

Curriculum Vita for Promotion

Mark A. Licht, PhD

Assistant Professor
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EDUCATION

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

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

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.

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.

ACADEMIC POSITIONS

August 2016 to present, **Assistant Professor and Extension Cropping Systems Specialist**, 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 Agronomist**, 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

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

SCHOLARSHIP

Peer-reviewed journal articles

Published or in press after 2015

1. Martinez-Feria, R., **M.A. Licht**, R.A. Ordonez, J. Hatfield, J. Coulter, and S.A. Archontoulis. *In Press, 2019*. An improved algorithm to predict in-field dry-down of maize and soybean grains with genotype-by-environment analysis. *Sci. Rep.*
2. Cordova, S.C., M.J. Castellano, R. Dietzel, **M.A. Licht**, K. Togliatti, R. Martinez-Feria, and S.V. Archontoulis. *In Press, 2019*. Soybean nitrogen fixation dynamics in fertile soils of Iowa, USA. *Field Crop Res.* <https://doi.org/10.1016/j.fcr.2019.03.018>
3. Tenorio, F.A.M., A.J. Eagle, E.L. McLellan, K.G. Cassman, R. Howard, F.E. Below, J.P. Burzaco, I.A. Ciampitti, 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, T.J. Vyn, C.S. Wortman, V.O. Sadras, and P. Grassini. *In Press, 2019*. Assessing variation in maize grain nitrogen concentration in the North Central US region. *Field Crops Res.* <https://doi.org/10.1016/j.fcr.2018.10.017>
4. 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). *Front. Plant Sci.* 10:298. <https://doi.org/10.3389/fpls.2019.00298>
5. 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 Res.* 230:98-106. <https://doi.org/10.1016/j.fcr.2018.10.014>
6. Baum, M., S.V. Archontoulis, and **M.A. Licht**. 2019. Planting date, hybrid maturity, and weather effects on maize yield and crop stage. *Agron. J.* 111:1-11. <https://doi.org/10.2134/agronj2018.04.0297>
7. 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. <https://doi.org/10.1016/j.eja.2018.04.002>
8. 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>
9. 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 messy farmer survey data. *Field Crops Research.* 221:130-141. <https://doi.org/10.1016/j.fcr.2018.02.024>
10. 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. <https://doi.org/10.1016/j.fcr.2017.09.003>
11. 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. <https://doi.org/10.1016/j.agrformet.2017.07.010>
12. 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. <https://doi.org/10.1016/j.gfs.2017.01.002>
 13. **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. <https://doi.org/10.1007/s11119-016-9464-7>
 14. 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. <https://doi.org/10.1016/j.fcr.2016.04.004>
 15. 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. <https://doi.org/10.1094/PDIS-06-14-0577-RE>

Abstracts of posters or presentations after 2015

1. Parvej, M.R., C.R. Hurburgh, H.M. Hanna, and **M.A. Licht**. 2018. Dynamics of corn dry matter content and grain quality after reaching physiological maturity. *Agronomy Abstract*, Madison, WI. ASA/CSSA annual meeting, Baltimore, MD. Nov. 4-7.
2. Wright, E., M.R. Parvej, S. Casteel, M.E. Zarnstorff, **M.A. Licht**. 2018. Impact of soybean defoliation on canopy recovery, yield, and quality. *Agronomy Abstract*, Madison, WI. ASA/CSSA annual meeting, Baltimore, MD. Nov. 4-7.
3. Kessler, A., **M.A. Licht**, S.V. Archontoulis, and M.E. Baum. 2018. Determining how late planting date, cultivar selection, and weather effect soybean grain yield. *Agronomy Abstract*, Madison, WI. ASA/CSSA annual meeting, Baltimore, MD. Nov. 4-7.
4. Baum, M.E., S.V. Archontoulis, and **M.A. Licht**. 2018. Modeling corn yield response to planting day and maturity group across Iowa. *Agronomy Abstract*, Madison, WI. ASA/CSSA annual meeting, Baltimore, MD. Nov. 4-7.
5. Rattalino Edreira, I., S. Mourtzinis, S.P. Conley, A. Roth, I.A. Ciampitti, **M.A. Licht**, H.J. Kandel, P.M. Kyverga, L. Lindsey, D.S. Mueller, S.L. Naeve, E.D. Nafziger, J. Specht, J. Standley, and P. Grassini. 2017. Assessing causes of yield gaps in agricultural areas with diversity in climate and soils. *Agronomy Abstract*, Madison, WI. ASA/CSSA/SSSA annual meeting, Tampa Bay, FL. Oct. 22-25.
6. Mourtzinis, S., J.I. Rattalino Edreira, P. Grassini, A.C. Roth, S.N. Casteel, I.A. Ciampitti, H.J. Kandel, P.M. Kyveryga, **M.A. Licht**, L.E. Edwards, D.S. Mueller, E.D. Nafziger, S.L. Naeve, J. Stanley, M.J. Staton, and S.P. Conley. 2017. Unravelling the influence of management practices on US-North Central soybean yields. *Agronomy Abstract*, Madison, WI. ASA/CSSA/SSSA annual meeting, Tampa Bay, FL. Oct. 22-25.
7. Wright, E. and **M.A. Licht**. 2017. Analysis of maize row spacing and plant population trials in Iowa. *Agronomy Abstract*, Madison, WI. ASA/CSSA/SSSA annual meeting, Tampa Bay, FL. Oct. 22-25.
8. Baum, M., **M.A. Licht**, and S.V. Archontoulis. 2017. Dissecting planting date, hybrid maturity, and weather effects on maize yield. *Agronomy Abstract*, Madison, WI. ASA/CSSA/SSSA annual meeting, Tampa Bay, FL. Oct. 22-25.
9. Navi, S.S., T. Huynh, C.G. Mayers, K.T. Pecinovsky, **M.A. Licht**, and X.B. Yang. 2017. Report of *Pythium* isolates on soybean seedling in Northeast Iowa. World Soybean Research Conference Ten, Savannah, GA. Sept. 10-15.

10. Comito, J., M. Helmers, **M.A. Licht**, E. Juchems, A. Staudt, S. Carlson, A. Carlson. 2017. Do cover crop mixtures make sense on Iowa farmland. Soil and Water Conservation Society Conference, Madison, WI. Jul. 31 – Aug. 2.
11. Archontoulis, S.V., R.N. Dietzel, **M.A. Licht**, M.J. Castellano, A. VanLoocke, R.A. Antonio-Ordóñez, J. Iqbal, L. Puntel, S.C. Cordova, R.A. Martinez-Feria, K. Togliatti, I. Huber, D. Herzmann, M.J. Helmers. 2016. Forecasting and assessing cropping systems: FACTS. Agronomy Abstract, Madison, WI. ASA/CSSA/SSSA annual meeting, Phoenix, AZ. Nov. 6-9.
12. **Licht, M.A.**, A.W. Lenssen, and R.W. Elmore. 2016. Maize seeding rate optimization in Iowa using soil and topographic characteristics. International Conference of Precision Agriculture, International Society of Precision Agriculture, St. Louis, MO. Jul. 31 – Aug. 4.
13. Archontoulis, S.V., **M. Licht**, R. Dietzel, M. Castellano, A. VanLoocke, I. Huber, K.J. Moore, L. Puntel, S. Cordova, K. Togliatti, and P. Edmunds. 2016. In-season forecast of crop yields, soil water-nitrogen, and climate using APSIM and WRF models in Iowa, USA. iCROP 2016, International Crop Modeling Symposium, Berlin, Germany. Mar. 15-17.
14. **Licht, M.A.**, A.W. Lenssen, and R.W. Elmore. 2015. Using soil and topographic characteristics for corn seeding rate optimization in Iowa. Agronomy Abstract, Madison, WI. ASA/CSSA/SSSA annual meeting, Minneapolis, MN. Nov. 15-19.
15. Morell, R.J., P. Grassini, H. Yang, R. Elmore, K. Cassman, I.A. Ciampitti, **M.A. Licht**, J.A. Coulter, J. Lauer, C.J. Lauer, C.J. Graham, P.R. Thomison, R. Massey, T.J. Vyn, S.M. Brouder, C.M. Pittelkow, and J.P. Van Wart. 2015. Contributions of a dynamic model approach to yield forecasts of corn in the U.S. Corn Belt. Agronomy Abstract, Madison, WI. ASA/CSSA/SSSA annual meeting, Minneapolis, MN. Nov. 15-19.
16. Archontoulis, S.V., **M.A. Licht**, and R.N. Dietzel. 2015. Soybean planting decision support tool. Agronomy Abstract, Madison, WI. ASA/CSSA/SSSA annual meeting, Minneapolis, MN. Nov. 15-19.
17. Archontoulis, S.V., **M.A. Licht**, R.N. Dietzel. 2015. In-season corn and soybean yield forecast in Iowa using APSIM. Agronomy Abstract, Madison, WI. ASA/CSSA/SSSA annual meeting, Minneapolis, MN. Nov. 15-19.

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 after 2015

1. Kaspar, T. and **M. Licht**. 2019. Post soybean, going to corn: Use oats. MCCC-104 and CROP 3159. Midwest Cover Crop Council, West Lafayette, IN.

2. Kaspar, T. and **M. Licht**. 2019. Post corn, going to soybean: Use cereal rye. MCCC-103 and CROP 3158. Midwest Cover Crop Council, West Lafayette, IN.
3. Mueller, D., A. Robertson, A. Sisson, G. Tylka, and **M. Licht**. 2018. Soybean diseases. IPM 0004. Iowa State University Extension and Outreach, Ames, IA.
4. Mueller, D., A. Robertson, A. Sisson, G. Tylka, and **M. Licht**. 2017. Corn diseases. IPM 0005. Iowa State University Extension and Outreach, Ames, IA.
5. **Licht, M.** 2016. Soybean staging. PM 3093A. Iowa State University Extension and Outreach, Ames, IA.
6. **Licht, M.** 2016. Soybean growth and development. PM 3093B. Iowa State University Extension and Outreach, Ames, IA.
7. **Licht, M.** 2016. Corn staging. PM 3094A. Iowa State University Extension and Outreach, Ames, IA.
8. **Licht, M.** 2016. Corn growth and development. PM 3094B. Iowa State University Extension and Outreach, Ames, IA.
9. **Licht, M.**, A. Sisson, D. Mueller, C. McGrath. 2016. Hail on Soybean in Iowa. IPM 0079. Iowa State University Extension and Outreach, Ames, IA.
10. **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.
11. 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.