

DAVIE M. KADYAMPAKENI

Assistant Professor

Soil and Water Science

Phone: 863-956-8843

Fax: 863-956-4631

E-mail: dkadyampakeni@ufl.edu

PROGRAM EMPHASIS

- 1) Develop and implement sustainable strategies that optimize water management for citrus production, conservation of water, and water quality.
- 2) Conduct research to improve water use efficiency in citrus production systems, minimizing water quality degradation, and maximizing productivity.
- 3) Develop local and regional water use models taking into consideration citrus planting systems, tree water requirements, irrigation scenarios, and water use for cold protection.
- 4) Apply precision agricultural technologies for local and regional water management.
- 5) Develop best management practices for water conservation and quality maintenance for surface and ground water sources.

EDUCATIONAL BACKGROUND

2012 : Ph.D. Soil and Water Science, University of Florida, Florida, USA.

2005 : M.S. Agronomy (Irrigation), University of Malawi, Malawi.

2002 : B.S. Agriculture (Agricultural Engineering) with credit, University of Malawi, Malawi.

PAST POSITIONS

2014-2016 : Researcher, International Water Management Institute, Accra, Ghana.

2012 to 2014 : Postdoctoral Research Associate, University of Florida, Gainesville, FL.

2008 to 2012 : Graduate Research Assistant, University of Florida, Gainesville, FL.

2008 : Irrigation Specialist, Ministry of Agriculture and Food Security World Bank-IFAD Project, Lilongwe, Malawi.

2007 : Scientific Officer, International Crops Research Institute for the Semi-Arid Tropics, Lilongwe, Malawi.

2002 to 2006 : Irrigation Agronomist, Ministry of Agriculture and Food Security, Malawi.

MEMBERSHIP IN PROFESSIONAL AND HONOR SOCIETIES

2015 to present : African Soil Science Society

2014 to present : American Society of Horticultural Science

2014 to present : Florida State Horticultural Society

2010 to present : Soil Science Society of America

2010 to present : Crop Science Society of America

2010 to present : Agronomy Society of America

2010 to present : Gamma Sigma Delta Honor Society of Agriculture

2009 to present : Delta Epsilon Iota Academic Honor Society

2008 to present : Improved Management of Agric. Water in Eastern and Southern Africa

2005 to present : African Crop Science Society

2003 to present : Rain Water Harvesting Association of Malawi

ACADEMIC ACCOMPLISHMENTS

- 2014 : Florida State Horticultural Society Citrus Best Paper Award, Florida, USA
 2012 : Graduate Student Travel Grant Award, University of Florida, USA
 2011 : Doris Lowe and Earl and Verna Lowe Scholarship, University of Florida, USA
 2011 : Outstanding International Student, University of Florida, USA
 2010 : Sam Polston Graduate Fellowship, University of Florida, USA
 2010 : Outstanding International Student, University of Florida, USA
 2010 : Robertson Graduate Fellowship, University of Florida, USA
 2009 : A.S. Herlong Endowed Scholarship, CALS/IFAS, University of Florida, USA
 2009 : Grinter Fellowship, University of Florida, USA
 2002 : USAID Bean/Cow pea CRSP Fellowship, University of Malawi, Malawi
 1998-2002 : Five Dean's Honor Awards, University of Malawi, Malawi
 1997 : Best Student and Most Hardworking Boy, Ntcheu High School, Malawi

REFEREED PUBLICATIONS

- Kadyampakeni, D.M., K.T. Morgan, A.W. Schumann. 2016. Biomass, nutrient accumulation and tree size relationships for drip- and microsprinkler-irrigated orange trees. *Journal of Plant Nutrition* 39:589-599, DOI:10.1080/01904167.2015.1009112
- Kadyampakeni, D.M., K.T. Morgan, J. Villalobos, and R.C. Ebel. 2015. Water and Nutrient Use Efficiency and Root Distribution of Selected Horticultural Crops. *Advances in Environmental Research* 37:1-16.
- Kadyampakeni, D.M., K.T. Morgan, P. Nkedi-Kizza, and G.N. Kasozi. 2015. Nutrient management options for Florida citrus: a review of NPK application and analytical methods. *Journal of Plant Nutrition* 38:568-583. DOI: 10.1080/01904167.2014.934470
- Kadyampakeni, D.M., S. Kazombo-Phiri, B. Mati, and I.R. Fandika. 2014. Performance of small-scale water management interventions on crop yield, water use and productivity in three agro-ecologies of Malawi. *Irrigation and Drainage* DOI: 10.1002/ird.1886
- Fandika, I.R., D. Kadyampakeni, B.M.L. Mwenebanda and T.M. Magombo. 2014. Banana irrigation management and optimization: A comparative study of researcher-managed and farmer-managed irrigated banana production in Shire Valley, Malawi. *African Journal of Agricultural Research* 9:2687-2693. DOI: 10.5897/AJAR09.302
- Morgan K.T., S. Barkataky, D. Kadyampakeni, R.C. Ebel, and F. Roka. 2014. Effects of short term drought stress and mechanical harvesting on sweet orange tree health, water uptake and yield. *HortScience* 49(6):835-842.
- Kadyampakeni, D.M., K.T. Morgan, A.W. Schumann, P. Nkedi-Kizza, and T.A. Obreza. 2014. Water use in drip- and microsprinkler-irrigated citrus trees. *Soil Science Society of America Journal* 78:1351–1361 doi:10.2136/sssaj2014.02.0054
- Kadyampakeni, D.M., K.T. Morgan, A.W. Schumann, P. Nkedi-Kizza. 2014. Effect of irrigation pattern and timing on root density of young citrus trees infected with Huanglongbing disease. *HortTechnology* 24:209-221.
- Kadyampakeni, D.M., S. Kazombo-Phiri, B. Mati, and I.R. Fandika. 2014. Impacts of small-scale water management interventions on crop yield, water use and productivity in two agro-ecologies of Malawi. *Agricultural Science* 5:454-465. <http://dx.doi.org/10.4236/as.2014.55046>.
- Kadyampakeni, D.M. 2014. Soil, water and nutrient management options for climate change adaptation in southern Africa. *Agronomy Journal* 106:100-110. doi:10.2134/agronj2013.0307
- Kadyampakeni, D.M., K.T. Morgan, A.W. Schumann, P. Nkedi-Kizza, and K. Mahmoud. 2014. Phosphorus and potassium distribution and adsorption on two Florida sandy soils. *Soil Science Society of America Journal* 78:325–334. doi:10.2136/sssaj2013.07.0259

- Kadyampakeni, D.M., K.T. Morgan, A.W. Schumann, P. Nkedi-Kizza, and K. Mahmoud. 2014. Ammonium and nitrate distribution in the soil using drip and microsprinkler irrigation for citrus production. *Soil Science Society of America Journal* 78:645–654. doi:10.2136/sssaj2013.07.0319
- Kadyampakeni, D.M. 2013. Comparative response of cabbage to irrigation in southern Malawi. *Journal of Agricultural Science* 5:1-7. <http://dx.doi.org/10.5539/jas.v5n8p1>
- Kadyampakeni, D.M., H.R. Mloza-Banda, D.D. Singa, J.H. Mangisoni, A. Ferguson, and S. Snapp. 2013. Agronomic and socio-economic analysis of water management techniques for dry season cultivation of common bean in Malawi. *Irrigation Science* 31:537-544. DOI 10.1007/s00271-012-0333-5
- Fandika, I.R., D. Kadyampakeni, S. Zingore. 2012. Performance of bucket drip irrigation powered by treadle pump on tomato and maize-bean production. *Irrigation Science* 30:57–68. DOI 10.1007/s00271-010-0260-2
- Pungulani, L., D. Kadyampakeni, L. Nsapato and M. Kachapila. 2012. Selection of high yielding and farmers' preferred genotypes of bambara nut (*Vigna subterranea* (L) Verdc) in Malawi. *American Journal of Plant Science* 3:1802-1808. <http://dx.doi.org/10.4236/ajps.2012.312A221>
- Kadyampakeni, D., A. Longwe, J. H. Mangisoni, H. R. Mloza-banda, H. Ferguson, and S. Snapp. 2010. A comparative economic assessment of the benefits of irrigation and water management practices on bean production in Chingale, Zomba, southern Malawi. *Bunda Journal of Agriculture, Environmental Science and Technology: A Special Issue on Agricultural and Applied Economics* 4:1-8.
- Fandika, I.R., D. Kadyampakeni, C. Bottomani and H. Kakhiwa. 2007. Comparative response of varied irrigated maize to organic and inorganic fertilizer application. *Physics and Chemistry of the Earth* 32:1107-1116. doi:10.1016/j.pce.2007.07.025.

CONFERENCE PROCEEDINGS AND BOOK CHAPTERS

- Kadyampakeni, D.M., K.T. Morgan, and A.W. Schumann. 2016. Citrus fertigation and irrigation practices for managing HLB in Florida. *Proceedings of Florida State Horticultural Society* 129 (in press).
- Kadyampakeni, D., T. Ellis, Y. Sidibe. 2015. Evaluating soil water dynamics using a simple soil water balance model in northern Ghana. *Proceedings of the African Soil Science Society Conference, Ouagadougou, Burkina Faso.* 14 pp.
- Kadyampakeni, D., A. Larbi, and I. Hoeschle-Zeledon. 2015. Improving water productivity in crop-livestock farming systems in northern Ghana. *Africa RISING Brief* 26. Nairobi, Kenya: ILRI. <http://africa-rising.net/2015/08/26/brief26/>
- Morgan K.T. and D.M. Kadyampakeni, 2015. Environmental conditions and irrigation practices affect citrus water use. In: A.H. Steele (Ed.) *Drip Irrigation: Technology, Management and Efficiency*, pp 1-22.
- Kadyampakeni, D.M., K.T. Morgan, A.W. Schumann, P. Nkedi-Kizza, and K. Mahmoud. 2014. Ammonium and nitrate distribution in the soil using drip and microsprinkler irrigation for citrus production. *CSA News* doi:10.2134/cs2014-47-3-9
- Kadyampakeni, D.M. and K.T. Morgan. 2014. Preliminary data on water uptake by Huanglongbing infected trees. *Proceedings of Florida State Horticultural Society* 127:42-44.
- Kadyampakeni, D.M., K.T. Morgan and A.W. Schumann. 2014. Root density and water uptake of trees infected with Huanglongbing. *Proceedings of Florida State Horticultural Society* 127:37–41.
- Kadyampakeni, D.M., K.T. Morgan, and A.W. Schumann. 2013. Water and nutrient uptake in citrus open hydroponic systems. *Proceedings of Florida State Horticultural Society* 126:58-61.
- Morgan, K.T. and D. Kadyampakeni. 2012. Open Field Hydroponics: Concept and Application. In: A.K. Srivastava (eds). *Advances in Citrus Nutrition* p. 271-280.

- Kadyampakeni, D. (Ed). 2011. Soil and Water Management: An Analysis of Interventions for Small-scale Agricultural Production in Malawi. p. 263.
- Mloza-Banda, H.R., Makwiza, C. and Kadyampakeni, D. 2010. Improving smallholder irrigation performance in Malawi. Proceedings of 2nd RUFORUM Biennial Meeting, 20-24 Sept. 2010, Entebbe, Uganda. p. 659-664.
- Kadyampakeni, D.M.S. and Kazombo-Phiri, S.F.M. 2010. Impacts of Treadle Pump Irrigation on Crop Productivity in Mchinji, Malawi. In: Mati, B. (ed). Agricultural Water Management Interventions Bearing Returns on Investment in Eastern and Southern Africa: A compendium of 18 case studies from six countries in Eastern and Southern Africa. p. 171-177.
- Kadyampakeni, D.M.S. and Kazombo-Phiri, S.F.M. 2010. Assessment of the Productivity of Field Crops with Regulated Surface Irrigation in Domasi Scheme, Malawi. p. 178-185. In: Mati, B. (ed). Agricultural Water Management Interventions Bearing Returns on Investment in Eastern and Southern Africa: A compendium of 18 case studies from six countries in Eastern and Southern Africa.
- Kazombo-Phiri, S.F.M. and Kadyampakeni, D.M.S. 2010. Effects of Off-Season 'Dambo' Irrigation on Crop Production and Farmer Incomes at Kamalambo, Malawi. In: Mati, B. (ed). Agricultural Water Management Interventions Bearing Returns on Investment in Eastern and Southern Africa: A compendium of 18 case studies from six countries in Eastern and Southern Africa. p. 164-170.
- Morgan, K.T., Schumann, A.W., Castle, W., Stover, E.W., Kadyampakeni, D., Spyke, P., Roka, F.M., Muraro, R. and Morris, A. 2009. Citrus production systems to survive greening— Horticultural practices. Proceedings of Florida State Horticultural Society 122:114-121.
- Kadyampakeni D.M.S., V. H. Kabambe. 2009. Analysis of research and development of soil fertility and water management technologies in Malawi - A review. Gökçekuş, H., (ed) Proceedings of International Conference on the Environment: Survival and Sustainability. Nicosia (Lefkoşa), Turkish Republic of Northern Cyprus: Educational Foundation of Near East University. p. 3847-3862.
- Monyo, E.S., M.O. Osiru, D. Kadyampakeni, O. Mponda and B. Chinyamunyamu. (eds.). 2008. Improving food security and nutrition in Malawi and Tanzania through research on edible legumes. Proceedings of Stakeholder Workshops on Groundnut Production in Malawi and Tanzania, International Crops Research Institute for the Semi-Arid Tropics. p. 96.
- Kadyampakeni, D.M.S. and Kazombo-Phiri, S.F. 2008. Agricultural water management interventions with proven returns to investment under smallholder systems: Findings from a case study of Malawi. Improved Management of Agricultural Water in Eastern and Southern Africa Research Report No. 14, Nairobi, Kenya. p. 60.
- Monyo, E., M. Osiru, J. Rusike, M. Mgonja, O. Mponda and D. Kadyampakeni. 2008. Mother and baby trials and farmer field schools for technology targeting and scaling-up/out. In: Improving Food Security and Nutrition in Malawi and Tanzania through Research on Edible Legumes. Andhra Pradesh, India. p. 55-59.
- Kadyampakeni, D.M.S. and I.R. Fandika. 2008. A review of irrigation and drainage research in Malawi. In: C. Nhira, A. Mapiki, P. Rankhumise (eds). Land and Water Management in Southern Africa: Towards sustainable agriculture. p. 129-134.
- Kabambe V.H. and D.M.S. Kadyampakeni. 2008. Review and analysis of research and development of soil fertility and water management technologies in Malawi. In: C. Nhira, A. Mapiki, P. Rankhumise (eds). Land and Water Management in Southern Africa: Towards sustainable agriculture. pp 162-171.
- Kadyampakeni, D., J.H. Mangisoni, D.D. Singa, H.R. Mloza-Banda, A. Ferguson, S. Snapp, and E. Mwendu-Phiri. 2008. Economic evaluation of irrigation and water management practices in Chingale Area Development Program of World Vision Malawi, Zomba, southern Malawi. In: C.

- Nhira, A. Mapiki, P. Rankhumise (eds). Land and Water Management in Southern Africa: Towards sustainable agriculture. p. 537-551.
- Kadyampakeni, D.M.S, H.R. Mloza-Banda, D.D. Singa, J.H. Mangisoni, A. Ferguson and S. Snapp. 2007. Technical evaluation of different irrigation technologies and water management techniques for dry season cultivation of beans (*Phaseolus vulgaris*) in Chingale Area Development Programme, Zomba. Proceedings of the SADC Land Water Management Conference (Mapiki A, ed.). 20-22 February 2007, Gaborone, Botswana.
- Kadyampakeni, D.M.S. 2007. Impact and mitigation of weather extremes for crop production in Malawi. Proceedings of the SADC Land Water Management Conference (Mapiki A, ed.). 20-22 February 2007, Gaborone, Botswana.
- Kadyampakeni, D.M.S., F.E. Kadwa and G.J.C. Kauta. 2007. Yield response of maize to applied water and nitrogen in Malawi. Proceedings of the SADC Land Water Management Conference (Mapiki A, ed.). 20-22 February 2007, Gaborone, Botswana.
- Kadyampakeni, D.M.S., H.R. Mloza-Banda, D.D. Singa, J.H. Mangisoni, A. Ferguson and S. Snapp. 2006. Comparative analysis of different irrigation technologies and water management techniques for dry season cultivation of beans (*Phaseolus vulgaris*) in Chingale ADP in Zomba southern Malawi. National Research Council of Malawi Dissemination Conference Proceedings, 6-8 December, 2006, Lilongwe, Malawi.

CONFERENCE ABSTRACTS

- Kadyampakeni, D., and K.T. Morgan. 2014. Soil characterization for citrus irrigation decision support on Florida sandy soils. Abstr. ASA/CSSA/SSSA International Meeting, Nov. 2-5, Long Beach, CA.
- Kadyampakeni, D.M., P. Nkedi-Kizza, K.T. Morgan, and A.W. Schumann. 2013. Phosphorus Sorption and Movement in Fine Sand Spodosols and Entisols. Abstr. ASA/CSSA/SSSA International Meeting, Nov. 3-6, Tampa, FL.
- Kadyampakeni, D., K. Morgan, P. Nkedi-Kizza, and A. Schumann. 2012. Modeling water movement using HYDRUS-2D. ASA/CSSA/SSSA Annual Meeting, Oct. 20–25, 2012, Cincinnati, OH.
- Kadyampakeni, D., K. Morgan, P. Nkedi-Kizza, and A. Schumann. 2011. Estimation of water uptake using the stem-heat balance technique on Florida 2- and 4-year-old citrus. ASA/CSSA/SSSA Annual Meeting, Oct. 16–19, 2011, San Antonio, TX.
- Kadyampakeni, D., K. Morgan, A. Schumann, P. Nkedi-Kizza, and T. Obreza. 2010. Effect of rainy season, irrigation method and fertigation frequency on citrus root length density, P and K distribution on a Florida Spodosol. ASA/CSSA/SSSA Annual Meeting, Oct. 31-Nov. 3, 2010, Long Beach, CA.
- Kadyampakeni, D., K. Morgan, and P. Nkedi-Kizza. 2009. Irrigation scheduling and method affect root length distribution in young citrus. Annual Soil and Water Science Research Forum, Sept. 11, 2009, Gainesville, FL.
- Kadyampakeni D.M.S., S.F. Kazombo-Phiri, and B.M. Mati. 2008. Increasing agricultural productivity through agricultural water management: A case study of Malawi. 3rd Regional Conf. Agric. Water Manage. Eastern and Southern Africa, 15-19 Sept. 2008, Addis Ababa, Ethiopia.
- Mati, B.M., Tsegaye, E.A., Firew, T.A., Thome, J.A., Mulinge, W.M., Rakotondralambo, A.,

Ravelombonjy, A., Kadyampakeni, D., Phiri, S.K., Kagabo, D.M., Nsabimana, J., Kajiru, D.J., Nkuba, J.M., Sang, J.K., and Mahindu, T.J. 2008. Identifying Agricultural Water Management Interventions with Proven Returns to Investment in Eastern and Southern Africa. 3rd Regional Conf. Agric. Water Manage. Eastern and Southern Africa, 15-19 Sept. 2008, Addis Ababa, Ethiopia.

Kadyampakeni, D.M.S., F.E. Kadwa, and G.J.C. Kauta. 2006. Tomato (*Lycopersicon esculentum*) yield response to different amounts of applied water in Malawi. 5th Int. Symp. Irrig. Hort. Crops, 28 Aug.-2 Sept. 2006, Mildura, Australia.

Kadyampakeni, D.M.S., F.E. Kadwa, and G.J.C. Kauta. 2006. Yield response of onion (*Allium cepa*) to different amounts of applied water in the dry season in Malawi. 5th Int. Symp. Irrig. Hort. Crops, 28 Aug.-2 Sept. 2006, Mildura, Australia.