
CURRICULUM VITAE
DOKYOUNG “D.K.” LEE

University of Illinois
Department of Crop Sciences
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EDUCATION

- Ph.D. in Agronomy- Environmental Soil Science (May 2003).
Plant Science Department, South Dakota State University, Brookings, SD.
- M.S. in Agro-environmental Chemistry- Environmental Soil Physics (Feb. 1999).
Agricultural Chemistry Department, Chungnam National University, Taejon, Korea.
- B.S. in Agricultural Chemistry (Feb. 1996)
Agricultural Chemistry Department, Chungnam National University, Taejon, Korea.

PROFESSIONAL EXPERIENCE

- Professor of Biomass and Bioenergy Crop Production (August 2019 – present),
Department of Crop Sciences, University of Illinois at Urbana-Champaign
- Joint Faculty (April 2023 – present), Environmental Science Division, Argonne National
Laboratory
- Director of Online Programs, Department of Crop Sciences, University of Illinois at
Urbana-Champaign (August 2020 – present)
- Founding member, Agroecosystem Sustainability Center, University of Illinois at Urbana-
Champaign (2021-present)
- Affiliate, Institute of Sustainability, Energy, and Environment, University of Illinois at
Urbana-Champaign (2022-present)
- Adjunct Senior Researcher, Rural Development Administration (RDA) of the Republic of
Korea (January 2022 – present)
- Associate Professor of Biomass and Bioenergy Crop Production (August 2014 – 2019),
Department of Crop Sciences, University of Illinois
- Adjunct Professor (April 2015-present), Department of Plant Science, Seoul National
University, Korea
- Assistant Professor of Biomass and Bioenergy Crop Production (August 2008 – 2014),
Department of Crop Sciences, University of Illinois
- Lead Agronomist (April 2007 – August 2008), North Dakota State University, Carrington
Research Extension Center
- Post-Doctoral Research Associate – Biomass Program Coordinator (May 2003 – May
2007) South Dakota State University

HONORS AND RECOGNITION

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- Honorary scientist and advisor on Agricultural Green Technology, Rural Development Administration of the Republic of Korea, 2010-2012.
 - “List of Teachers Ranked as Excellent by Their Students” for Bioenergy Crops, CPSC 415 in 2010, 2011, 2012, 2013, 2016, 2017, 2018, 2021, and 2022; Tomorrows Environment, CPSC336 in 2018 and 2019; Cannabis Flower Production, CPSC499 in 2023; Research Methods in Plant Science, CPSC505 in 2021, 2023.
 - NACTA Teacher Fellow Award, North American Colleges & Teachers of Agriculture (NACTA), USA. Bioenergy Crop course development and excellent teaching. May 2014.
 - The Illinois Aggregate Reclamation Award. The Department of Natural Resource, Illinois, USA. Mine reclamation and maximizing socio-ecological services using dedicated energy crops, May 2014.
 - The Non-Coal Mining Reclamation Award. The National Association of State Land Reclamationists. Mine reclamation and maximizing socio-ecological services using dedicated energy crops, September 2014.
 - Second place, the 2014 Quarry Life Award Program North American Competition, Lehigh Hanson, Heidelberg Cement Group. Demonstrated the benefits of limestone mine quarry reclamation, November 2014.
 - Brain Pool Program Research Fellow, Korean Federation of Science and Technology Societies funded by the Ministry of Sciences, ICT and Future Planning, 2015.
 - Wyffels Hybrids Award for Faculty Excellence. College of Agricultural. Consumer and Environmental Sciences, University of Illinois, 2015.
 - Runge Faculty Distinguished Achievement Award. College of Agricultural. Consumer and Environmental Sciences, University of Illinois, 2019.
 - University Scholar for AY 2022-2023, University of Illinois System, 2022.
 - Honorary scientist and advisor on Agricultural Green Technology, Rural Development Administration of the Republic of Korea, 2022-2024.
 - Teaching Excellence Award, Department of Crop Sciences, University of Illinois, 2023.

Professional Development

- Completed a ten-week Teaching Academy program. University of Illinois, Fall 2008
- Completed a one-year Research Academy Program, University of Illinois, 2010
- Technical Advisor for Hanson Material Company concerning the use of perennial grasses for reclamation in a limestone quarry, Fairmount, IL. September 2011- present
- Participated in the 2013-2014 ACES Global Academy Program, University of Illinois, 2013-2014.
- Assisting the Department Head with developing an international student exchange program with Chungnam National University, Korea. 2014-present.
- Sabbatical Leave at Seoul National University, Korea. August – December 2015.
- Illinois Association of Aggregate Producers Sustainability Committee, 2015 – present.
- Completed LEAD21, leadership training to become a leader in land grant institutions and to link research, academics, and extensions to lead more effectively. 2016-2017.
- Coordinator for the program “Shadowing the Department Online MS” 2018.

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- Completed the program “Building Pathways for Emerging Leaders at Illinois” 2019-2020, University of Illinois

PROFESSIONAL AND HONOR SOCIETIES

- The Korean Society of Weed Science (2015-present)
- The National Alfalfa & Forage Alliance (2018-present)
- Eastern Native Grass Association (2010-present)
- Soil Science Society of America (2002 - present)
- Crop Science Society of America (2002 - present)
- American Society of Agronomy (2002 - present)
- Phi Kappa Phi Honorary Society (2000 - 2003)
- South Dakota Professional Soil Scientist Association (2000 - 2004)

SERVICE TO THE COMMUNITY

Editorial Boards

- Associate editor of *Agronomy Journal*, August 2008 - 2012
- Guest editor of a special issue, “Soil and Environmental Impacts of Bioenergy Production Systems” in *Geoderma* Journal, December 2013-June 2015.
- Editor of a special issue, “the EU project OPTIMA” in *Bioenergy Research* Journal, December 2014-October 2015.
- Field editor of *Journal of Crop Science and Biotechnology*, 2015-2023.
- Editor of *Korean Journal of Agricultural Science*, 2016-present.

Service to the Profession

- Co-chair of Graduate Student Association of Plant Science Department (Sep. 2002 – May 2003) South Dakota State University, Brookings, SD.
- Coordinator of the concurrent session, University Biomass Energy Curriculum Workshop. First National Sun Grant meeting, March 10-13, 2009. Washington, D.C.
- Sun Grant Western Regional Center, Biomass for Biofuel, Bioproducts, and Bioprocessing Competitive Grants Program, Grant Proposal Review Committee. 2009
- Award Committee member of National Association of Plant Breeders. August 2012-2015.
- U.S. Department of Agriculture, Cooperative States Research, Education, and Extension Service. Biomass Research and Development Initiative (BRDI) Competitive Grants Program, Grant Proposal Review Committee. 2010.
- U.S. Department of Energy, Biomass Competitive Grants Program. Development of Methodologies for Determining Preferred Landscape Designs for Sustainable Bioenergy Feedstock Production Systems at a Watershed Scale, Grant Proposal Review Committee. 2010.
- U.S. Department of Agriculture, Cooperative States Research, Education, and Extension Service. Biomass Research and Development Initiative (BRDI) Competitive Grants Program, Grant Proposal Review Committee. 2011.

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- U.S. Department of Agriculture, National Institute of Food and Agriculture and Agricultural Research Service - National Agriculture Library. Biomass Feedstock Production Life Cycle Inventories Assemble Project for the USDA Open LCI Database. Database Inventory Peer Review Committee. 2011.
 - United States Department of Agriculture, Cooperative States Research, Education, and Extension Service. Biomass Research and Development Initiative (BRDI) Competitive Grants Program, Grant Proposal Review Committee. 2012.
 - The organizer and convener of the symposium “Impact of Bioenergy Cropping on Soils and the Environment”, 20th World Congress Soil Science, June 8-13, 2014.
 - The Organizer of 2014 University of Illinois/Energy Biosciences Institute Feedstocks Symposium. 2014.
 - U.S. Department of Energy/SunGrant Regional Feedstock Partnership Species (Conservation Reserve Program (CRP)) Lead, 2008-2017.
 - Kansas NSF EPSCoR Grant Review Panel. 2014.
 - U.S. Department of Agriculture, National Institute of Food and Agriculture. Biomass Feedstock Genetic Development and Evaluation Competitive Grant Program, Grant Proposal Review Committee. 2017.
 - Agriculture and Agri-Food Canada (AAFC) Science and Technology Branch Project Proposal External Review Committee. 2018.
 - U.S. Department of Agriculture, Agricultural Research Service, Wheat, Sorghum and Forage Research Unit, CRIS Project Review Committee. 2018.
 - IL representative and committee member of Multistate Research Project, NE1710: Improving Forage and Bioenergy Crops for Better Adaptation, Resilience, and Flexibility, 2018-present.
 - The Secretary of International Affairs, The Korean Society of Weed Science, 2018-2020.
 - The chair and organizer of the Switchgrass V International Conference, July 22-25, 2019, Champaign, IL.
 - The Director of the Board of Education, The Korean Society of Weed Science, 2021-present.
 - The member of the Midwest Bioenergy Crop Coalition. 2022-present.
 - The advisory and planning committee, Regional Feedstock Partnership Listening Session, DOE Bioenergy Technologies Office. 2022- present
 - Ad Hoc Reviewer for *Agronomy Journal*, *Crop Science*, *GCB Bioenergy*, *Biomass and Bioenergy*, *Bioresource Technology*, *Bioenergy Research*, *Industrial Crops and Products*, *Applied Geochemistry*, *Ecological Engineering*, and *Journal of Environmental Quality*, etc.

Faculty Governance

University

Plant Variety Review Committee, 2018-present

Greenhouse Master Plan Task Force, 2023-present

College

Plant Care Facility Committee, 2009-2014, 2016-2018

2017 Spitze Land-Grant Professional Career Excellence Award committee
 2020 Runge Faculty Distinguished Achievement Award and Spitze Land-Grant Professional Career Excellence Award committee
 Return to Teaching Committee 2020
 eLearning Advisory Council, 2021-present

Department

Advisory Committee, 2013-2015 (chair)
 Faculty Advisory Committee, 2013-2015 (chair), 2016-2018; 2016-2018
 Field and Furrow Student Club Advisor, 2013-2018
 Search Committee for eight faculty positions, 2011, 2012, 2013 (Chair), 2015, 2016, 2018 (chair), 2022 (chair), 2023
 Search Committee for 14 Academic Professionals and Research Center Directors, 2009 (Chair), 2010 (2), 2011 (Chair), 2012 (2), 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2022
 Search Committee for an assistant head, 2018
 Search Committee for Research and Education Center Director, 2018
 Agronomy Field Day Committee, 2008-2019
 Extension Committee, 2008-present
 Tenure and Promotion Committee, 2021-present
 Department Task Force on Academic Position Committee 2016-2018
 Five Assistant Professor Mentoring Committee, 2014-2021, 2016-2022, 2017-present, 2018-present (chair), 2022-present
 Graduate Study Committee, 2019-2022
 Academic Administration Committee, 2029-present
 Director of Online Programs (Online MS and Certificate Programs), 2019-present

CURRICULUM DEVELOPMENT AND INSTRUCTION

- Major advisor: eight Ph.D. students, nine M.S. students, 12 post-doctoral research associates and visiting research scientists; four students have won departmental graduate student awards for their research excellence; one Ph.D. student obtained a tenure-track position in Korea, five Ph.D. students obtained tenure-track positions in the US, and one student obtained post-doctoral research associate position in universities, USDA ARS, and DOE national lab.
- Graduate student committees: over 20 Ph.D. and M.S. students
- Undergraduate student advisor: 7-10 students each year
- Course taught: Courses highlighted in bold are currently taught
 - CPSC215, Prairie and Bioenergy: Fall 2012, 2013, 2014, 2017
 - CPSC293, Off-campus Crop Science Internship: Fall 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022
 - CPSC336, ENVS336, Tomorrow's Environment: Spring 2016, 2017, 2018, 2019, 2020, 2021
 - **CPSC415, Bioenergy Crops**: Fall 2009, 2010, 2011, 2012, 2013, 2014, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023
 - **CPSC415 OLP (online), Bioenergy Crops**: Fall 2016, 2018, 2019, 2020, 2021,

- 2022, 2023
- **CPSC480 ONL & OLP, Cannabis Classification and Management:** Fall (online) & Spring (in-person) 2021, 2022, 2023
- **CPSC481 (online), Principles and Practices of Cannabis Flower Production:** Spring 2022, 2023
- **CPSC505 OLP (online), Research Methods in Plant Sciences:** Spring 2021, 2022, 2023
- CPSC518 OLP (online), Crop Growth and Development: Spring 2018, 2019, 2020
- **CPSC594 OLP (Online course), Professional Orientation:** Fall 2020, 2021, 2022,2023
- CPSC598, Crop Science Graduate Student Seminar: Fall 2009, Spring 2010
- CPSC599, Thesis Research: 2008-2023
- New courses developed: CPSC 415, CPSC 215, CPSC480, CPSC499, CPSC505, CPSC518
- Online programs: advising 30-40 Online MS students and over 100 non-degree-seeking students in CPSC certificate programs each semester (2,700 students in programs). Currently managing departmental certificate programs, Professional Development Certificates (Crop Sciences, Horticulture, and Urban Agriculture), and Undergraduate Horticultural Certificate, established Cannabis Production and Management Certificate in 2021.

EXTENSION AND OUTREACH

- Organizer and speaker for multiple Research Extension Center Field Days and Training Workshops for crop production, 2007-2008, North Dakota State University, Carrington Research Extension Center.
- Tour guide and speaker for over 20 areal farm open-houses and field days for perennial energy crop production, 2008-2018.
- Tour guide and speaker for over 20 visits and tours of statewide, multi-state, national, and international ag-professionals, scientists, legislatures, and administrators, 2008-2019.
- Planning and organizing The University Annual Agronomy Day, 2009-2019.
- Lecturer and tour guide for The University of Illinois Energy Farm Open House, 2009-2022.
- Speaker and educator for Illinois Specialty Crops, Agritourism, and Organic Conference, 2014-2017.
- Organizer and speaker of The University of Illinois Hemp Research Open House, 2021-2022
- Developed and established over 40 field trials, demonstration plots, and on-farm research plots to demonstrate and evaluate perennial energy crop production and ecosystem services and uses those plots for outreach activities, 2009-2022
- Planner and speaker for the next-generation bioenergy feedstock production field research field day event supported by USDOE-BETO, 2019-2022
- Provide technical guidance for perennial grass establishment and management for State Agencies, nonprofit organizations, and private industries; Natural Resource Conservation Service (NRCS), Agricultural Watershed Institute, Illinois Department of

Transportation (IDOT), and Illinois Aggregate Association.

INVITED LECTURES AND PRESENTATION

“Our future energy: Bioenergy from agricultural land.” Korea University, Division of Life Sciences and Biotechnology seminar series, Seoul, Korea, March 2009.

“Prepare yourself for the emerging bioenergy industry.” Kangwon National University, Department of Applied Plant Science Technology Seminar Series, Chuncheon, South Korea, March 2009.

“Emerging bioenergy industry: Lignocellulosic bioenergy feedstock.” Chungnam National University, Department of Bio Environmental Chemistry seminar series, Taejon, South Korea, March 2009.

“Training the workforce for the emerging bioenergy industry.” First National Sun Grant meeting, Washington, D.C., March 11, 2009.

“The Regional Biomass Feedstock Partnership: Herbaceous energy crops and CRP land for biomass production across environmental gradients, CRP land for biomass energy production in the US.” Sixth Annual Conference of the World Congress on Industrial Biotechnology and Bioprocessing, Montreal, Canada, July 19-22, 2009.

“CRP management for sustainable biomass feedstock production.” Regional Feedstock Partnership meeting, Sun Grant Initiative, and U.S. Department of Energy Biomass Program, San Antonio, TX, February 23-24, 2010.

“Growing America’s fuel-dedicated energy crops.” Near-term Opportunities for Biorefineries Symposium, Champaign, IL, October 11-12, 2010.

“Dedicated energy crops for sustainable biofuel production in the United States.” Symposium for Bioenergy and Biorefinery, Seoul National University, Seoul, South Korea, October 27, 2010.

“Utilization of Conservation Reserve Program (CRP) grassland for sustainable biomass production.” First Annual World Congress of Bioenergy, Dalian, China, April 25-30, 2011.

“Developing prairie cordgrass as a new bioenergy crop.” Biomass and Energy Crops IV international conference, Association of Applied Biologists, Champaign, IL, October 20-21, 2011.

“America’s energy challenges: Deploy alternative energy, lignocellulosic biofuels.” Energy R&D Center, SK Global Technology, Daejeon, South Korea, November 29, 2011.

“Beneficial bioenergy feedstocks: prairie cordgrass as a stress-tolerant dedicated energy crop.” Fifth Bioenergy and Biotechnology Symposium, Bioenergy Research Center, Chonnam National University, Kwangju, South Korea, December 2, 2011.

“CRP management for sustainable biomass feedstock production.” Regional Feedstock Partnership meeting, Sun Grant Initiative, and U.S. Department of Energy Biomass Program, Indianapolis, IN, February 2012.

“Conservation Reserve Program (CRP) grassland for sustainable biomass feedstock production.” Sun Grant Initiative national conference, New Orleans, LA, October 2-5, 2012.

“Diversifying cellulosic feedstocks with native perennial grasses.” Oak Ridge National Laboratory, Knoxville, TN, December 19, 2012.

“Genetic variation in native perennial grass *Spartina pectinata*.” International Conference of Plant and Animal Genome XXI, San Diego, CA, January 12-16, 2013.

“CRP management for sustainable biomass feedstock production.” Regional Feedstock Partnership meeting, Sun Grant Initiative, and U.S. Department of Energy Biomass Program, Tunica, MS, February 15, 2013.

“Prairie cordgrass and other grasses for CRP land”. Bioenergy Crops in Central Illinois, Argonne National Laboratory. March 8, 2013.

“Diversifying potential cellulosic feedstocks with prairie cordgrass.” Energy Biosciences Institute Six-Month Review. April 16, 2013. Champaign, IL.

“The Regional Biomass Feedstock Partnership: Herbaceous Energy Crops and CRP Land for Biomass Production in the USA”: A Five-Year Regional Feedstock Partnership Report, CRP Land for Biomass Energy Production.” The tenth Annual Conference of the World Congress on Industrial Biotechnology and Bioprocessing, Montreal, Canada, June 16-19, 2013.

“Energy Biosciences Institute Six-Month Review. Diversifying potential cellulosic feedstocks with prairie cordgrass.” October 15, 2013. Champaign, IL.

“Integrating perennial grasses for sustainable agricultural systems to maximize farm profitability.” North Central Regional Center for Rural Development. March 11, 2014.

“Integrating perennial grasses for sustainable agricultural systems to maximize farm profitability.” National Taiwan University. March 14, 2014.

“Energy Biosciences Institute Six-Month Review. Diversifying potential cellulosic feedstocks with prairie cordgrass.” April 21, 2014. Champaign, IL.

“Halophytic bioenergy crops.” Energy Bioscience Institute. May 12, 2014.

“Evaluation of wild *Tripsacum* for glyphosate tolerance and interspecific cross potential between *Tripsacum* and Maize”. Monsanto, St. Louis. September 11, 2014.

“Energy Biosciences Institute Six-Month Review. Diversifying potential cellulosic feedstocks with prairie cordgrass.” October 1, 2014. Champaign, IL.

“Integrating bioenergy crops with traditional food crops for sustainable agriculture.” The 2nd International Symposium: Preparing Future Agricultural Science for Climate Change. Chungnam National University, Daejeon, South Korea. October 21, 2014.

“Diversifying cellulosic bioenergy feedstocks with native prairie grasses for sustainable agriculture.” Argonne National Laboratory. October 29, 2014.

“Identification of stable neopolyploids for the development of high yielding prairie cordgrass for sustainable biomass feedstock production on marginal land.” 2015 North Central Regional Sun Grant Center Annual Meeting. March 18-19, 2015

“Molecular dissection of genetic variation in abiotic stress tolerant prairie cordgrass (*Spartina pectinata*). Plant and Animal Genome Asia 2015, July 13-15, 2015. Singapore.

“Perennial grasses and multifunctional landscape for sustainable agriculture” Seoul National University, Korea. September 2, 2015.

“Transcriptome analysis of a warm-season grass, *Spartina pectinata*, in response to freezing stress” The 24th Korean Genome Organization (KOGO) Annual Conference 2015. Seoul, Korea. September 9, 2015.

“Utilization of Native Grasses for Biomass Production and Resource Conservation in the U.S.” The Korean Society of Weed Science Annual Conference 2015, Kangwon, Korea. October 22-23, 2015.

“Perennial grasses and multifunctional landscape for sustainable agriculture” Kangwon National University. Korea. November 11, 2015.

“Model development for predicting rice-weed competition under climate change. 2015 Brain Pool Program Comprehensive Workshop. Seoul, Korea. November 12, 2015.

“Utilization of Native Grasses for Biomass Production in the U.S.” Chungnam National University. Korea. December 6, 2015.

“Agriculture in U.S., How do American Farmer Farm?” Dongbu Farm Hannong, Nosan, Korea. December 10, 2015.

“Diversifying cellulosic bioenergy feedstocks with native prairie grasses” Los Alamos National Laboratory. May 6, 2015.

“The Regional Feedstock Partnership: CRP grassland for biomass production across environmental gradients” DOE Bioenergy 2016, Washington DC, July 12-14, 2016

“Diversifying Cellulosic Bioenergy Crops with Perennial Grasses for Sustainable Feedstock Production and Ecosystem Service” 2016’ Yangling International Agri-Science Forum, Yangling, China. November 5-7, 2016; The Prairie & Native Grass International Conference, Lincoln, NE. August 7-10, 2017.

“High diversity landscapes to monoculture agricultural landscapes: Evolution of weed management in the Midwestern United States” 2018 International Joist Conference of Plant Protection, The Korean Society of Weed Science, Kwangju, Korea. October 24-26, 2018.

“Multifunctional landscape: Perennial bioenergy crops in agricultural landscapes” 2018 International Workshop on Multifunctional Agriculture – Management and Utilization of Bioresources, The kick-off of the Silkroad innovation alliance on multifunctional agriculture and bioresources (SIAMAB), Yangling, China. November 19-20, 2018.

“Multifunctional Design of Illinois of Department Transportation Right-of-Ways: Pollinator habitat and biomass production” The 12th Eastern Native Grass Symposium. Erie, PA. September 17-19, 2018.

“Multifunctional landscape: Perennial bioenergy crops in agricultural landscapes” Seoul National University. Seoul, Korea. August 2, 2019.

“Dual functions of energy crops: Feedstock production and Ecosystem Services” Noble Research Institute. Ardmore, OK. October 17, 2019.

“Next-generation Feedstocks for the Emerging Bioeconomy” USDOE-Bioenergy Technologies Office (BETO) 2021 Project Peer Review. Online, March 9, 2021.

“Hemp research at the University of Illinois: Germplasm collection and breeding” Rural Development Administration, Korea. Online, April 4, 2022.

“Hemp research at the University of Illinois. Southern Illinois Hemp and Cannabis Symposium” Carbondale, IL. September 19, 2022.

“Hemp for Cannabinoid Production. Rural Development Administration, Department of Agriculture, Korea. December 13, 2022.

“Next-Generation Feedstocks for the Emerging Bioeconomy” 2023 Project Peer Review, U.S. Department of Energy, Bioenergy Technologies Office. Denver, CO. April 3-6, 2023.

“Purpose-Grown Bioenergy Crops, Switchgrass & Miscanthus; Biomass Yield, Carbon Storage, and Nutrient Dynamics” The Regional Feedstock Partnership 2.0 Workshop. U.S. Department of Energy, Kansas City, KS. July 6-7, 2023.

“Climate Smart Farming for Sustainable Food and Fuel Production in U.S.” Rural Development Administration, Korea. June 26, 2023.

“Framework for field-level carbon stock quantification in the U.S.” The current development of soil carbon sink and ESG of enterprise and carbon rights management Conference. Agriculture and Food Administration, Council of Agriculture and National Chung Hsing University, Taiwan. August 30-31, 2023.

PUBLICATIONS

Chapters in Books

1. Jeranyama, P., B.I. Nyoka, V. Owens, A. Boe, M. Moeching, and **D.K. Lee**. 2009. Management guide for biomass feedstock production from switchgrass in the Northern Great Plains. *In* Sarah Lancaster (ed.), Introduction to Crop Production. Custom edition for Oklahoma State University. Pearson Custom Publishing. Boston, MA. pp 773-784.
2. Boe, A., T. Springer, **D.K. Lee**, A.L. Rayburn, and J. Gonzalez-Hernandez. (2013). Underutilized Grasses. *In* M. Saha, H.S. Bhandari, J.H. Bouton (eds.) Biomass Crops: Genetics and Breeding. John Wiley & Sons, Inc. Oxford, UK (ISBN-9780470960332, ch9). pp 173-205.
3. Mitchell, R., **D.K. Lee**, and Michael Casler. (2014). Switchgrass. *In* D. Karlen (ed.) Cellulosic Energy Cropping Systems. John Wiley & Sons, Inc. Oxford, UK. (ISBN: 978-1-119-99194-6, ch5). pp 75-90.
4. **Lee, D.K.**, A. Parrish, and T. Voigt. (2014). Switchgrass and Giant Miscanthus Agronomy. *In* Yogendra Shastri et al. (eds.) Biomass Feedstock Production Engineering. Springer. NY, USA. (ISBN: 978-1-4899-8013-7, ch3). pp 37-59.

Articles in Journals

1. **Lee, D.K.**, D.Y. Chung, and K.S. Lee. 1997. Heavy metal distribution patterns and its effect on paddy soil and stream around Gubong Mine. *J. Korean Soil Environmental Science*, 2:69-80. (in Korean)
2. Kim, P.J., **D.K. Lee**, and D.Y. Chung. 1997. Vertical distribution of bulk density and salts in a plastic film house. *Korean J. Soil Science and Fertilizer*, 30:226-233. (in Korean)
3. Kim, P.J., **D.K. Lee**, and D.Y. Chung. 1997. Effects of soil bulk density on saturated hydraulic conductivity and solute elution patterns. *Korean J. Soil Science and Fertilizer*, 30:234-241. (in Korean)
4. Chung, D.Y., **D.K. Lee**, and P.J. Kim. 1997. Enhancement of salinity problems in a cultivated soil of greenhouse. *Daesan Foundation for Rural Culture and Society*, 5:117-130. (in Korean)
5. Chung, D.Y. and **D.K. Lee**. 1999. Sequential fraction of heavy metals from mine tailings and two series of agricultural soils. *Korean J. Soil Science and Fertilizer*, 32:375-382.

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6. **Lee, D.K.** and A. Boe. 2005. Biomass production of switchgrass in central South Dakota. *Crop Science*, 45:2583-2590.
 7. **Lee, D.K.** and J.J. Doolittle. 2005. Soil carbon dioxide flux and organic carbon in grassland after manure and ammonium nitrate application. *Korean J. Environmental Agriculture*, 24:238-244.
 8. Mulkey, V.R., V.N. Owens, and **D.K. Lee**. 2006. Management of switchgrass-dominated Conservation Reserve Program lands for biomass production in South Dakota. *Crop Science*, 46:712-720.
 9. Lee, J.H., J.J. Doolittle, **D.K. Lee**, and D.D. Malo. 2006. Influence of drying temperature and duration on the quantification of particulate organic matter. *Korean J. Environmental Agriculture*, 25:289-296.
 10. **Lee, D.K.**, J.J. Doolittle, and V.N. Owens. 2007. Soil carbon dioxide fluxes in established switchgrass land managed for biomass production. *Soil Biology and Biochemistry*, 39:178-186.
 11. **Lee, D.K.**, J.J. Doolittle, and V.N. Owens. 2007. Switchgrass and soil C sequestration response to NH₄NO₃, manure, and harvest frequency on Conservation Reserve Program land. *Agronomy Journal*, 99:462-468.
 12. Boe, A. and **D.K. Lee**. 2007. Genetic variation for biomass production in prairie cordgrass and switchgrass. *Crop Science*, 47:929-934.
 13. Hong, C.H., **D.K. Lee**, D.Y. Chung, and P.J. Kim. 2007. Liming Effect on stabilization of cadmium in upland soil affected by gold mine tailing. *Archives of Environmental Contamination and Toxicology*, 52:496-502.
 14. Lee, C.H., **D.K. Lee**, M.A. Ali, and P.J. Kim. 2008. Effects of oyster shell on soil chemical and biological properties and cabbage productivity as a liming material. *Waste Management*, 28:2702-2708.
 15. Mulkey, V.R., V.N. Owens, and **D.K. Lee**. 2008. Management of warm-season grass mixtures for biomass production in South Dakota. *Bioresource Technology*, 99:609-617.
 16. Lee, C.H., C.Y. Park, **D.K. Lee**, and P.J. Kim. 2008. Long-term fertilization effects on rice productivity and nutrient efficiency in Korean paddy. *J. of Plant Nutrition*, 31:1496-1506.
 17. Hong, C.H., **D.K. Lee**, and P.J. Kim. 2008. Feasibility of phosphate fertilizer to immobilize cadmium in a field. *Chemosphere*, 70:2009-2015.
 18. Lee, S.B., C.H. Lee, K.Y. Jung, K.D. Parl, **D.K. Lee**, P.J. Kim. 2009. Changes of soil organic carbon and its fractions in relation to soil physical properties in a long-term fertilized paddy. *Soil & Tillage Research*, 104:227-232.
 19. Prasifka, J.R., J.D. Bradshaw, A. Boe, **D.K. Lee**, D. Adamski, and M.E. Gray. 2009. Symptoms, distribution, and abundance of the stem-boring caterpillar, *Blastobasis repartella* (Dietz) in switchgrass. *Bioenergy Research*, 3:238-242.

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20. Boe, A., V.N. Owens, J. Gonzalez, J. Stein, **D.K. Lee**, and B.C. Koo. 2009. Morphology and biomass production of prairie cordgrass on marginal lands. *Global Change Biology Bioenergy*, 1:240-250.
 21. Hong, C.O., D.Y. Chung, **D.K. Lee**, and P.J. Kim. 2009. Comparison of phosphate materials for immobilizing cadmium in soil. *Archives of Environmental Contamination and Toxicology*, 58:268-274.
 22. Kil, H.Y., E.S. Seong, B.K. Ghimire, I.M. Chung, S.S. Kwon, E.J. Goh, K.H. K. Heo, M.J. Kim, J.D. Lim, **D.K. Lee**, and C.Y. Yu. 2009. Antioxidant and antimicrobial activities of crude sorghum extract. *Food Chemistry*, 115:1234-1239.
 23. **Lee, D.K.**, V.N. Owens, A. Boe, and B.C. Koo. 2009. Biomass and seed yields of big bluestem, switchgrass, and intermediate wheatgrass in response to manure and harvest timing at two topographic positions. *Global Change Biology Bioenergy*, 1:171-179.
 24. Kim, S.M., A.L. Rayburn, and **D.K. Lee**. 2010. Genome size and chromosome analysis in prairie cordgrass (*Spartina pectinata* L.). *Crop Science*, 50:2277-2282.
 25. Kim, S.M., A.L. Rayburn, T. Voigt, A. Parrish, and **D.K. Lee**. 2011. Salinity effects on germination and plant growth of prairie cordgrass and switchgrass. *Bioenergy Research*, 5:225-235.
 26. Castro, J.C., A. Boe, and **D.K. Lee**. 2011. A simple system for promoting flowering of upland switchgrass in the greenhouse. *Crop Science*, 51:2607-2614.
 27. Prasifka, J.R., **D.K. Lee**, J.D. Bradshaw, A. Parrish, and M.E. Gray. 2012. Seed reduction in prairie cordgrass, *Spartina pectinata* L., by the floret-feeding caterpillar *Aethes spartina* (Barnes and McDunnough). *Bioenergy Research*, 5:189-196.
 28. Maughan, M., G. Bollero, **D.K. Lee**, R. Darmody, S. Bonos, L. Cortese, J. Murphy, R. Gaussoin, M. Sousek, D. Williams, L. Williams, F. Miguez, and T. Voigt. 2012. *Miscanthus x giganteus* productivity: The effects of management in different environments. *Global Change Biology Bioenergy*, 4:253-265.
 29. Kim, S.M., A.L. Rayburn, A. Parrish, and **D.K. Lee**. 2012. Cytogeographic distribution and genome size variation in prairie cordgrass (*Spartina pectinata* Bosc ex Link). *Plant Molecular Biology Reporter*, 7:1-13.
 30. Voigt, T., **D.K. Lee**, and G. Kling. 2012. Perennial herbaceous crops with potential for biofuel production in the temperate USA. *CAB Reviews*, 7:1-13.
 31. Wang, D., M. Maughan, J. Sun, X. Feng, F. Miguez, **D.K. Lee**, and M. Dietze. 2012. Impact of nitrogen allocation on growth and photosynthesis of miscanthus (*Miscanthus x giganteus*). *Global Change Biology Bioenergy*, 4:688-697.
 32. Kim, S.M., A.L. Rayburn, A. Boe, and **D.K. Lee**. 2012. Neopolyploidy in *Spartina pectinata* Link: 1. Morphological analysis of tetraploid and hexaploid plants in a mixed natural population. *Plant Systematics and Evolution*, 298:1073-1083.

-
33. Maughan, M., A. Parrish, G. Bollero, T. Voigt, W. Rooney, and **D.K. Lee**. 2012. Nitrogen fertilization effect on forage and energy sorghum biomass production and yield components in Illinois. *Agronomy Journal*, 104:1032-1040.
 34. Boe, A., V.N. Owens, J. Gonzalez-Hernandez, and **D.K. Lee**. 2013. Seed set in prairie cordgrass (*Spartina pectinata* Link). *Crop Science*, 53:1-8.
 35. Hong, C.O., V.N. Owens, **D.K. Lee**, and A. Boe. 2013. Switchgrass, big bluestem, and Indiangrass monocultures and their two- and three-way mixtures for bioenergy in the Northern Great Plains. *Bioenergy Research*, 6:229-239.
 36. **Lee, D.K.**, E. Aberle, C. Chen, J. Egnolf, K. Harmoney, G. Kakani, R.L. Kallenbach, and J.C. Castro. 2013. Nitrogen and harvest management of Conservation Reserve Program (CRP) grassland for sustainable feedstock production. *Global Change Biology Bioenergy*, 5:6-15.
 37. Zang, C., Z. Li, W. Yang, L. Pan, M. Gu, and **D.K. Lee**. 2013. Assessment of metals pollution on agricultural soil surrounding a lead-zinc mining area in the Karst Region of Guangxi, China. *Bulletin of Environmental Contamination and Toxicology*, 90:736-741.
 38. Anderson, E.K., A. Parrish, T.B. Voigt, V.N. Owens, C.H. Hong, and **D.K. Lee**. 2013. Nitrogen fertility and harvest management of switchgrass for sustainable bioenergy feedstock production in Illinois. *Industrial Crops and Products*, 48:19-27.
 39. Zang, C., P. Zhang, C. Mo, W. Yang, Q. Li, L. Pan, and **D.K. Lee**. 2013. Cadmium uptake, chemical forms, subcellular distribution, and accumulation in *Echinodorus Osiris Rataj*. *Environmental Science Process Impacts*, 26:1459-1465.
 40. Kim, S.M., A.L. Rayburn, T.B. Voigt, M.L. Ainouche, A.K. Ainouche, and **D.K. Lee**. 2013. Chloroplast DNA intraspecific phylogeography of prairie cordgrass (*Spartina pectinata* Bosc ex Link). *Plant Molecular Biology Reporter*, 31:1376-1383.
 41. Mohammed, Y.A., C. Chen, and **D.K. Lee**. 2013. Harvesting time and nitrogen fertilizer Management to improve bioenergy feedstock production and quality from CRP land. *Agronomy Journal*, 106:57-65.
 42. Seong, E.S., J. H. Yoo, J.G. Lee, H.Y. Kim, I.S. Hwang, K. Heo, J.D. Lim, **D.K. Lee**, E.J. Sacks, and C.Y. Yu (2013) Transient overexpression of the Miscanthus sinensis glucose-6-phosphate isomerase gene (MsGPI) in Nicotian benthamiana enhances expression of gene related to antioxidant metabolism. *Plant Omics Journal*, 6:408-414.
 43. Anderson, E.K., A.G. Hager, T.B. Voigt, and **D.K. Lee**. 2014. Switchgrass and prairie cordgrass response to foliar- and soil-applied herbicide. *Weed Technology*, 28:633-645.
 44. Quinn, L.D., K.C. Straker, J. Guo, S.M. Kim, S. Thapa, G. Kling, **D.K. Lee**, and T.B. Voigt. 2014. Stress tolerant feedstocks for sustainable bioenergy production on marginal land. *Bioenergy Research*, 5:225-235.
 45. Anderson, E.K., **D.K. Lee**, D.J. Allen, and T.B. Voigt. 2015. Agronomic factors in the establishment of tetraploid seeded Miscanthus x giganteus. *GCB Bioenergy*, 7:1075-1083.

-
46. Anderson, E.K., A.G. Hager, **D.K. Lee**, D.J. Allen, and T.B. Voigt. 2015. Response of seeded *Miscanthus × giganteus* to PRE and POST herbicides. *Weed Technology*, 29:274-283.
 47. Anderson, E.K., T.B. Voigt, S.M. Kim, and **D.K. Lee**. 2015. Determining effects of sodicity and salinity on switchgrass and prairie cordgrass germination and plant growth. *Industrial Crops and Products*, 64:79-87.
 48. Kim, S.M., J. Guo, S. Kwak, Y.S. Jin, **D.K. Lee**, and Vijay Singh. 2015. Effects of genetic variation and growing condition of prairie cordgrass on feedstock composition and ethanol yield. *Bioresource Technology*, 183:70-77.
 49. Straker, K.C., L.D. Quinn, T.B. Voigt, **D.K. Lee**, and G.J. Kling. 2015. Black locust as a bioenergy feedstock: A review. *Bioenergy Research*, 8:1117-1135.
 50. Friessen, P., M.M. Peixoto, **D.K. Lee**, and R. Sage. 2015. Sub-zero cold tolerance of *Spartina pectinata* (prairie cordgrass) and *Miscanthus x giganteus*: candidate bioenergy crops for cool temperate climates. *Journal of Experimental Botany*, 64:4403-4413.
 51. Guo, J., S. Thapa, T.B. Voigt, A.L. Rayburn, A. Boe, and **D.K. Lee**. 2015. Phenotypic and biomass yield variations in natural populations of prairie cordgrass (*Spartina pectinata* Link) in the USA. *Bioenergy Research*, 8:1371-1383.
 52. Kim, S.M., **D.K. Lee** and A. Lane Rayburn. 2015. Analysis of active nucleolus organizing regions in polyploid prairie cordgrass (*Spartina Pectinata* Link) by silver staining. *Cytologia*, 80:249-258.
 53. Zhang, C., J. Guo, E.K. Anderson, H. Huang and **D.K. Lee**. 2015. Growth responses and accumulation of cadmium in switchgrass (*Panicum virgatum* L). *RSC Advances*, 5:83700-83706.
 54. Graves, H., A.L. Rayburn, S.M. Kim, and **D.K. Lee**. 2016. Chloroplast DNA variation within prairie cordgrass (*Spartina pectinata* Link) populations in the U.S. *Journal of Systematics and Evolution*, 54:104-112.
 55. Anderson, E.K., G.A. Bollero, M.W. Maughan, A.S. Parrish, T.B. Voigt, and **D.K. Lee**. 2016. Establishing switchgrass with a corn companion crop to improve economic profitability. *Agronomy Journal*, 108:1-8.
 56. Lee, E.J. G. Nah, M.J. Yook, S.H. Lim, T.S. Park, **D.K. Lee**, and D.S. Kim. 2016. Phylogenetic relationship of *Echinochloa* species based on simple sequence repeat and phenotypic marker analyses. *Weed Science*, 64:441-454.
 57. Anderson, E.K., E. Aberle, C. Chen, J. Egenolf, K. Keith, V.G. Kakani, R. Kallenbach, M. Khanna, W. Wang, and **D.K. Lee**. 2016. Impacts of management practices on bioenergy feedstock yield and economic feasibility on Conservation Reserve Program (CRP) grasslands. *GCB Bioenergy*, 8:1178-1190.
 58. Nah, G., J.H. Im, J.W. Kim, J.S. Lim, A.Y. Choi, I.Y. Choi, T.J. Yang, T.S. Park, **D.K. Lee**, and D.S. Kim. 2016. The complete chloroplast genomes of three Korean *Echinochloa crus-galli* accessions. *Mitochondria DNA*, 27:1-2.

-
59. Serapiglia, M.J., A.A. Boateng, **D.K. Lee**, and M.D. Casler. 2016. Switchgrass harvest time management can impact biomass yield and nutrient content. *Crop Science*, 56:1970-1980.
 60. Graves, H., A.L. Rayburn, J.L. Gonzalez-Hernandez, G. Nah, D.S. Kim and **D.K. Lee**. 2016. Validating DNA polymorphisms using KASP assay in prairie cordgrass (*Spartina pectinata* Link) populations in the U.S. *Frontiers in Plant Science*, 6:1271.
 61. Song, J.S., S.H. Lim, Y.H. Lim, **D.K. Lee**, and D.S. Kim. 2016. Herbicide-based weed management in *Miscanthus sacchariflorus*. *Bioenergy Research*, 9:326-334.
 62. Nah, G.J., M.S. Lee, D.S. Kim, A.L. Rayburn, T. Voigt, and **D.K. Lee**. 2016. Transcriptome analysis of a warm-season grass, *Spartina pectinata*, in response to freezing stress. *PlosOne*, 11(3):e0152294.
 63. Crawford, J., P.J. Brown, T. Voigt, and **D.K. Lee**. 2016. Linkage mapping in prairie cordgrass (*Spartina pectinata* Link) using genotyping-by-sequencing. *Molecular Breeding*, 36-62.
 64. Harmony, K.R., **D.K. Lee**, R.L. Kallenbach, and E.Z. Aberle. 2016. Species composition changes in Conservation Reserve Program (CRP) grassland when managed for biomass feedstock production. *Bioenergy Research*, 9:1180-1188.
 65. Prasifka, J.R., L.F. Marek, **D.K. Lee**, S.B. Thapa, V. Hahn, and J.D. Bradshaw. 2016. Effects from early planting of late-maturing sunflowers on damage from primary insect pests in the United States, *Helia*, 39:45-56
 66. Lee, M.S., A.L. Rayburn, and **D.K. Lee**. 2016. Genesis and identification of octoploids generated from tetraploid prairie cordgrass (*Spartina pectinata* Link). *Crop Science*, 56:2973-2982.
 67. Nugent, G., A. Kohmetscher, D. Namuth-Covert, J. Guretzky, P. Murphy, and **D.K. Lee**. 2016. Learning from online modules in diverse instructional contexts. *Interdisciplinary Journal of e-Skills and Life Long Learning*, 12:13-121.
 68. Guo, J., A. Boe, D.S. Kim, and **D.K. Lee**. 2017. Growth and development of two perennial grasses in ambient light condition during their natural dormant period. *Crop Science*, 57:2213-2225.
 69. Bishop, J.W., S. Kim, M.B. Villamil, **D.K. Lee**, and A.L. Rayburn. 2017. Meiotic pairing as an indicator of genome composition in polyploid prairie cordgrass (*Spartina pectinata* Link). *Genetica*, 145:235-240.
 70. Cooney, D., H. Kim, L. Quinn, M.S. Lee, J. Guo, S. Chen, B. Xu, and **D.K. Lee**. 2017. Switchgrass as a bioenergy crop in the Loess Plateau, China: Potential lignocellulosic Feedstock production and environmental conservation. *Journal of Integrative Agriculture*, 16:1211-1226.
 71. Lee, M.S., E.K. Anderson, D. Stojšin, M. McPherson, B. Baltazar, M.J. Horack, J.M. Fuente, K. Wu, J.H. Crowley, A.L. Rayburn, and **D.K. Lee**. 2017. Assessment of the potential for gene flow from transgenic maize (*Zea mays* L.) to eastern gamagrass (*Tripsacum dactyloides* L.). *Transgenic Research*, 26:501-514.

-
72. Boe, A., C. Yang, P. Johnson, V. Owens, **D.K. Lee**, J. Guo, and J. Gonzalez-Hernandez. 2017. Genetics and partitioning for biomass of prairie cordgrass compared to switchgrass on marginal cropland. *BioEnergy Research*, 10:864-875.
73. Lee, M.S., A. Wycislo, J. Guo, **D.K. Lee**, and T.B. Voigt. 2017. Nitrogen fertilization effects on biomass production and yield components of *Miscanthus x giganteus*. *Frontiers in Plant Science*, 8:1-9.
74. Guo, J., S. Thapa, T. Voigt, V. Owens, A. Boe, and **D.K. Lee**. 2017. Biomass yield and feedstock quality of prairie cordgrass in response to seedling rate, row spacing, and nitrogen fertilization. *Agronomy Journal*, 109:1-12.
75. **Lee, D.K.**, E. Aberle, E.K. Anderson, W. Anderson, B.S. Baldwin, D. Baltensperger, M. Barrett, J. Blumenthal, S. Bonos, J. Bouton, D.I. Bransby, C. Brummer, P.S. Burks, C. Chen, C. Daly, J. Egenolf, R.L. Farris, J.H. Fike, R. Gaussoin, J.R. Gill, K. Gravois, M.D. Halbleib, A. Hale, W. Hanna, K. Harmony, E.A. Heaton, R.W. Heiniger, L. Hoffman, C.O. Hong, G. Kakani, R. Kallenbach, B. Macoon, J.C. Medley, A. Missaoui, R. Mitchell, K.J. Moore, J.I. Morrison, G.N. Odvody, J.D. Richwine, R. Ogoshi, J.R. Parrish, L. Quinn, E. Richard, W.L. Rooney, J.B. Rushing, R. Schnell, M. Sousek, S.A. Staggenborg, T. Tew, G. Uehara, D.R. Viands, T. Voigt, D. Williams, L. Williams, L.T. Wilson, A. Wycislo, Y. Yang, and V. Owens. (2018). Biomass production of herbaceous energy crops in the United States: Field trial results and yield potential maps from the multiyear Regional Feedstock Partnership. *GCB Bioenergy*, 10: 698-716
76. Hernández, K.A., Owens, V.N., Boe, A., González-Hernández, J.L, **Lee, D.K.** & Aberle, E. (2018). Above- and Belowground Prairie Cordgrass Response to Applied Nitrogen on Marginal Land. *Bioenergy Research*, 11: 440-448.
77. Lee, M.S., Mitchell, R. Heaton, E. & **Lee, D.K.** (2018). Warm-season grass monocultures and mixtures for sustainable bioenergy feedstock production in the Midwest, USA. *Bioenergy Research*, 12: 43-54.
78. Kenaley, S.C., Gu, M., Bergstorm, G.C. & **Lee, D.K.** (2018). First report of Puccinia spaganioides affecting prairie cordgrass (*Spartina pectinata*) in Illinois. *Plant Disease*, 102: 1460-1460.
79. Calser, M., Vogel, K.P., **Lee, D.K.**, Mitchell, R.B., Adler, P.R., Sulc, R.M., Johnson, K.D., Kallenbach, R.L., Boe, A., Mathison, R.D., Cassida, K.A., Min, D.H., Crawford, J. & Moore, K.J. (2018). 30 years of progress toward increased biomass yield of switchgrass and big bluestem. *Crop Science*, 58:1242-1254.
80. Kim, S.M., **Lee, D.K.**, S. Tapha, B.S. Dien, M.E. Tumbleson, K.D. Rausah, and V. Singh. (2018). Cellulosic ethanol potential of feedstocks grown on marginal land. *Transactions of ASABE*, 61: 1891-1906.
81. Cheng, M.H., Dien, D., **Lee, D.K.** & Singh, V. (2019). Sugar production from bioenergy sorghum by using pilot scale continuous hydrothermal pretreatment combined with disk refining. *Bioresource Technology*, 289:121663.

-
82. Zumpf, C., Lee, M.S., Thapa, S., Guo, J., Mitchell, R., Volenec, J.J., & **Lee, D.K.** (2019). Impact of warm-season grass management on feedstock production on marginal farmland in Central Illinois. *GCB Bioenergy*, 11(10), 1202-1214.
 83. Casler, M.D., **Lee, D.K.**, Mitchell, R.B., Adler, P.R., Sulc, R.M., Johnson, K.D., ... & Min, D. (2019). Nitrogen Demand Associated with Increased Biomass Yield of Switchgrass and Big Bluestem: Implications for Future Breeding Strategies. *BioEnergy Research*, 13:120-131.
 84. Kim, S., Albrecht, K., Sheaffer, C., **Lee, D.K.**, Subramanian, S., & Owens, V. (2020). Biomass Production of Prairie Cordgrass (*Spartina pectinata* Link.) Using Urea and Kura Clover (*Trifolium ambiguum* Bieb.) as a Source of Nitrogen. *BioEnergy Research*, 13:1095-1107.
 85. Kent, J., Hartman, M.D., **Lee, D.K.**, & Hudiburg, T. (2020). Simulated Biomass Sorghum GHG Reduction Potential is Similar to Maize. *Environmental Science & Technology*, 54(19), 12456-12466.
 86. Poudel, H.P., **Lee, D.K.**, & Casler, M.D. (2020). Selection for Winter Survivorship in Lowland Switchgrass. *BioEnergy Research*, 1-11.
 87. Li, S., Moller, C.A., Mitchell, N.G., **Lee, D.K.**, & Ainsworth, E.A. (2020). Bioenergy sorghum maintains photosynthetic capacity in elevated ozone concentrations. *Plant, Cell & Environment*. 44(3), 729-746
 88. Lee, M.S., Urgun-Demirtas, M., Shen, Y., Mojekwu, L., Zumpf, C. Anderson, E.K., Rayburn, A.L. & **Lee, D.K.** (2021). Effect of digestate and digestate supplemented with biochar on switchgrass growth and chemical composition. *Biomass & Bioenergy*, 144-105928.
 89. Parrish, A.S., Lee, M.S., Voigt, T.E. & **Lee, D.K.** (2021). *Miscanthus × giganteus* Responses to Nitrogen Fertilization and Harvest Timing in Illinois, USA. *BioEnergy Research*. 14(4), 1126-1135.
 90. Zumpf, C., Cacho, J., Grasse, N., Quinn, J., Hampton-Marcell, J., Armstrong, A., Campbell, Christina, N. & **Lee, D.K.** (2021). Influence of Shrub Willow Buffers Strategically Integrated in an Illinois Corn-Soybean Field on Soil Health and Microbial Community Composition. *Science of The Total Environment*, 145674.
 91. Guo, J., Brown, P. J., Rayburn, A. L., Butts-Wilmsmeyer, C. J., Boe, A., & **Lee, D.K.** (2021). Genomic Variation Shaped by Environmental and Geographical Factors in Prairie Cordgrass Natural Populations Collected across Its Native Range in the USA. *Genes*, 12(8), 1240.
 92. Hamada, Y., Zumpf, C. R., Cacho, J. F., **Lee, D.K.**, Lin, C. H., Boe, A., ... & Negri, M. C. (2021). Remote Sensing-Based Estimation of Advanced Perennial Grass Biomass Yields for Bioenergy. *Land*, 10(11), 1221.
 93. Zumpf, C., Quinn, J., Cacho, J., Grasse, N., Negri, M. C., & **Lee, D.K.** (2021). Invertebrate and Plant Community Diversity of an Illinois Corn–Soybean Field with Integrated Shrub Willow Bioenergy Buffers. *Sustainability*, 13(21), 12280.
 94. Zumpf, C., Cacho, J., Grasse, N., Quinn, J., Hampton-Marcell, J., Armstrong, A., ... & **Lee, D.K.** (2021). Influence of shrub willow buffers strategically integrated in an Illinois corn-

- soybean field on soil health and microbial community composition. *Science of the Total Environment*, 772, 145674.
95. Kim, H., **Lee, D.K.**, Voigt, T. B., Tian, G., & Yannarell, A. C. (2022). Agricultural practices of perennial energy crops affect nitrogen cycling microbial communities. *Applied Soil Ecology*, 172, 104366.
96. Potash, E., Guan, K., Margenot, A., **Lee, D.K.**, DeLucia, E., Wang, S., & Jang, C. (2022). How to estimate soil organic carbon stocks of agricultural fields? perspectives using ex-ante evaluation. *Geoderma*, 411, 115693.
97. Burnham, M. B., Simon, S. J., **Lee, D.K.**, Kent, A. D., DeLucia, E. H., & Yang, W. H. (2022). Intra-and inter-annual variability of nitrification in the rhizosphere of field-grown bioenergy sorghum. *GCB Bioenergy*, 14(3), 393-410.
98. Li, S., Moller, C. A., Mitchell, N. G., Lee, D., Sacks, E. J., & Ainsworth, E. A. (2022). Testing unified theories for ozone response in C4 species. *Global Change Biology*, 28(10), 3379-3393.
99. Wang, S., Guan, K., Zhang, C., **Lee, D.K.**, Margenot, A. J., Ge, Y., ... & Huang, Y. (2022). Using soil library hyperspectral reflectance and machine learning to predict soil organic carbon: Assessing potential of airborne and spaceborne optical soil sensing. *Remote Sensing of Environment*, 271, 112914.
100. Sharma, B. P., Zhang, N., **Lee, D.K.**, Heaton, E., Delucia, E. H., Sacks, E. J., ... & Khanna, M. (2022). Responsiveness of miscanthus and switchgrass yields to stand age and nitrogen fertilization: A meta-regression analysis. *GCB Bioenergy*, 14(5), 539-557.
101. Casler, M. D., **Lee, D.K.**, Mitchell, R. B., Moore, K. J., Adler, P. R., Sulc, R. M., ... & Sato, T. K. (2022). Biomass Quality Responses to Selection for Increased Biomass Yield in Perennial Energy Grasses. *BioEnergy Research*, 1-9.
102. Li, Z., Guan, K., Zhou, W., Peng, B., Jin, Z., Tang, J., ... **Lee, D.K.** & Yang, Y. (2022). Assessing the impacts of pre-growing-season weather conditions on soil nitrogen dynamics and corn productivity in the US Midwest. *Field Crops Research*, 284, 108563.
103. Namoi, N., Archer, D., Rosenstock, T. S., Jang, C., Lin, C. H., Boe, A., & **Lee, D.K.** (2022). How profitable is switchgrass in Illinois, USA? An economic definition of marginal land. *Grassland Research*, 1(2), 111-122.
104. Schetter, A., Lin, C. H., Zumpf, C., Jang, C., Hoffmann, L., Rooney, W., & **Lee, D.K.** (2022). Genotype-Environment-Management Interactions in Biomass Yield and Feedstock Composition of Photoperiod-Sensitive Energy Sorghum. *BioEnergy Research*, 15(2), 1017-1032.
105. Chandrasoma, J., Christianson, R., Cooke, R. A., Davidson, P. C., **Lee, D.K.**, & Christianson, L. (2022). Saturated buffer design flow and performance in Illinois. *Journal of Environmental Quality*, 51, 389– 398.
106. Emerson, R. M., Hoover, A. N., Cortez, M. M., Rials, T., Owens, V., Voigt, T., ... **Lee, D.K.** & Volk, T. A. (2022). Regional Feedstock Partnership Biomass Quality Assessment Final

Report (No. INL/EXT-21-63851-Rev000). Idaho National Lab. (INL), Idaho Falls, ID (United States).

107. Namoi, N., Jang, C., Robins, Z., Lin, C. H., Lim, S. H., Voigt, T., & **Lee, D.K.** (2022). Aerial Imagery Can Detect Nitrogen Fertilizer Effects on Biomass and Stand Health of *Miscanthus× giganteus*. *Remote Sensing*, 14(6), 1435.
108. Howlett, D. S., Stewart, J. R., Inoue, J., Saito, M., **Lee, D.K.**, Wang, H., ... & Toma, Y. (2022). Source and Accumulation of Soil Carbon along Catena Toposequences over 12,000 Years in Three Semi-Natural *Miscanthus sinensis* Grasslands in Japan. *Agriculture*, 12(1), 88.
109. Casler, M., & **Lee, D.K.** (2023) Registration of ‘Cedar Creek’ Switchgrass. *J. Plant Registration*, 17:483-487, <https://doi.org/10.1002/plr2.20294>
110. Casler, M., & **Lee, D.K.** (2023) Registration of ‘Empire’ Big Bluestem. *J. Plant Registration*, 17:223-227, <https://doi.org/10.1002/plr2.20280>
111. Thapa, S., Vittore, K. M., Allen, D. P., Guo, J., Lee, M. S., & **Lee, D.K.** (2022). Finding Promising Candidates for Wet Growing Conditions: The Effect of Two Row Spacings on Biomass Production of Four Bioenergy Prairie Cordgrass Populations in a Wet Marginal Land. *Bioenergy Research*, 1-11.
112. Zhou, W., Guan, K., Peng, B., Margenot, A., **Lee, D.K.**, Tang, J., ... & Wang, S. (2023). How does uncertainty of soil organic carbon stock affect the calculation of carbon budgets and soil carbon credits for croplands in the US Midwest? *Geoderma*, 429, 116254.
113. Cacho, J. F., Feinstein, J., Zumpf, C. R., Hamada, Y., **Lee, D.K.**, Namoi, N. L., ... & Negri, C. (2023). Predicting Biomass Yields of Advanced Switchgrass Cultivars for Bioenergy and Ecosystem Services Using Machine Learning. *Energies*, 16(10), 4168.
114. Lin, C. H., Namoi, N., Hoover, A., Emerson, R., Cortez, M., Wolfrum, E., ... & **Lee, D.K.** (2023). Harvest and nitrogen effects on bioenergy feedstock quality of grass-legume mixtures on Conservation Reserve Program grasslands. *GCB Bioenergy*, 15(3), 283-302.
115. Guan, K., Jin, Z., Peng, B., Tang, J., DeLucia, E. H., West, P., **Lee, D.K.**, ... & Yang, S. J. (2023). A scalable framework for quantifying field-level agricultural carbon outcomes. *Earth-Science Reviews*, 104462.
116. Potash, E., Guan, K., Margenot, A. J., **Lee, D.K.**, Boe, A., Douglass, M., ... & Zumpf, C. (2023). Multi-site evaluation of stratified and balanced sampling of soil organic carbon stocks in agricultural fields. *Geoderma*, 438, 116587.
117. Casler, M. D., **Lee, D.K.**, Mitchell, R. B., Moore, K. J., Adler, P. R., Sulc, R. M., ... & Sato, T. K. (2023). Biomass Quality Responses to Selection for Increased Biomass Yield in Perennial Energy Grasses. *BioEnergy Research*, 16(2), 877-885.
118. Cooney, D. R., Namoi, N., Zumpf, C., Lim, S. H., Villamil, M., Mitchell, R., & **Lee, D. K.** (2023). Biomass Production and Nutrient Removal by Perennial Energy Grasses Produced on a Wet Marginal Land. *BioEnergy Research*, 16(2), 886-897.
119. Zumpf, C. R., Cacho, J. F., Grasse, N. F., Walsh, C., Lee, D. J., **Lee, D.K.**, & Negri, M. C.

(2023). Evapotranspiration of advanced perennial bioenergy grasses produced on marginal land in the US Midwest. *Biomass and Bioenergy*, 178, 106975.

120. Lee, M. S., Boyd, R. A., Jang, C., Lee, J. W., & **Lee, D. K.** (2023). Identifying biomass yield potential of tetra, hexa, and octoploid prairie cordgrass populations grown on marginal lands. *Crop Science*. <https://doi.org/10.1002/csc2.21131>
121. Li, S., Leakey, A.D., Moller, C.A., Montes, C., Sacks, E.J., **Lee, D.K.** & Ainsworth, E.A. (2023). Similar photosynthetic, but different yield responses of C₃ and C₄ crops to elevated O₃. *Proceedings of the National Academy of Sciences*. 120 (46) e2313591120.
122. Namoi, N., Jang, C., Behnke, G., Yang, W., & **Lee, D.K.** (2023). Responses of the aged stand of *Miscanthus × giganteus* to nitrogen fertilization: Biomass yield and yield components. *GCB Bioenergy* (Accepted).
123. Jang, C.H., Namoi, N., Wolske, E., Wasonga, D., Behnke, G., Bowman, D.D., & Lee, D.K. (2023). Integrating Plant Morphological Traits with Remote-Sensed Multispectral Imageries for Accurate Corn Grain Yield Prediction. *PLOS One* (Accepted).

PATENTS AND LICENSES

1. U.S. Provisional Application Serial No.: 61/658,376\ Title: NEW PRAIRIE CORDGRASS (SPARTINA PECTINATA) CULTIVAR 'SAVOY' FOR A BIOENERGY FEEDSTOCK PRODUCTION
Inventors: D.K. Lee & Allen Parrish
Provisional patent application filed in the U.S. Patent and Trademark Office (PTO) on June 11, 2012, the application was accepted on November 18, 2013, and published on December 12, 2013.
Publication No. US-2013-0333067
2. 'SAVOY' prairie cordgrass commercial licensing, Millborn Seeds, Brookings, SD.
3. 'IL-ecotype' big bluestem commercial licensing, Ernst Seeds, Meadville, PA.
4. 'INDEPENDENCE' switchgrass commercial licensing, Ernst Seeds, Meadville, PA.
5. 'Cedar Creek' Switchgrass plant registration
6. 'Empire' Big Bluestem plant registration

GRANTS RECEIVED and CURRENT RESEARCH PROJECTS

Lee, D.K. Developing prairie cordgrass as a cellulosic bioenergy crop. Energy Biosciences Institute. 1/1/2009-12/31/2011. \$566,801.

Lee, D.K. Species (CRP) leader of Herbaceous Biomass Feedstock Development team - CRP management for biomass feedstock production. Sun Grant and USDOE Regional Biomass Feedstock Partnership. 4/1/2008-3/31/2014. \$176,000.

Voigt, T., S. Long, and D.K. Lee (Co-PI). Feedstock production/Agronomy Program. Energy Biosciences Institute. 2008-2013. \$7,241,508. [\$1,200,000 to Lee].

Lee, D.K. (PI), E.D. Nafziger, and F. Fernández. Nitrogen fertility management of switchgrass for sustainable bioenergy feedstock production in Illinois. Illinois Department of Agriculture, Fertilizer Research and Education Center. 4/1/2009-4/30/2012. \$96,442 [\$90,000 to Lee].

Owens, V.E. D.K. Lee (Co-PI), et al. Sustainable biomass production on marginal lands using a novel legume/grass mixture. 2009 USDOE Competitive Grant Program on Sustainable Biomass Production Systems via NC Sun Grant. 7/1/2010-9/31/2013. [\$119,700 to Lee].

Lee, D.K. Sustainable production and distribution of bioenergy for the central USA. USDA, NIFA AFRI CAP subcontract through Iowa State University. 8/1/2011-7/31/2015. [\$211,232 to Lee]

Lee, D.K. Evaluate seeds collected from a natural population of *Tripsacum* for the presence of glyphosate tolerance and hybridization of *Tripsacum* and maize to evaluate the likelihood of viable F1 hybrid progeny production. Monsanto. 2013-2017. \$101,840.

Casler, M., D.K. Lee, (Co-PI), et al. Evaluating perennial grass cultivars for their use as biomass energy crops in Illinois. USDA, NIFA AFRI CAP through Agricultural Research Service. 8/1/2011-7/31/2015. [\$125,000 to Lee].

Lee, D.K. Diversifying potential cellulosic perennial feedstocks with prairie cordgrass. Energy Biosciences Institute. 1/1/2012-12/31/2014. \$538,100.

Rayburn, A.L., and D.K. Lee (Co-PI). Identification of stable neopolyploids for the development of high-yielding prairie cordgrass for sustainable biomass production. USDA NIFA. 2012-2014. \$148,999 [\$74,500 to Lee].

Lee, D.K. (PI), A. Parrish, N. Rajagopalan, B.K. Sharma, L. Rodriguez, H. Blaschek, and Y.-S. Jin. Feasibility of energy crop Production in IDOT right-of-ways-Agronomy. Illinois Department of Transportation. 2012-2015. [\$169,714 to Lee].

Lee, D.K. (PI), S.T.Lovell, Paulson, and A. Yannarell. Multifunctional buffers on marginal farmland to improve the environmental profile of agriculture and diversify production opportunities. IL Nutrient Research and Education Council. 2015-2019. \$583,274 [\$200,000 to Lee].

Lee, D.K. (PI), Y.-S. Jin, V. Singh, and A.L. Rayburn. Developing prairie cordgrass as a high-yielding biofuel crop for stressed environments. CABER/IPBC Seed Grant Program. 2012. \$30,000 [\$7,500 to Lee].

Lee, D.K. (PI), and M. Lim. A new approach to producing biomass feedstocks from marginal land and reclaiming salt impacted soils in the North Central USA. 2009 USDOE Competitive

Grant Program on Sustainable Biomass Production Systems via NC Sun Grant. 2013-2015. \$34,192 (\$34,192 to Lee).

Lee, D.K. (PI), M. Bohn, Y.-S. Jin, and V. Singh. Developing maize hybrids for high biofuel production using grain, cobs, and stover. CABER/IPBC Seed Grant Program. 2013-2015. \$50,000 (\$12,500 to Lee).

Voigt, T., D.K. Lee (Co-PI), G. Kling, and S. Long. Feedstock production/Agronomy Program. Energy Biosciences Institute. 2013-2014. \$1,700,000 [\$550,000 to Lee].

Lee, D.K. Sustainable local mushroom production systems for Illinois to enhance grower profitability and increase consumer choice. USDA/NIFA, IL Ag Dept. 2015-2017. \$36,323.

Lee, D.K. Evaluation of switchgrass growth and establishment under digestate treatment. USDOE/Argonne National Lab. 2016. \$58,000.

Lee, D.K. (PI) and T. Voigt. The Use of multifunctional perennial buffer strips in reducing the nutrient loss from agricultural fields. Metropolitan Water Reclamation District of Great Chicago. 2016-2019. \$207,800 (\$207,800 to Lee).

Lee, D.K. (PI) A. Boe, and R. Mitchell. Evaluation of stability of heterosis for biomass yield in prairie cordgrass on marginal land. USDA/NIFA, NC Sun Grant. 2016-2018. \$123,000 [\$72,341 to Lee]

Lee, D.K. Bioenergy buffer strips designed for crop production and ecosystem services in central Illinois. USDOE/Argonne National Lab. 2017-2020. \$201,411

DeLucia, E. D.K. Lee (Co-PI) and 55 others. Center for Advanced Bioenergy and Bioproducts Innovation. USDOE. 2017-2022. \$115,000,000 [\$422,079 to Lee]

Blascheck, H., D.K. Lee (Co-PI), B.K. Sharma, G. Letterly, L. Rodriguez, and Y.S. Jin. Cost savings and revenue potential from IDOT right-of-ways. IL Dept. Transportation. 2017-2018. \$313,285 [\$71,672 to Lee].

Lee, D.K. Phenology changes of perennial plants driven by climate change can alter plant productivity and ecosystem balance. University of Illinois Research Board. 2018-2019. \$19,210.

Lee, D.K. (PI), A. Boe, E. Heaton, M. Negri, K. Comer, V. Owens, D. Archer, R. Mitchell, and A. Hoover. Next generation energy crops for the emerging bioeconomy. USDOE/BETO. 2018-2024. \$5,000,000 [\$1,260,000 to Lee].

Lee, D.K. (PI) and J. Shafer. Development of butterfly milkweed varieties with low seed dormancy and high seed yield. USDA/NIFA, IL Ag Dept. 2015-2017. \$66,476 [\$66,476 to Lee].

Lee, D.K. Impact of slow released N fertilizer on corn growth and N use efficiency. Nousbo Tech. 2020. \$29,760.

Lee, D.K. Impact of equidistance planting on soybean yield. John Deere. 2020. \$22,369.

Guan, K., D.K. Lee (Co-PI), C. Bernacchi, E. Delucia, and J.S. Lee. Midwest bioenergy crop landscape laboratory (MBC-LAB): Capturing spatio-temporal and managerial variations to provide a gold standard data and platform for validating field-level emissions from bioenergy crop. USDOE/APRA-E. 2020-2023. \$3,300,000 [\$1,200,000 to Lee].

Chowdhary, G., D.K. Lee (Co-PI). Autonomous Robotic Platform for Digital Agriculture: Cover Crop Interrow Planting. 2020. The Center of Digital Agriculture. The University of Illinois. \$25,000 [\$12,500 to Lee].

Chen, J.H., S. Rowan, M. Hersam, S. Chaidhuri, E. Ainsworth, and D.K. Lee (Co-PI). Manufacturing Advanced Electronics through Printing Using Bio-based and Locally Identifiable Compounds. National Science Foundation (NSF). \$9,150,000 [\$600,000 to Lee].

Chowdhary, G., D.K. Lee (Co-PI), D.W. Shike, J.C. McCann, I. Condotta. Illinois Precision Livestock & Cover Crop Environmental Sustainability (i-PLACES). 2021. Institute for Sustainability, Energy and Environment, The University of Illinois. \$30,000 [\$10,000 to Lee].

Guan, K., D.K. Lee (Co-PI), C. Bernacchi, E. Delucia, W. Yang, and J. Peng. The “system of systems” solutions for commercial field-level quantification of soil organic carbon and nitrous oxide emission for scalable applications (SYMFONI). USDOE/APRA-E. 2021-2023. \$4,469,763 [\$432,238 to Lee].

Lee, D.K. (PI), C. Riggins, A. Parrish, and P. Gavin. Development of dual-purpose hems: Fiber and Grain for protein and oils. Flura Inc. 2021. \$108,000 [\$58,000 to Lee].

Madhu, K. D.K. Lee (Co-PI) and others. Sustainably Colocating Agricultural and Photovoltaic Electricity Systems (SCAPES). USDA-NIFA. 2021-2025. \$10,274,093 [\$471,000 to Lee].

Lee, D.K. Collection of genetic resources and introduction of research technologies for hemp research. Korea-RDA. 2021-2023. \$240,000.

Chowdhary, G., Margenot, A., D.K. Lee (Co-PI). I-FARM: Illinois Farming and Regenerative Management Testbed. USDA-NIFA. 2022-2025. \$2,363,355 [\$261,082 to Lee and Margenot].

Riggins, C. and D.K. Lee (Co-PI). The Midwestern Hemp Research Collaborative: Participatory Research and Extension to Grow a Sustainable Hemp Industry. USDA-NIFA. \$163,810.

Leakey, A., D.K. Lee (Co-PI) and 55 others. Center for Advanced Bioenergy and Bioproducts Innovation. USDOE. 2023. \$25,000,000 [\$368,617 to Lee]

Fontes, G.P., D.K. Lee (Co-PI), D. Wasonga, D., D. Schaefer. Evaluating the impacts of fall-applied controlled-release N fertilizer on N use efficiency, soil water quality, GHG emissions, and grain yield in a strip-till corn cropping system. Illinois Nutrient Research and Education Council. \$401,822 [\$180,000 to Lee]

Leakey, A., D.K. Lee (Co-PI) and 55 others. Center for Advanced Bioenergy and Bioproducts Innovation. USDOE. 2024. \$25,000,000 [\$392,825 to Lee]