

CURRICULUM VITAE

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Mark A. Licht, PhD

Assistant Professor
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EDUCATION

Ph.D., Crop Production and Physiology, Iowa State University, 2015

Influence of corn seeding rate, soil attributes, and topographic characteristics on grain yield, yield components, and grain composition.

M.S., Soil Science, Iowa State University, 2003

Comparative influence of tillage systems and nutrient timing on the soil environment and crop response in Iowa soils.

B.S., Agronomy, Iowa State University, 2000

B.S., Agricultural Extension Education, Iowa State University, 2000

ACADEMIC POSITIONS

August 2016 to present, **Assistant Professor**, Iowa State University

Focus is an integrated extension (60%), research (20%), and teaching (20%) cropping systems program to holistically manage Iowa corn and soybean-based cropping systems to achieve productivity, profitability, and environmental goals. Research is aligned around varied aspects of soybean, corn, and cover crop management as well as agronomic implications of precision technologies.

March 2014 to present, **Extension Cropping Systems Specialist**, Iowa State University

Focus was on corn and soybean Extension programming efforts in support of the Department of Agronomy and Extension field agronomists. Supervisor: Dr. John Lawrence

August 2006 to February 2014, **Extension Field Agronomist**, Iowa State University

Developed Extension programming in support of Iowa corn and soybean farmers and associated agronomists as well as conducted pesticide and manure applicator training. Supervisor: Dr. John Lawrence

October 2002 to August 2006, **Extension Program Specialist**, Iowa State University

Conducted research and Extension activities in support of soil conservation, residue management, and nutrient management. Developed the Iowa Learning Farms program to promote and increase awareness of conservation practices in Iowa. Supervisor: Dr. Mahdi Al-Kaisi

AWARDS

Outstanding Paper Award, Crop Forage and Turfgrass Management Journal, 2020

Early Achievement in Extension and Outreach Award, College of Agriculture and Life Sciences, Iowa State University, 2019

Achievement Award, National Association of County Agriculture Agents, 2012

National Finalist, Search for Excellence in Crop Production, 2012

National Finalist, Feature Story Communication Award, Iowa Agricultural Extension Association, 2011

State Finalist, Individual Newsletter Communication Award, Iowa Agricultural Extension Association, 2011

National Extension Leadership Development, North Central, Class of 2010

Regional Finalist, Factsheet Communication Award, National Association of County Agriculture Agents, 2010

Achievement by an Educational Team Award, Iowa State University Extension, 2009

New Professional Award, Iowa State University Extension, 2008

Achievement by an Educational Team Award, Iowa State University Extension, 2008

Certificate of Excellence, Newsletter, American Society of Agronomy, 2006

Certificate of Excellence, Internet Web Page, American Society of Agronomy, 2003

Certificate of Excellence, Extension Publications, American Society of Agronomy, 2003

EXTENSION SCHOLARSHIP AND ACTIVITIES

Peer reviewed Extension journal articles

1. Comito, J., E. Ripley, **M.A. Licht**, and A.K. Janke. 2020. Effectively conducting field days while responding to unprecedented external restrictions. *Journal of Extension*. 58(5) article v58-5tt3. <https://www.joe.org/joe/2020october/tt3.php>
2. Comito, J., B. Case Haub, and **M.A. Licht**. 2018. Rapid needs assessment and response technique. *Journal of Extension*. 56(2) article 2TOT1. <https://www.joe.org/joe/2018april/tt1.php>

Books and book chapters

1. Mueller, D., A. Sisson, and **M. Licht**. 2016. Understanding soybean diseases and disorders. In D. Mueller, K. Wise, A. Sisson, D. Smith, E. Sikora, C. Bradley, and A. Robertson (Ed.), *A Farmer's Guide to Soybean Diseases* (5-22). Minneapolis, MN: APS Press.
2. Camberto, J., T. Legleiter, **M. Licht**, and J. Obermeyer. 2016. Noninfectious disorders. In D. Mueller, K. Wise, A. Sisson, D. Smith, E. Sikora, C. Bradley, and A. Robertson (Ed.), *A Farmer's Guide to Soybean Diseases* (115-128). Minneapolis, MN: APS Press.
3. Mueller, D., A. Sisson, and **M. Licht**. 2016. Understanding corn diseases and disorders. In D. Mueller, K. Wise, A. Sisson, D. Smith, E. Sikora, C. Bradley, and A. Robertson (Ed.), *A Farmer's Guide to Corn Diseases* (5-22). Minneapolis, MN: APS Press.
4. Camberto, J., T. Legleiter, **M. Licht**, and J. Obermeyer. 2016. Noninfectious disorders. In D. Mueller, K. Wise, A. Sisson, D. Smith, E. Sikora, C. Bradley, and A. Robertson (Ed.), *A Farmer's Guide to Corn Diseases* (123-136). Minneapolis, MN: APS Press.

Extension publications

1. Hodgson, E.W., **M.A. Licht**, and A.J. Sisson (Eds.). 2020. Field crop production handbook. [CROP 3162](#). Iowa State University Extension and Outreach, Ames, IA.
 - a. **Licht, M.A.**, M. Baum, P. Kassel, B. Lang, and A. Saeugling. 2020. Cropping systems. In E.W. Hodgson, M.A. Licht, and A.J. Sisson (Ed.), *Field Crop Production Handbook, CROP 3162* (5-10). Iowa State University Extension and Outreach, Ames, IA.
 - b. **Licht, M.A.**, Md. Parvej, and W. Pierson. 2020. Corn production. In E.W. Hodgson, M.A. Licht, and A.J. Sisson (Ed.), *Field Crop Production Handbook, CROP 3162* (11-20). Iowa State University Extension and Outreach, Ames, IA.
 - c. **Licht, M.A.**, Md. Parvej, and W. Pierson. 2020. Soybean production. In E.W. Hodgson, M.A. Licht, and A.J. Sisson (Ed.), *Field Crop Production Handbook, CROP 3162* (21-28). Iowa State University Extension and Outreach, Ames, IA.
 - d. Pierson, W., **M.A. Licht**, and B. Lang. 2020. Small grains. In E.W. Hodgson, M.A. Licht, and A.J. Sisson (Ed.), *Field Crop Production Handbook, CROP 3162* (37-44). Iowa State University Extension and Outreach, Ames, IA.
 - e. Ripley, L., **M.A. Licht**, J. Benning, W. Pierson, and R. Vittetoe. 2020. Small grains. In E.W. Hodgson, M.A. Licht, and A.J. Sisson (Ed.), *Field Crop Production Handbook, CROP 3162* (57-62). Iowa State University Extension and Outreach, Ames, IA.
2. Kwaw-Mensah, D., T. Kirstukas, J. Comito, A. Staudt, E. Ripley, J. Benning, **M. Licht**, M. Helmers, K. Stefanik. 2020. Whole farm conservation best practices manual. [CLG 105](#). Conservation Learning Group, Iowa State University Extension and Outreach, Ames, IA.
3. Kaspar, T. and **M. Licht**. 2020. Post corn silage, going to soybean: Use cereal rye. Iowa Cover Crop Recipe. [MCCC-122 and CROP 3166](#). Midwest Cover Crop Council, West Lafayette, IN.

4. Kaspar, T. and **M. Licht**. 2020. Post corn silage, going to corn: Use cereal rye. Iowa Cover Crop Recipe. [MCCC-121 and CROP 3165](#). Midwest Cover Crop Council, West Lafayette, IN.
5. **Licht, M.A.**, M.R. Parvej, and M.E. Baum. 2019. Guide to Iowa corn planting. [CROPR 3161](#). Iowa State University Extension and Outreach, Ames, IA.
6. Kaspar, T. and **M. Licht**. 2019. Post soybean, going to corn: Use oats. Iowa Cover Crop Recipe. [MCCC-104 and CROP 3159](#). Midwest Cover Crop Council, West Lafayette, IN.
7. Kaspar, T. and **M. Licht**. 2019. Post corn, going to soybean: Use cereal rye. Iowa Cover Crop Recipe. [MCCC-103 and CROP 3158](#). Midwest Cover Crop Council, West Lafayette, IN.
8. Mueller, D., A. Robertson, A. Sisson, G. Tylka, and **M. Licht**. 2018. Soybean diseases. [IPM 0004](#). Iowa State University Extension and Outreach, Ames, IA.
9. Mueller, D., A. Robertson, A. Sisson, G. Tylka, and **M. Licht**. 2017. Corn diseases. [IPM 0005](#). Iowa State University Extension and Outreach, Ames, IA.
10. **Licht, M.** 2016. Soybean staging. [PM 3093A](#). Iowa State University Extension and Outreach, Ames, IA.
11. **Licht, M.** 2016. Soybean growth and development. [PM 3093B](#). Iowa State University Extension and Outreach, Ames, IA.
12. **Licht, M.** 2016. Corn staging. [PM 3094A](#). Iowa State University Extension and Outreach, Ames, IA.
13. **Licht, M.** 2016. Corn growth and development. [PM 3094B](#). Iowa State University Extension and Outreach, Ames, IA.
14. **Licht, M.**, A. Sisson, D. Mueller, C. McGrath. 2016. Hail on Soybean in Iowa. [IPM 0079](#). Iowa State University Extension and Outreach, Ames, IA.
15. **Licht, M.**, A. Sisson, D. Mueller, A. Robertson, C. McGrath. 2016. Hail on Corn in Iowa. [IPM 0078](#). Iowa State University Extension and Outreach, Ames, IA.
16. Abendroth, L., R. Hartzler, E. Hodgson, **M. Licht**, A. Mallarino, C. McGrath, D. Mueller, R. Pope, A. Robertson, J. Sawyer, K. Schaefer, A. Sisson, and G. Tylka. 2016. Corn and soybean field guide. [IPM 0001](#). Iowa State University Extension and Outreach, Ames, IA.
17. Kapil, A., D. Anderson, K. Kohl, J. DeJong, and **M. Licht**. 2016. Calibrating liquid tank manure applicators. [AE 3601A](#). Iowa State University Extension Service, Ames, IA.
18. Pedersen, P. and **M. Licht**. 2014. Soybean growth and development. [PM 1945](#). Iowa State University Extension and Outreach, Ames, IA.
19. Arora, K., **M. Licht**, and K. Leibold. 2014. Industrial corn stover harvest. [PM 3050](#). Iowa State University Extension and Outreach, Ames, IA.
20. **Licht, M.**, D. Wright, and A. Lenssen. 2013. Planting soybean for high yield in Iowa. [PM 3040](#). Iowa State University Extension and Outreach, Ames, IA.
21. **Licht, M.**, D. Wright, and A. Lenssen. 2013. Soybean response to drought. [PM 3046](#). Iowa State University Extension and Outreach, Ames, IA.
22. Sisson, A., D. Mueller, A. Robertson, E. Hodgson, K. Schaefer, **M. Licht**, and C. McGrath. 2012. Late season corn scouting. [CSI 0019](#). Iowa State University Extension and Outreach, Ames, IA.
23. Sisson, A., D. Mueller, A. Robertson, E. Hodgson, K. Schaefer, **M. Licht**, and C. McGrath. 2012. Mid-season corn scouting. [CSI 0018](#). Iowa State University Extension and Outreach, Ames, IA.
24. Sisson, A., D. Mueller, A. Robertson, E. Hodgson, K. Schaefer, **M. Licht**, and C. McGrath. 2012. Early season corn scouting. [CSI 0017](#). Iowa State University Extension and Outreach, Ames, IA.
25. Sisson, A., D. Mueller, A. Robertson, E. Hodgson, K. Schaefer, **M. Licht**, and C. McGrath. 2012. Late season soybean scouting. [CSI 0008](#). Iowa State University Extension and Outreach, Ames, IA.
26. Sisson, A., D. Mueller, A. Robertson, E. Hodgson, K. Schaefer, **M. Licht**, and C. McGrath. 2012. Mid-season soybean scouting. [CSI 0007](#). Iowa State University Extension and Outreach, Ames, IA.
27. Sisson, A., D. Mueller, A. Robertson, E. Hodgson, K. Schaefer, **M. Licht**, and C. McGrath. 2012. Early season soybean scouting. [CSI 0006](#). Iowa State University Extension and Outreach, Ames, IA.

28. **Licht, M.**, M. Al-Kaisi. 2006. Iowa soil quality card. [PM 2027](#). Iowa State University Extension Service, Ames, IA.
29. Al-Kaisi, M., H.M. Hanna, and **M. Licht**. 2005. Resource conservation practices: Tillage management and soil organic matter. [PM 1901](#). Iowa State University Extension Service, Ames, IA.
30. Al-Kaisi, M. and **M. Licht**. 2005. Resource conservation practices: Tillage, manure management and water quality. [PM 1901H](#). Iowa State University Extension Service, Ames, IA.
31. Al-Kaisi, M., H.M. Hanna, and **M. Licht**. 2004. Resource conservation practices: Manure and tillage management. [PM 1901G](#). Iowa State University Extension Service, Ames, IA.
32. Kapil, A., **M. Licht**, K. Kohl, and J. DeJong. 2004. Calibrating liquid tank manure applicators. [AE 3601A](#). Iowa State University Extension Service, Ames, IA.
33. Al-Kaisi, M., H.M. Hanna, and **M. Licht**. 2003. Resource conservation practices: Conservation buffers and water quality. [PM 1901F](#). Iowa State University Extension Service, Ames, IA.
34. Al-Kaisi, M., H.M. Hanna, and **M. Licht**. 2003. Resource conservation practices: Soil erosion and water quality. [PM1901E](#). Iowa State University Extension Service, Ames, IA.

Extension products

1. Martinez-Feria, R., D. Herzmann, **M. Licht**, and S. Archontoulis. 2019. Corn dry down calculator. <https://crops.extension.iastate.edu/facts/corn-drydown-calculator>
2. Archontoulis, S., **M. Licht**, and M. Castellano. 2016. Forecast and Assessment of Cropping systems (FACTS). <http://crops.extension.iastate.edu/facts/>
3. Archontoulis, S., **M. Licht**, and R. Dietzel. 2014. Soybean planting decision tool. <http://agron.iastate.edu/CroppingSystemsTools/soybean-decisions.html>

RESEARCH SCHOLARSHIP AND ACTIVITIES

Peer-reviewed journal articles

1. Phillips, X., D.S. Mueller, Y. Kandel, and **M.A. Licht**. 2020. Estimating soybean RUE using UAV imagery reflectance data and the impact of foliar fungicides. *Agronomy* 10:2002. [doi: 10.3390/agronomy10122002](https://doi.org/10.3390/agronomy10122002)
2. Cordova, S.C., S.V. Archontoulis, and **M.A. Licht**. 2020. Soybean profitability and yield component response to nitrogen fertilizer in Iowa, US. *Agrosystems, Geosciences and Environment* 2020:e20092. [doi: 10.1002/agg2.20092](https://doi.org/10.1002/agg2.20092)
3. Hunt, E.D., H.E. Birge, C. Laingen, **M.A. Licht**, J. McMechan, W. Baule, and T. Connor. 2020. A perspective on changes across the U.S. Corn Belt. *Environmental Research Letters* 15:071001. [doi: 10.1088/1748-9326/ab9333](https://doi.org/10.1088/1748-9326/ab9333)
4. **Baum, M.**, **M.A. Licht**, I. Huber, and S. Archontoulis. 2020. Impacts of climate change on the optimum planting date of different maize cultivars in the central US Corn Belt. *European Journal of Agronomy* 119:126101. [doi: 10.1016/j.eja.2020.126101](https://doi.org/10.1016/j.eja.2020.126101)
5. Matcham, E., S. Mourtzinis, S.P. Conley, J.I. Rattalino Edreira, P. Grassini, A.C. Roth, S.N. Casteel, I.A. Caimpitti, H.J. Kandel, P.M. Kyveryga, **M.A. Licht**, D.S. Mueller, E.D. Nafziger, S.L. Naeve, J. Stanley, M.J. Staton, and L.E. Lindsey. 2020. Management of early- and late-planted soybean in the North-Central US. *Agronomy Journal* 2020:2928-2943. [doi: 10.1002/agj2.20289](https://doi.org/10.1002/agj2.20289)
6. **Parvej, M.R.**, C.R. Hurburgh, H.M. Hanna, and **M.A. Licht**. 2020. Dynamics of corn dry matter content and grain quality after reaching physiological maturity. *Agronomy Journal* 2020:998-1011. [doi: 10.1002/agj2.20042](https://doi.org/10.1002/agj2.20042)
7. Archontoulis, S.V., M. Castellano, **M.A. Licht**, G. Nichols, M. Baum, I. Huber, R. Martinez-Feria, L. Puntel, R. Ordonez, J. Iqbal, E. Wright, R. Dietzel, M. Helmers, A. Vanloocke, M. Liebman, J.

- Hatfield, D. Herzmann, C. Cordova, P. Edmonds, K. Togliatti, M. Danalatos, H. Pasley, C. Pedersen, and K. Lamkey. 2020. Predicting crop yields and soil-plant nitrogen dynamics in the US Corn Belt. *Crop Science* 2020:721-738. [doi: 10.1002/csc2.20039](https://doi.org/10.1002/csc2.20039)
8. Kessler, A., S.V. Archontoulis, and **M.A. Licht**. 2020. Soybean yield and crop stage response to planting date, cultivar maturity, and environment. *Agronomy Journal*. 112:382-394. [doi: 10.1002/agj2.20053](https://doi.org/10.1002/agj2.20053)
 9. McNunn, G., E. Heaton, S.V. Archontoulis, **M.A. Licht**, and A. VanLoocke. 2019. Using a crop modeling framework for precision cost-benefit analysis of variable seeding and nitrogen application rates. *Frontiers in Sustainable Food Systems*. 3:108. [doi: 10.3389/fsufs.2019.00108](https://doi.org/10.3389/fsufs.2019.00108)
 10. **Licht, M.A.**, M.R. Parvej, and E.E. Wright. 2019. Corn yield response to row spacing and plant population in Iowa. *Crop, Forage and Turfgrass Management*. 5:38. [doi: 10.2134/cftm2019.05.0032](https://doi.org/10.2134/cftm2019.05.0032)
 11. Martinez-Feria, R., **M.A. Licht**, R.A. Ordonez, J. Hatfield, J. Coulter, and S.A. Archontoulis. 2019. Evaluating maize and soybean grain dry-down in the field with predictive algorithms and genotype-by-environment analysis. *Scientific Reports*. 9:7167. [doi: 10.1038/s41598-019-43653-1](https://doi.org/10.1038/s41598-019-43653-1)
 12. Cordova, S.C., M.J. Castellano, R. Dietzel, **M.A. Licht**, K. Togliatti, R. Martinez-Feria, and S.V. Archontoulis. 2019. Soybean nitrogen fixation dynamics in fertile soils of Iowa, USA. *Field Crop Research* 236:165-176. [doi: 10.1016/j.fcr.2019.03.018](https://doi.org/10.1016/j.fcr.2019.03.018)
 13. Tenorio, F.A.M., A.J. Eagle, E.L. McLellan, K.G. Cassman, R. Howard, F.E. Below, D.E. Clay, J.A. Coulter, A.B. Geyer, D.K. Joos, J.G. Lauer, **M.A. Licht**, A.J. Lindsey, B. Maharjan, C.M. Pittlkow, P.R. Thomison, C.S. Wortman, V.O. Sadras, and P. Grassini. 2019. Assessing variation in maize grain nitrogen concentration in the North Central US region. *Field Crops Research* 2019:185-193. [doi: 10.1016/j.fcr.2018.10.017](https://doi.org/10.1016/j.fcr.2018.10.017)
 14. Assefa, Y., L.C. Purcell, M. Salmeron, S. Naeve, S. Casteel, P. Kovacs, S. Archontoulis, **M. Licht**, F. Below, H. Kandel, L.E. Lindsey, J. Gaska, S. Conley, C. Shapiro, J.M. Orlowski, B.R. Golden, G. Kaur, M. Singh, K. Thelen, R. Laurenz, D. Davidson, and I.A. Ciampitti. 2019. Assessing variation in US soybean seed composition (protein and oil). *Frontiers in Plant Science*. 10:298. [doi: 10.3389/fpls.2019.00298](https://doi.org/10.3389/fpls.2019.00298)
 15. Andrade, J.F., J.I. Rattalino Edreira, S. Mourtzinis, S.P. Conley, I.A. Ciampitti, J.E. Dunphy, J.M. Gaska, D.L. Holshouser, H.J. Kandel, **M.A. Licht**, L.E. Lindsey, A.T. McClure, S. Naeve, E.D. Nafziger, J.M. Orlowsky, J. Ross, L. Thompson, M.J. Staton, J.E. Specht, and P. Grassini. 2019. Assessing the influence of row spacing on US soybean seed yield using experimental and survey producer data. *Field Crops Research*. 230:98-106. [doi: 10.1016/j.fcr.2018.10.014](https://doi.org/10.1016/j.fcr.2018.10.014)
 16. **Baum, M.**, S.V. Archontoulis, and **M.A. Licht**. 2019. Planting date, hybrid maturity, and weather effects on maize yield and crop stage. *Agronomy Journal*. 111:303-313. [doi: 10.2134/agronj2018.04.0297](https://doi.org/10.2134/agronj2018.04.0297)
 17. Ordonez, R.A., M.J. Castellano, J.L. Hatfield, **M.A. Licht**, E.E. Wright, and S.V. Archontoulis. 2018. A solution for sampling position errors in maize and soybean root mass and length estimates. *European Journal of Agronomy*. 96:156-162. [doi: 10.1016/j.eja.2018.04.002](https://doi.org/10.1016/j.eja.2018.04.002)
 18. Mourtzinis, S., J.I. Rattalino Edreira, P.M. Kyveryga, **M.A. Licht**, S.L. Naeve, A.C. Roth, S.N. Casteel, S.P. Conley, L. Lindsey, D.S. Mueller, M.J. Staton, H.J. Kandel, E.D. Nafziger, P. Grassini, I.A. Ciampitti, and J. Stanley. 2018. Sifting and winnowing: Analysis of farmer field data for soybean in the US North-Central region. *Field Crops Research*. 221:130-141. [doi: 10.1016/j.fcr.2018.02.024](https://doi.org/10.1016/j.fcr.2018.02.024)
 19. Ordonez, R., M. Castellano, J. Hatfield, M. Helmers, **M. Licht**, M. Liebman, R. Dietzel, R. Martinez-Feria, J. Iqbal, L. Puntel, C. Cordova, K. Togliatti, E. Wright, and S. Archontoulis. 2018. Maize and soybean root front velocity and maximum depth in the Iowa, USA. *Field Crops Research*. 215:122-131. [doi: 10.1016/j.fcr.2017.09.003](https://doi.org/10.1016/j.fcr.2017.09.003)
 20. Edreira, J., S. Mourtzinis, S.P. Conley, A.C. Roth, I.A. Ciampitti, **M.A. Licht**, H. Kandel, P.M.

- Kyveryga, L.E. Lindsey, D.S. Mueller, S.L. Naeve, E. Nafziger, J.E. Sprecht, J. Stanley, M.J. Staton, and P. Grassini. 2017. Assessing causes of yield gaps in agricultural areas with diversity in climate and soils. *Agricultural and Forest Meteorology*. 247:170-180. doi: [10.1016/j.agrformet.2017.07.010](https://doi.org/10.1016/j.agrformet.2017.07.010)
21. Grassini, P., C.M. Pittelkow, K.G. Cassman, H.S. Yang, S. Archontoulis, **M. Licht**, K.R. Lamkey, I.A. Ciampitti, J.A. Coulter, S.M. Brouder, J.J. Volenec, N. Guindin-Garcia. 2017. Robust spatial frameworks for leveraging research on the food-energy-water nexus. *Global Food Security*. 14:18-22. doi: [10.1016/j.gfs.2017.01.002](https://doi.org/10.1016/j.gfs.2017.01.002)
 22. **Licht, M.A.**, A.W. Lenssen, R.W. Elmore. 2017. Corn (*Zea mays* L.) seeding rate optimization in Iowa, USA. *Precision Agriculture*. 18:452-469. doi: [10.1007/s11119-016-9464-7](https://doi.org/10.1007/s11119-016-9464-7)
 23. Morell, F.J., H.S. Yang, K.G. Cassman, J. Van Wart, R.W. Elmore, **M. Licht**, J.A. Coulter, I.A. Ciampitti, C.M. Pittelkow, S.M. Brouder, P. Thomison, J. Lauer, C. Graham, R. Massey, and P. Grassini. 2016. Can crop simulation models be used to predict local to regional maize yields and total production in the U.S. Corn Belt? *Field Crops Research*. 192:1-12. doi: [10.1016/j.fcr.2016.04.004](https://doi.org/10.1016/j.fcr.2016.04.004)
 24. Kandel, Y.R., C.A. Bradley, K.A. Wise, M.I. Chilvers, A. Tenuta, V.M. Davis, R. Esker, D.L. Smith, **M.A. Licht**, D.S. Mueller. 2015. Effect of glyphosate application on sudden death syndrome of glyphosate-resistant soybean under field conditions. *Plant Disease*. 99:347-354. doi: [10.1094/PDIS-06-14-0577-RE](https://doi.org/10.1094/PDIS-06-14-0577-RE)
 25. Al-Kaisi, M.M., X. Yin, and **M.A. Licht**. 2005. Soil carbon and nitrogen changes as affected by tillage systems and crop biomass in a corn-soybean rotation. *Applied Soil Ecology*. 30:174-191. doi: [10.1016/j.apsoil.2005.02.014](https://doi.org/10.1016/j.apsoil.2005.02.014)
 26. Al-Kaisi, M.M., X. Yin, and **M.A. Licht**. 2005. Soil carbon and nitrogen changes as influenced by tillage and cropping systems in some Iowa soils. *Agriculture, Ecosystems and Environment*. 105:635-647. doi: [10.1016/j.agee.2004.08.002](https://doi.org/10.1016/j.agee.2004.08.002)
 27. **Licht, M.A.** and M.M. Al-Kaisi. 2005. Corn response, nitrogen uptake, and water use in strip-tillage compared with no-tillage and chisel plow. *Agronomy Journal*. 97:705-710. doi: [10.2134/agronj2004.0102](https://doi.org/10.2134/agronj2004.0102)
 28. **Licht, M.A.** and M.M. Al-Kaisi. 2005. Strip-tillage effect on seedbed soil temperature and other soil physical properties. *Soil Tillage Research*. 80:233-249. doi: [10.1016/j.still.2004.03.017](https://doi.org/10.1016/j.still.2004.03.017)
 29. Al-Kaisi, M.M. and **M.A. Licht**. 2004. Effect of strip tillage on corn nitrogen uptake and residual nitrate accumulation compared to no-tillage and chisel plow. *Agronomy Journal*. 96:1164-1171. doi: [10.2134/agronj2004.1164](https://doi.org/10.2134/agronj2004.1164)

Other scientific publications

1. Grassini, P., K.G. Cassman, H.S. Yang, S.V. Archontoulis, **M. Licht**, K. Lamkey, I. Ciampitti, C. Coulter, C. Pittelkow, S. Broder, and J. Volence. 2015. Improved spatial framework to better leverage research on the food-energy-water nexus. Food-Energy-Water White Paper for National Science Foundation. <https://www.crops.org/files/science-policy/white-papers/5.pdf>
2. Yang, H.S., K. Cassman, S. Archontoulis, **M. Licht**, X. Lin, and I. Ciampitti. 2015. Integrated modeling with experimentation: systematic and quantitative research that allows applications and predictions at different temporal and spatial scales. Food-Energy-Water White Paper for National Science Foundation.

TEACHING ACTIVITIES

Courses taught

1. Agronomy Systems Analysis (AGRON 591)

2. Practicum in Agronomy (AGRON 594)
3. Experience in Plant Science and Outreach (AGRON 581X)

Guest lectures

- AGEDS 450, Farm Management and Operation; Sept. 2020
- AGRON 392, Systems Analysis in Crop and Soil Management; Oct. 2013, Feb. 2015, Oct. 2015, Oct. 2016
- AGRON 410, Professional Development in Agronomy; Feb. 2018, Oct. 2018
- AGRON 500, International Graduate Student Orientation Seminar; Oct. 2010, Oct. 2012, Oct. 2013, Oct. 2014, Oct. 2015, Oct. 2016
- AGRON 100, Section 1, Transfer Student Orientation; Sep. 2014, Sep. 2015
- PL P 691, Field Plant Pathology; Jun. 2013
- PL P 694, Colloquium in Plant Pathology; Feb. 2015

Advising and mentoring

Professional and scientific staff advisees

1. Fernando Marcos, research associate, January 2020 – current
2. Emily Wright, research associate, November 2016 – January 2019

Postdoctoral advisees

1. Rasel Parvej, July 2018 – October 2019

Masters and doctoral students

1. Ashlyn Kessler. August 2019. Planting date, cultivar maturity, and environment effects on soybean yield and crop stage. M.S. Crop Production and Physiology, Iowa State University, Ames, IA. *Co-advised with Sotirios Archontoulis. Currently research associate with Michael Castellano lab group, Iowa State University.*
2. Anne B. Carlson. August 2019. What's new in cover crop research in Iowa from 2013 to 2018? M.S. Agronomy, Iowa State University, Ames, IA.
3. Mitchell E. Baum. May 2019. The effect of year-to-year variability on planting date and relative maturity selection for maize. M.S. Crop Production and Physiology, Iowa State University, Ames, IA. *Co-advised with Sotirios Archontoulis. Currently PhD student with Sotirios Archontoulis.*
4. David Gust. May 2019. Cereal rye impact on soybean yield on a Ziegenfuss Clay Loam soil in Southeast Michigan. M.S. Agronomy, Iowa State University, Ames, IA.
5. Nicholas P. Marley. May 2019. A comparison of March and April soybean planting dates in south-central Illinois. M.S. Agronomy, Iowa State University, Ames, IA.
6. Samuel Whitmer. December 2020. An evaluation of hemp production practices in the U.S. Desert Southwest. M.S. Seed Technology and Business, Iowa State University, Ames, IA.

Masters and doctoral committees

1. Rafeal A. Martinez-Feria. December 2018. Drivers of yield and nitrogen-loss tradeoffs: Cropping system evaluations with process-based modeling. Ph.D. Crop Production and Physiology, Iowa State University, Ames, IA. (Sotirios Archontoulis, major professor)
2. Ellyson Williams. August 2017. Flowering response to clipping in corn. M.S. Seed Technology and Business, Iowa State University, Ames, IA. (Gary Munkvold, major professor)
3. Daniel A. Sjarpe. December 2017. Effect of seed treatments and soybean cultivars on root rot caused by *Fusarium virguliforme*. M.S. Plant Pathology, Iowa State University, Ames, IA. (Daren

Muller, major professor)

4. Swetabh Patel. May 2020. Intercropping and relay cropping to increase productivity, resilience, and long-term sustainability of corn and soybean cropping systems in Iowa. Ph.D. Crop Production and Physiology, Iowa State University, Ames, IA. (Andrew Lenssen and Kenneth Moore, major professors)
5. Gunnar B. Dinkla. May 2020. Winter annual alternative crops for enhanced sustainability in Iowa cropping systems. M.S. Crop Production and Physiology, Iowa State University, Ames, IA. (Mary Wiedenhoft, major professor)
6. Annabelle Laurent, December 2020. The analysis of data from on-farm research networks: Statistical approaches to test the efficacy of management practices and data visualization. Ph.D. Crop Production and Physiology, Iowa State University, Ames, IA. (Fernando Miguez, major professor)