
273. Shrestha, S. and Datta, A. 2015. Field measurements for evaluating the RZWQM and PESTFADE models for the tropical zone of Thailand. *J. Environmental Manage.* 147:286-296.
274. Siimes K, and Kamari J. 2003. A review of available pesticide leaching models: Selection of models for simulation of herbicide fate in Finnish sugar beet cultivation. *BOREAL ENVIRONMENT RESEARCH.* 8:31-51.
275. Sima, N. Q., Harmel, R. D., Fang, Q. X., Ma, L., and Andales, A. A. A modified F-test for evaluating model performance by considering both experimental and simulation uncertainties. *Environ. Modell. Softw.* 2018. (accepted on March 15, 2018)
276. Singer, J., Malone, R. W., Jaynes, D. B., and Ma, L. Cover crop effects on nitrogen load in tile drainage from Walnut Creek Iowa using RZWQM. *Agric. Water Management.* 98:1622-1628. 2011.
277. Singh, P. 1994. Modification of Root Zone Water Quality Model (RZWQM) to simulate the tillage effects on subsurface drain flows and NO₃-N movement. Ph.D. dissertation. Iowa State University.
278. Singh, P., R. S. Kanwar, K. E. Johnsen, and L. R. Ahuja. 1996. Calibration and evaluation of subsurface drainage component of RZWQM v2.5. *J. Environ. Qual.* 25:56-63.
279. Singh, P. and R. S. Kanwar. 1995. Modification of RZWQM for simulating subsurface drainage by adding a tile flow component. *Trans. ASAE.* 38:489-498.
280. Singh, P. and R. S. Kanwar. 1995. Simulating NO₃-N transport to subsurface drain flows as affected by tillage under continuous corn using modified RZWQM. *Trans. ASAE.* 38:499-506.
281. Singh, P. and R. S. Kanwar. 1992. Simulating tillage effects on water quality by using RZWQM. Paper presented at the Dec. 15-18, 1992 ASAE annual international meeting, Nashville, TN. Paper No. 922539. ASAE, St. Joseph, MI.
282. Sophocleous, M. A., Townsend, M.A., Vocasek, F., Ma, L., KC, A., 2008. Treated wastewater and nitrate transport beneath irrigated fields near Dodge City, Kansas. Final Report to KWRI, Kansas Geol. Survey, Open-file Rpt 2008-12. *Current Research in Earth Sciences, Bulletin* 258.
<http://www.kgs.ku.edu/Current/2010/Sophocleous/index.html>
283. Sophocleous, M. Margaret A. Townsend, Fred Vocasek, L. Ma, and Ashok KC. 2009. Soil Nitrogen Balance under Wastewater Management: Field Measurements and Simulation Results. *J. Environ. Qual.* 38:1286-1301.
284. Starks, P. J., Heathman, G. C., Ahuja, L. R., and Ma, L. Use of limited soil property data and modeling to estimate root zone soil water content. *J. Hydrol.* 2002. 272:131-147.
285. Stulina, G., M. R. Cameira, L. S. Pereira. Using RZWQM to Search Improved Practices for Irrigated Maize in Fergana, Uzbekistan. *Agricultural Water Management* . 2005, 77:263-281.
286. Sun, H. W., J. Z. Yang, X. G. Wang, and L. Chen. 2011. Effects of controlled drainage on soil water and nitrogen changes in greenhouse. *Trans. Of the CSAE.* 27:37-45.
287. Sun Mei, Zhang Xiaolin, Feng Shaoyuan, Huo Zailin. Parameter Optimization and Validation for RZWQM2 Model Using PEST Method. doi: 10.6041 /j.issn.1000-1298.2014.11.023 (in Chinese).

- 288.Sun, M., X. Zhang, Z. Huo, S. Feng, G. Huang, and X. Mao. Uncertainty and sensitivity assessments of an agricultural-hydrological model (RZWQM2) using the GLUE method. *J. Hydrol.* 534:19-30. 2016.
- 289.Sun, M, Z. Huo, Y. Zheng, X. Dai, S. Feng, X. Mao. 2018. Quantifying long-term responses of crop yield and nitrate leaching in an intensive farmland using agro-eco-environmental model. *Science of the Total Environment.* 613:1003-1012.
- 290.Thorp, K. R., R.W. Malone, D. B. Jaynes. 2007. Simulating Long-Term Effects of Nitrogen Fertilizer Application Rates on Corn Yield And Nitrogen Dynamics. *Trans. ASABE.* 50(4):1287-1303.
- 291.Thorp, K. R., D. B. Jaynes, and R.W. Malone. 2008. Simulating Long-Term Performance of Drainage water management in Midwestern United States. *Trans. ASABE.* 51(3):961-976.
- 292.Thorp, K.R., M.A. Youssef, D.B. Jaynes, R.W. Malone, and L. Ma. 2009. DRAINMOD-N II: Evaluated For an Agricultural System in Iowa and Compared to RZWQM-DSSAT. *Trans. ASABE.* 52(5):1557-1573.
- 293.Tonitto, C., N. P. Gurwick, and P. B. Woodbury. 2016. Quantifying greenhouse gas emissions from agricultural and forest landscapes for policy development and verification. In: DelGrosso, S., Ahuja, L. R. and Parton, W. (eds). *Synthesis and Modeling of Greenhouse Gas Emissions and Carbon Storage in Agricultural and Forest Systems to Guide Mitigation and Adaptation. Advances in Agricultural Systems Modeling, Vol. 6.* Pp229-304.
- 294.Walker, S. E. 1996. Modeling nitrate in tile-drained watersheds of east-central Illinois. Ph.D. thesis. University of Illinois at Urbana-Champaign.
- 295.Walker, S. E., K. E. Johnsen, and J. K. Mitchell. 1994. Application of the Root Zone Water Quality Model (RZWQM) to the study of nitrate in tile drainage in East Central Illinois. Presented at the December 13-16, 1994 ASAE International Winter Meeting. Atlanta, GA. Paper no. 94-2538. ASAE, 2950 Niles Rd. St. Joseph, MI 49085-9659. USA.
- 296.Walker, S. E., J. K. Mitchell, M. C. Hirschi, and K. E. Johnsen. 2000. Sensitivity analysis of the Root Zone Water Quality Model. *Trans. ASAE.* 43:841-846.
- 297.WANG Feng, ZHANG Ke-qiang, HUANG Zhi-ping. Introduction and application progress of the root zone water quality model (RZWQM) [J]. *System Sciences and Comprehensive Studies in Agri—culture*, 2008, 24(4): 501-504 (in Chinese).
- 298.Wang, F., X. Y. Zhang, K. Q. Zhang, and L. J. Bai. 2012. Simulation of intensive swine wastewater irrigation of wheat-maize with RZWQM in North China Plain. *J. Food Agric & Environment.* 10:1020-1024.
- 299.Wang, X. P. and G. H. Huang. 2008. Evaluation on the irrigation and fertilization management practices under the application of treated sewage water in Beijing, China. *Agricul. Water Management.* 95:1011-1027.
- 300.Wang, X and P. Cui. Linkage of ArcView GIS with the RZWQM. *J. Spatial Hydrology.* 4(2):1-15. 2004.
- 301.Wang, Z., Z. Qi, L. Xue, M. Bukovsky, and M.J. Helmers. 2015. Modeling the impacts of climate change on nitrogen loss and crop yield in a subsurface drained field. *Climatic Change.* DOI: 10.1007/s10584-015-1342-1.
- 302.Wang, Z., Z. Qi, L. Xue, and M. Bukovsky. 2016. RZWQM2 simulated management practices to mitigate climate change impacts on nitrogen losses and corn production. *Environmental Modeling and Software.* 84:99-111. <http://dx.doi.org/10.1016/j.envsoft.2016.06.016>

303. Watts, D. G., N. R. Fausey, and D. A. Bucks. 1999. Background of the MSEA-RZWQM modeling project. *Agron. J.* 91:169-170.
304. Wauchope, R. D., R. G. Nash, L. L. McDowell, K. W. Rojas, L. R. Ahuja, G. H. Willis, T. B. Moorman, and Q. Ma. 2000. Pesticide processes. Pp163-244. In: Ahuja, L. R., K. W. Rojas, J. D. Hanson, M. J. Shaffer, and L. Ma (eds). *The Root Zone Water Quality Model*. Water Resources Publications LLC. Highlands Ranch, CO.
305. Wauchope, R. D., Rojas, K. W., Ahuja, L. R., Ma, Q. L., Malone, R. W., and Ma, L. Documenting the pesticide processes module of the ARS RZWQM agroecosystem model. *Pest Manag. Sci.* 60:222-239. 2004.
306. Wauchope, R. D., L. R. Ahuja, J. G. Arnold, R. Bingner, R. Lowrance, M. T. van Genuchten, L. D. Adams. Software for pest management science: Computer models and databases from the U.S. Department of Agriculture- Agricultural Research Service. *ARS Special Issue of Pest Management Sci.* 59:691-698. 2004.
307. Wu, L., R.R. Allmaras, J.A. Lamb, K.E. Johnsen. 1996. Model Sensitivity to measured and estimated hydraulic properties of a Zimmerman fine sand. *Soil Sci. Soc. Am. J.* 60:1283-1290.
308. Wu, L., W. Chen, J. M. Baker, and J. A. Lamb. 1999. Evaluation of RZWQM field measured data from a sandy soil. *Agro. J.* 91:177-182.
309. Xi, M., Z. Qi, Y. Zou, G.S.V. Raghavan, and J. Sun. 2015. Calibrating RZWQM2 model using quantum-behaved particle swarm optimization algorithm. *Computers and Electronics in Agriculture* 113:72-80 DOI: 10.1016/j.compag.2015.02.002.
310. Xi, M., D. Lu, D. Gui, Z. Qi, and G. Zhang. 2016. Calibration of an agricultural-hydrological model (RZWQM2) using surrogate global optimization. *Journal of Hydrology*. Available online.
311. XUE Chang-liang, ZHANG Ke-qiang, ZHANG Guo-yin, YANG De-guang, SONG Shuai, WANG Feng. Simulating Migration and Leaching of Water and Nitrogen in Maize Soil Profile in North China Plain with RZWQM Model *Journal of Agro-Environment Science*. 2014, 33(11):2179-2186 (in Chinese).
312. XUE Changliang, ZHANG Keqiang, YANG Deguang, ZHANG Guoyin, WANG Guoping, WANG Feng. RZWQM simulation of nitrogen transport and loss under winter wheat/summer maize rotation system in NorthChina Plain. *Chinese Journal of Eco-Agriculture*, Feb. 2015, 23(2): 150-158 (in Chinese).
313. Youssef, M. A., A. M. Abdelbaki, L. M. Negm, R. W. Skaggs, K. R. Thorp, D. B. Jaynes. 2018. DRAINMOD-simulated performance of controlled drainage across the U.S. Midwest. *Agric. Water Manage.* 197:54-66.
314. Yu, Q., Saseendran, S. A., Ma, L. Flerchinger, G. N., T. R. Green, and Ahuja, L. R. Modeling a wheat-maize double cropping system in China using two plant growth modules with RZWQM. *Agric. Systems*. 89:457-477. 2006.
315. Yu, Q., Flerchinger, G. N., S. Xu, Kozak, J., Ma, L. and Ahuja, L. R. Simulation of Energy Balance and Water and Heat Transfer by SHAW and RZ-SHAW. *Trans. ASABE*. 50(5):1507-1516.
316. Zhang, Q., and Ren, L. 2012. Application of Root Zone Water Quality Model to simulate water and nitrogen use efficiency of winter wheat-summer maize double cropping system. I. Model calibration and sensitivity analysis. *J. Hydraulic Engineering*. 43:81-90.

317. Zhang, Q., and Ren, L. 2012. Application of Root Zone Water Quality Model to simulate water and nitrogen use efficiency of winter wheat-summer maize double cropping system. II. Model validation and scenario analysis. *J. Hydraulic Engineering*. 43:354-362.
318. Zhang, X. and K. S. Goh. Evaluation of three models for simulating pesticide runoff from irrigated agricultural fields. *J. Environ. Qual.* 44:1809-1820. 2015.
319. ZHAO Liang. RZWQM model to simulate the growth of summer maize under the conditions of soil water and nitrogen distribution study. *Water Saving Irrigation*, 2013, 9: 30-39. (in Chinese)
320. Zhu G. W. and L. Ren Parameters Sensitivity Analysis and Scaling of RZWQM, *Journal of irrigation and drainage*. 2011, 30(02) 7-11.
321. Zou, S., Hu. X., Wang, W., Andales, A. A., and Zhang, Y. Optimization of irrigation schedule based on RZWQM model for spring wheat in Shiyang River basin. *Trans. Chinese Society of Agricultural Engin.* 32:121-129. 2016.