PETRO M. KYVERYGA, PhD
Affiliate Associate Professor
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Department of Agronomy-Iowa State University of Science and Technology
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Curriculum Vita (Updated January 2025)

I collaborate with ISU faculty, staff, and students in areas of Soil Science, Precision/Digital Agriculture, On-Farm Research, Crop and Data Sciences. Current and past research projects include:

- Advancing methodologies for analyzing and summarizing data from on-farm agronomic and environmental studies.
- Quantifying the impact of management practices on soil health and water quality.
- Developing on-line interactive decision management-aid and risk assessment tools/apps for researchers, farmers, and agronomics.
- Improving manure nutrient management using sensing technologies and identifying the best practices of starter and in-furrow fertilization.
- Advising researchers and agronomists with statistical analyses and decision making in precision agriculture and precision conservation.

CAREER SUMMARY

- served as a principal and co-principal investigator for 26 research grants and contracts in areas of on-farm research, remote sensing, process-oriented modeling, digital agriculture, soil health, and water quality.
- published 50 peer-reviewed publications describing the advancement in on-farm research, remote sensing, precision conservation, nutrient management, water quality, and process-oriented and ML/AI modeling.
- advised commodity groups, non-profits, and agribusiness companies in best practices for conducting on-farm research, monitoring water quality, assessment of conservation practices, developing data governance and data privacy policies.
- supervised the development of advanced statistical, GIS, and cropping systems models for regional, local and watershed-based assessments of conservation and agronomic practices;
- lead the development of 12 public and internal web-based interactive decision-aid tools for farmers, conservationists, and CCA agronomists to increase adoption of soil health, water quality and best agronomic practices.
- Filed two patents for developing predictive models for planter automation and advancing proximal soil sensing technologies.
- more than 30 invitations to present at conferences, meetings, and symposiums on local, national, and international levels, including Canada and Ukraine.

EDUCATION

2000-2005   Ph.D. Soil Science/Soil Fertility, Iowa State University, Ames, IA

1991-1996   Specialist Diploma (5yr-degree), Agrochemistry and Soil Science, National Agricultural University of Ukraine, Kyiv, Ukraine.

2014-2018   Completed coursework (42 credit hours) equivalent to M.S. in Statistics, Iowa State University, Ames, IA

PROFESSIONAL EXPERIENCE

2022-2024   Analytics Agronomist, Science Agronomy, Deere & Company

2020-2022   Senior Research Scientist-Analytics, Research Center for Farming Innovation, Iowa Soybean Association

2015-2020   Director of Analytics, Research Center for Farming Innovation, Iowa Soybean Association

2013-2015   Operations Manager-Analytics, Iowa Soybean Association

2006-2013   Senior Research Associate, On-Farm Network, Iowa Soybean Association

2005-2006   Postdoctoral Research Associate, Department of Agronomy, Iowa State University

HONORS AND AWARDS

2023-2024	President-Elect, American Society of Agronomy
2023	R Shiny Interactive Digital App/Tool Competition - 1st Place, Best 1st App. Deere & Company.
2023	Production Systems Quarterly Award: Uncovering Timely Insights of Agronomic and Conservation Trials. Deere & Company.
2020	Outstanding Paper Award, "Strengths and Limitations of Nitrogen Rate Recommendations for Corn and Opportunities for Improvement". Agronomy Journal; American Society of Agronomy.
2017	Fellow of the American Society of Agronomy - awarded annually to only up 0.3 percent of the Society's active and emeritus members.
2008	1st place. The Conservation Innovation Grant Poster Award, USDA Natural Resources Conservation Services, Tucson, AZ
2001	Gamma Sigma Delta, the Honor Society of Agriculture, Iowa State University
1998	The Distinguished Young Scientist Award, National Agricultural University of Ukraine

SERVICE AND LEADERSHIP IN PROFESIONAL SOCIETIES

- President-Elect, Board Member, American Society of Agronomy, 2023-present
- Secretary of the Alliance of Crop, Soil and Environmental Science Societies (ASA/SSSA/CSA);
- Ex-officio Member of International Certified Crop Adviser Board of Directors, 2024.
- Associate Editor, Journal of Precision Agriculture, 2023-present
- Community Stewardship and Review Committee, American Society of Agronomy, 2019-2022
- Science Advisor, Ecosystem Services Market Consortium, 2019-2022
- Invited Editor for Special Issue: "Predictive Modeling to Aid Agronomic Decision Making", Agronomy Journal, 2020-2021
- American Society of Agronomy, Fellow Committee, 2019-2020
- Member of the State of Iowa LIDAR committee, Iowa Department of Natural Resources, 2018-2019
- Technical Editor for Special Issue of On-Farm Research, American Society of Agronomy-Soil Science of Society of America, 2018-2019
- Science Advisor, NutrientStar, Environmental Defense Fund, 2016-2019
- Technical Editor of Agronomy Journal, two terms, American Society of Agronomy, 2013 – 2019
- Chair, Biometry and Statistical Community, American Society of Agronomy, 2018
- Precision Agriculture Exam Committee. ASA -SSSA, 2017-present
- Vice Chair, Biometry and Statistical Community, American Society of Agronomy, 2017
- Presiding Chair, Biometry and Statistical Computing Section, American Society of Agronomy, 2018
- Member, Agronomic Industry Award Committee, 2013-2014
- Senior Associate Editor for Agronomy Journal American Society of Agronomy, 2011-2012
- Screening Editor, American Society of Agronomy, Agronomy Journal Editorial Board, 2010-2011
- Associate Editor for Agronomy Journal, American Society of Agronomy, 2008-2010

FUNDED GRANTS AT IOWA STATE UNIVERSITY

1. PI. P. Kyveryga (currently Matt Carrol), D. Anderson, S. Nelson and M. Soupir. 2022-2024. On-the go NIR manure sensing to improve nutrient management. **United States Department of Agriculture, Agriculture and Food Research Initiative- Engineering for Agricultural Production Systems.** $575,000.

2. PI. S. Archontoulis, Co-PIs M. McDaniel, P. Kyveryga and S. Nelson. 2021-2023. Quantifying soil nitrogen dynamics in manured fields. **Iowa Nutrient Research Center**. $170,000.

3. PI. B. Ganapathysubramanian et al., 2021-2025. AI Institute for Resilient Agriculture (AIIRA). **National Science Foundation/ USDA Agriculture and Food Research Initiative**. $20,000,000.

4. PI. A. Singh. Co-PIs S. Sarkal, G. DePaula, P. Kyveryga, S. Simone, C. Valdivia, M. Segovia. 2020-2023. *SCC-IRG Track 2:* Smart Integrated Farm Network for Rural Agricultural Communities. **National Science Foundation**. $1,500,000.

5. PI. S. Sarkal. Co-PIs A. Singh, B. Ganapathysubramanian, Ar. Singh, D. Muller, P. Kyveryga, A. Johri, K. Hauser, D. Drewry, G. Krishnan, N. Merchant. 2021-2025. Context Aware Learning for Sustainable CybEr-agricultural systems. **National Science Foundation**. $7,000,000.

6.   PI. G. DePaula and P. Kyveryga. 2020-2021. Adapting Corn Production Nitrogen Management to Changes in Precipitation Level and Intensity. **ISU Center for Agriculture and Rural Development,** $35,000.

7.   PI. F. Miguez Co-PIs P. Kyveryga and T. Morris. 2021-2022. FACT: Web-Based Dynamic Data-Analytics Framework for On-Farm Research Networks. **United States Department of Agriculture, Agriculture and Food Research Initiative-Food and Agriculture Cyber Technologies**. $394,000.

8.   PI. F. Miguez Co-PIs P. Kyveryga. 2018. ISOFAST - Mastering agronomic decisions through interactive on-line summaries of on-farm replicated strip trials. **Iowa Soybean Research Center**. $46,000.

9.   PI. M. Castellano Co-PIs P. Kyveryga 2018. New technologies to reduce barriers to implementation of nutrient loss reduction strategies. **Iowa Nutrient Research Center**. $97,000.

10.   PI. F. Miguez Co-PIs P. Kyveryga. 2017. Online interactive summaries of soybean on-farm replicated strip trials. **Iowa Soybean Association**. $46,000.

11.   PI. S. Nelson. Co-PIs P. Kyveryga, M. Darr. 2018. Use of High-Density Protein Maps and Remote Sensing to Understand Protein Levels in U.S. Produced Soybeans. **Iowa Soybean Board**. $100,000.

12.   PI. S. Archontoulis.   Co-PIs M. Helmer, M. Castellano, P. Kyveryga, A. Kiel. 2016. Quantifying temporal and spatial variability in NO3-N leaching across Iowa. **Iowa Nutrient Research Center**. $144,000.

13.   PI. M. Darr Co-PIs R. Pearson, P. Kyveryga. 2015. Integrated Research and Education Program for Use of Remote Sensing and UAVs for Enhanced Soybean Production. **Iowa Soybean Association.** $146,000.

14.   PI. S. Kyveryga.   Co-PIs S. Archontoulis, T. Gunther, R Wolf. 2015. Predicting Risk of Excessive Nitrogen Accumulation and Edge of Field Nitrate Losses. **Iowa Department of Agriculture and Land Stewardship**. $50,000.

15.   PI. C. Anderson Co-PIs P. Kyveryga. 2015. Online interactive summaries of on-farm replicated strip trials. **Iowa Soybean Association**. $46,000.

16.   PI. C. Anderson Co-PIs C. Hart, P. Kyveryga. 2014. Soybean Yield Expectation for the next Decade using Climate Trend and 2014 Climate Regime Change. **Iowa Soybean Association**. $60,000.

FUNDED GRANTS OUTSIDE IOWA STATE UNIVERSITY

1.   PI. I. Ciampitti and P. Kyveryga. 2022. Prototyping a soybean quality data layer for informing decisions. **United Soybean Board**. $220,000.

2.   PI. I. Ciampitti and P. Kyveryga. Co-PIs. J. Fulton, J. Casteel, P. Kovach, R. Pearson, L. Puntel, L. Thompson, J. Lory, M. Sing, and A. Prestholt. 2022. Mapping Soybean Protein and Oil Quality in Farmer Fields. **North Central Soybean Research Program**. $100,000.

3. PI. I. Ciampitti and P. Kyveryga. 2021. Economic, Value Chain and Market Differentiation Benefits of On-the-Go and Remote Sensing Mapping of Soybean Protein and Oil. **United Soybean Board**. $120,000.

4. PI. I. Ciampitti and P. Kyveryga. Co-PIs. L. Baso and A. Prestholt. 2021. Mapping Soybean Protein and Oil Quality in Farmer Fields. **North Central Soybean Research Program**. $186,000.

5. PI. P. Kyveryga Co-PIs T. Gunther, T. Middleton. 2020. Soil Health Test Interpretation Portal & Cover Crop Economic Simulator for Farmers. **Iowa USDA Natural Resources Conservation Services, Conservation Innovation Grant**. $85,000.

6. PI. P. Kyveryga Co-PIs E. Hare and S. Fey. 2018. Power Calculator for Multi-Location On-Farm Strip Trials. **John Deere Co**. $25,000.

7. PI. J. Lorry Co-PIs P. Kyveryga, Q. Kettering. 2016. Translating On-farm Research into Farmer-Relevant Nutrient Risk Assessments Using Advanced Hierarchical Methods. **United States Department of Agriculture, Agriculture and Food Research Initiative-Foundational Bioenergy and Natural Resource and Environment**. $485,000.

8. PI. P. Kyveryga Co-PIs S. Fey, T. Morris, K. Chapman. 2016. Developing an online data collection platform for the NutrientStar on-farm trial data. **Environmental Defense Fund**, $30,000.

9. PI. P. Kyveryga Co-PIs T. Morris, K. Chapman. 2015. Farmer Network Training Manual. **Environmental Defense Fund**. $30,000.

10. PI. T. Blackmer Co-PIs P. Kyveryga, T. Morris. 2012. Adaptive nutrient management. **United States Department of Agriculture, Natural Resources Conservation Services, Conservation Innovation Grant,** $200,000.

SUMMARY OF CAREER PUBLICATION

- 50 peer-reviewed journal articles
- 2 patent disclosures
- 2 invited book chapters
- 1 book
- 8 extension conference proceedings
- 33 invited presentations and lectures

Google scholar total citations=1690, h-index=21, i10-index=35

https://scholar.google.com/citations?user=5ev9000AAAAJ&hl=en

PEER-REVIEWED PUBLICATIONS AT IOWA STATE UNIVERSITY

- 45 peer-reviewed journal articles
- 2 patent disclosures
- 2 invited book chapters
- 1 book
- 8 extension conference proceedings
- 33 invited presentations and lectures

Google scholar total citations=1660, h-index=21, i10-index=35

https://scholar.google.com/citations?user=5ev9000AAAAJ&hl=en

Peer-Reviewed Publications

1   **Kyveryga**, P., P. Cano, P. Cisdeli, C. Hernández, G. Santiago, and I. Ciampitti. 2024. Developments in modelling and decision support systems in precision agriculture and conservation. in *Precision Agriculture for Sustainability*: Second edition (ed. John Stafford) (accepted).

2   Choi, E., G. DePaula, **P. Kyveryga,** and S. Fey. 2024. The Trade-off between Yield and Nitrogen Pollution under Excessive Rainfall: Evidence from On-farm Field Experiments in Iowa. *Land Economics* https://doi.org/10.3368/le.101.2.022024-0015R

3   Pereyra, V, C Hernandez1, T. Hefley, A. Sharda, P.V. Vara Prasad4, L. Puntel, G. R. Balboa, D. Moseley, J. T. Irby, E. Francisco, A. F. B. Reis, A. Prestholt, J. McDanel, M. Carroll, S. N. Casteel1, R. Pearson, M. Pal Singh, P. Kovács, M.l H, Ostlie, J. Fulton, **P. Kyveryga**, and I. A. Ciampitti. 2024. On-farm drivers of soybean seed protein and oil concentration. *Field Crops Research* (in review).

4   Fotouhi, F., K. Menke, A. Prestholt, A. Gupta, M. Carroll, H.Yang, E. J. Skidmore, M. O'Neal, N. Merchant, S. K. Das, **P. Kyveryga**, B. Ganapathysubramanian, A. K. Singh, A.Singh and S. Sarkar. 2024. Persistent monitoring of insect-pests on sticky traps through hierarchical transfer learning and slicing-aided hyper inference. *Frontiers in Plant* Science. doi.org/10.3389/fpls.2024.1484587

5   Pereyra Picabea, V., T. Irby., P. Kovacs, **P. Kyveryga**, P. Vara Prasad., T. Hefley, B. Van De Woestyne, I. Ciampitti. 2024. Soybean and seed quality in equidistant versus non-equidistant plant arrangements. *Crop Science*. 10.1002/csc2.21364.

6   Daigh, A.L.M., S. H. Daroub, **P. M. Kyveryga**, M. E. Sorrells, N. Rajan, J. A. Ippolito, E. Kailer, C. S. Booth, U. Acharya, D. Ghimire, S. Das, B. Maharjan, and Y. Ge. 2024. Communicating Artificial Intelligence (AI) in Agricultural and Environmental Publications. *Agricultural & Environmental Letters*. Volume 9, Issue 2 e20144. https://acsess.onlinelibrary.wiley.com/doi/10.1002/ael2.20144.

7   Balabaygloo,. B., B. Bekee, S. W. Blair, S. Fey, F. Fotouhi, A. Gupta, K. Menke, A. Vangala, Jorge C. M. Palomares, A. Prestholt, V. K. Tanwar, X. Tao, M. E. Carroll, S. Das, G. Depaula, **P. Kyveryga**, S. Sarkar, M. Segovia, S. Sylvestri, C. Valdivia, and A. K. Singh. 2024. Smart connected farms and networked farmers to tackle climate challenges impacting agricultural production. *Frontiers in Agronomy*. Volume 6 - 2024 | https://doi.org/10.3389/fagro.2024.1410829.

8   Rogovska, N., P. O'Brien, R. Malone, B. Emmet, J. Kovar, D. Janes. T. Kaspar, T. Moorman, and **P. Kyveryga**. 2023. Long-Term Conservation Practices Reduce Nitrate Leaching While Maintaining Yields in Tile-Drained Midwestern Soils. *Agricultural Water Management.* Volume 288, 108481, ISSN 0378-3774. https://doi.org/10.1016/j.agwat.2023.108481.

9   Laurent A, A. Cleveringa, S. Fey, **P. Kyveryga**, N. Wiese, M. Lefebvre, D. Newville, D. Quinn, J. McGuire, H. Tao, T. Morris, and F. Miguez. 2023. Late-season corn stalk nitrate measurements across the US Midwest from 2006 to 2018. *Scientific Data* 10(1):192. doi: 10.1038/s41597-023-02071-9. PMID: 37029130; PMCID: PMC10082001.

10   Hernandez, C., A. Correndo, B. McArtor, C. Hernandez, **P. Kyveryga**, A. Prestholt, I. Ciampitti. 2023. On-farm soybean seed protein and oil prediction using satellite data. *Computer and Electronics in Agriculture*. Volume 212, 2023, 108096, ISSN 0168-1699, https://doi.org/10.1016/j.compag.2023.108096.

11   Correndo A., B. McArtor, A. Prestholt, C. Hernandez, **P. Kyveryga**, I. Ciampitti. 2022. Interactive soybean variable-rate seeding simulator for farmers. *Agronomy Journal*. 114:3554–3565.

12   Laurent A., E. Heaton., **P. Kyveryga**, D. Makowski, L. Puntel, A. Robertson, L. Thompson and F. Miguez. 2022. A yield comparison between small-plot and on-farm foliar fungicide trials in soybean and maize. *Agronomy for Sustainable Development* 42, 86 (2022). https://doi.org/10.1007/s13593-022-00822-3.

13   Laurent A., Lyu, H., **P. Kyveryga**, D. Makowski, H. Hofmann, F. Miguez. 2021. Interactive web-based data visualization and analysis tool for synthesizing on-farm research networks data. *Research Synthesis Method*, 112:2928–2943.

14   Laurent A., F. Miguez, **P. Kyveryga**, and D. Makowski. 2020. Going beyond mean effect size; presenting prediction intervals for on-farm network trial analyses. *European Journal of Agronomy,* https://doi.org/10.1016/j.eja.2020.126127.

15   Matcham, E.G., S. Mourtzinis., S. P. Conley, J. I. Rattalino, P. Grassini, A. C. Roth, S. N. Casteel, I. A. Ciampitti, 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 Strategies for Early- and Late-Planted Soybean in the North-Central US. *Agronomy Journal*, 112:2928–2943.

16   Bissonnette, K.M., C. C. Marett, M.P. Mullaney, G. Gebhart, **P. Kyveryga**, T. Mueller, and G. L. Tylka. 2020. Effects of ILeVo seed treatment on Heterodera glycines reproduction and soybean yield in small-plot and strip-trial experiments in Iowa. *Plant Disease*. https://doi.org/10.1094/PDIS-06-19-1132-RE.

17   Grassini, P., J. Rattalino, J. Andrade, **P. Kyveryga**, and Shawn Conley. 2020. Assessing approaches for stratifying producer fields based on biophysical attributes for regional yield-gap analysis. *Field Crop Research*, https://doi.org/10.1016/j.fcr.2020.107825.

18   **Kyveryga, P.M**. 2019. On-Farm Research: Experimental Approaches, Analytical Frameworks, Case Studies and Impact. *Agronomy Journal*. 111:2633-2635. https://doi.org/10.2134/agronj2019.11.0001.

19   Laurent, A., **P.M. Kyveryga,** D. Makowski, F. Miguez. 2019. A framework for visualization and analysis of agronomic field trials from on-farm research networks. *Agronomy Journal*. 111:1-12. ttps://doi.org/10.2134/agronj2019.02.0135.

20   Andrade, J., J. I. Rattalino Edreira, S, Mourtzinis, S. P. Conley, I. A. Ciampitti, J. E. Dunphy, J. M. Gaska, K. Glewen, D. L Holshouser, H. J Kandel, P. Kyveryga, C. D. Lee, M. A Licht, L.E. Lindsey, M. A. McClure, S. Naeve, E. D. Nafziger, J. M. Orlowski, J. Ross, M. J. Staton, L. Thompson, J. E. Specht, P. Grassini. 2019. Assessing the influence of row spacing on soybean yield using experimental and producer survey data. *Field Crop Research*. 230:98-106.

21   Tao, H., T.F. Morris, **P.M. Kyveryga,** and J. McGuire. 2018. Factors Affecting Nitrogen Availability and Variability in Cornfields. *Agronomy Journal*. 110:974-985. https://doi.org/10.2134/agronj2017.11.0631.

22   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. Lindsey, D. S. Mueller, E. D. Nafziger, S. L. Naeve, J. Stanley, M. J. Staton, S. P. Conley. 2018. Sifting and winnowing: Analysis of farmer field data for soybean in the US North-Central region. *Field Crop Research*. 221:130-144.

23   Bissonnette, K. M., C. C. Marett, M. P. Mullaney, G. D. Gebhart, **P.M. Kyveryga,** T.A. Mueller, and G.L.Tylka. 2018. Effect of Clariva Complete Beans seed treatment on *Heterodera glycines* reproduction and soybean yield in Iowa. *Plant Health Progress*. 19:1-8. https://doi.org/10.1094/PHP-08-17-0043-RS.

24   Kandel, Y.R., C. L. Hunt, **P.M. Kyveryga,** T.A. Mueller, and D. S. Mueller. 2018. Differences in Small Plot and On-Farm Trials for Yield Response to Foliar Fungicide on Soybean. *Plant Disease*. 140. 140-145. DOI: 10.1094/PDIS-05-17-0697-RE.

25   Morris, T.M., S.T. Murrell, D. B. Beegle, J.J. Camberato, R.B. Ferguson, J. Grove, Q. Ketterings, **P.M. Kyveryga**, C. A.M. Laboski, J. M. McGrath, J. J. Meisinger, J. Melkonian, B. N. Moebius-Clune, E. D. Nafziger, D. Osmond, J. E. Sawyer, P. C. Scharf, W. Smith, J. T., Spargo, H. M. van Es, and H. Yang. 2017. Strengths and Limitations of Nitrogen Rate Recommendations for Corn and Opportunities for Improvement. *Agronomy Journal*. 110:1-37. https://doi.org/10.2134/agronj2017.02.0112.

26   Rattalino 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. Specht, 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 Forestry Meteorology*. 247:170-180. https://doi.org/10.1016/j.agrformet.2017.07.010.

27   Anderson C.J., and **P.M. Kyveryga**. 2016. Combining on-farm and climate data for risk management of nitrogen decisions. *Climate Risk Management*. 13:10-18. https://doi.org/10.1016/j.crm.2016.03.002.

28   Jones, C.S., A. Seeman, **P.M. Kyveryga**, K.E. Schilling, A. Kiel, K.-S. Chan, and C.F. Wolter. 2016. Crop Rotation and Raccoon River Nitrate. *J. Soil and Water Conservation*. 71. 223-235. https://doi.org/10.2489/jswc.71.3.206.

29   Yang, S., X. Li, C. Chen, **P. M. Kyveryga**, and X. B. Yang**.** 2016. Assessing Field Specific Risk of Soybean Sudden Death Syndrome Using Satellite Imagery in Iowa. *Phytopathology*, 106 (8) 842-853. https://doi.org/10.1094/PHYTO-11-15-0303-R.

30   **Kyveryga, P.M**., T.M. Blackmer, and D.S. Mueller. 2013. When do foliar pyraclostrobin fungicide applications produce profitable soybean yield responses? *Plant Health Progress.* https://doi.org/10.1094/PHP-2013-0928-01-RS.

31   **Kyveryga, P.M**., and T.M. Blackmer. 2013. Probability of profitable yield response to nitrification inhibitor used with liquid swine manure on corn. *Precision Agriculture,* DOI: 10.1007/s11119-013-9307-8.

32   **Kyveryga, P.M**., P.C. Caragea, M.S. Kaiser, and T.M. Blackmer. 2013. Predicting risk from reducing nitrogen fertilization using hierarchical models and on-farm data. *Agronomy Journal*. 105:84-95. DOI: 10.2134/agronj2012.0218.

33   *Kyveryga, P.M.,* and T.M. Blackmer. 2012. On-farm evaluations to calibrate tools for estimating late-season nitrogen status of corn. *Agronomy Journal*. 104:1284-1294. https://doi.org/10.2134/agronj2011.0403.

34   **Kyveryga, P.M**., T.M. Blackmer, and P.C. Caragea. 2011. Categorical analysis of spatial variability in economic yield response of corn to nitrogen fertilization. *Agronomy Journal*. 103:796-804. https://doi.org/10.2134/agronj2010.0411.

35   **Kyveryga, P.M**., T.M. Blackmer, and R. Pearson. 2011. Normalization of uncalibrated late-season digital aerial imagery for evaluating corn nitrogen status. *Precision Agriculture*. DOI: 10.1007/s11119-011-9231-8.

36   *Kyveryga, P.M.,* T.M. Blackmer, R. Pearson, and T.F. Morris. 2011. Late-season digital aerial imagery and stalk nitrate testing to estimate the percentage of areas with different N status within fields. *J. Soil and Water Conservation*. 66 (6)-373-385. https://doi.org/10.2489/jswc.66.6.373.

37   *Kyveryga, P.M*., H. Tao, T.F. Morris, and T.M. Blackmer. 2010. Identification of nitrogen management categories by corn stalk nitrate sampling guided by aerial imagery. *Agronomy Journal*. 102:858-866. https://doi.org/10.2134/agronj2009.0401.

38   Zhang, J., A.M. Blackmer, T.M. Blackmer, and *P.M. Kyveryga*. 2010. Fertilizer bands affect early growth of corn. *Communication in Soil Science Plant Analysis.* 41:1306-1314. https://doi.org/10.1080/00103621003759312.

39   Zhang, J., A.M. Blackmer, *P.M. Kyveryga*, M.J. Glady, and T.M. Blackmer. 2010. Temporal patterns in symptoms of nitrogen deficiency as revealed by remote sensing of corn canopy. *Pedosphere*. 20:15-20. https://doi.org/10.1016/S1002-0160(09)60278-2.

40   *Kyveryga, P.M*., A.M. Blackmer, and J. Zhang. 2009. Characterizing and classifying variability in corn yield response to nitrogen fertilization on subfield and field scales. *Agronomy Journal*. 101:269-277. https://doi.org/10.2134/agronj2008.0168.

41   Zhang, J., A.M. Blackmer, *P.M. Kyveryga*, B. Van De Woestyne, and T.M. Blackmer. 2008. Fertilizer-induced advances in corn growth stage and quantitative definitions of nitrogen deficiencies. *Pedosphere* 18:60-68. https://doi.org/10.1016/S1002-0160(07)60103-9.

42   Zhang, J., A.M. Blackmer, J.W. Ellsworth, **P.M. Kyveryga**, and T.M. Blackmer. 2008. Luxury production of leaf chlorophyll and mid-season recovery of nitrogen deficiencies in corn. *Agronomy Journal*. 100:658-664. https://doi.org/10.2134/agronj2006.0154.

43   **Kyveryga, P.M**., A.M. Blackmer, and T.F. Morris. 2007. Disaggregating model bias and variability when calculating economic optimum rates of nitrogen fertilization for corn. *Agronomy Journal*. 99:1048-1056. https://doi.org/10.2134/agronj2006.0339.

44   **Kyveryga, P.M**., A.M. Blackmer, and T.F. Morris. 2007. Alternative benchmarks for economically optimal rates of nitrogen fertilization for corn. *Agronomy Journal*. 99:1057-1065. https://doi.org/10.2134/agronj2006.0340.

45   Zhang, J., A.M. Blackmer, T.M. Blackmer. *P.M. Kyveryga*, and J.W. Ellsworth. 2007. Nitrogen deficiency and recovery in sustainable corn production as revealed by leaf chlorophyll measurements. *Agronomy for Sustainable Development*. 27:313-320. https://doi.org/10.1051/agro:2007023.

46   **Kyveryga, P.M**., A.M. Blackmer, J.W. Ellsworth, and R. Isla. 2004. Soil pH effects on nitrification of fall-applied anhydrous ammonia. *Soil Science Society of America*. 68:545-551. https://doi.org/10.2136/sssaj2004.5450.

Book

1.   Loginova, I. V., M.M. Gorodniy, and **P.M. Kyveryga**. 2011. Agricultural Chemistry: A manual for students of higher educational institutions in Ukraine. (In English). Kiyv. National University of Life Environmental Sciences of Ukraine.

Book Chapter

1   **Kyveryga P.M**, T.S. Mueller, and D.S. Mueller. 2018. On-Farm Replicated Strip Trials. *In* Precision Agriculture Basics. A textbook for undergraduate students. D.K. Shannon, D.E. Clay and N.R. Kitchen (ed.). American Society of Agronomy, Crop Science Society of America and Soil Science Society of America. P.189-207.

Other Publications

1   Kharel, T., S. Swink, C. Youngerman. A., Maresta, K. Czymmek, Q. Kettering., **P. Kyveryga**, T., Musket, V., Hubbard. 2018. Processing/Cleaning Corn Silage and Grain Yield Monitor Data for Standardized Yield Maps across Farms, Fields, and Years. Cornel University, Nutrient Management Spear Program.

2   Ciampitti I, and **P. Kyveryga**. 2016. Rewards and Challenges Starting Your Career with On-Farm Research. Crops, Soils, Agronomy News 61 (10), 32-35. American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America.

3   **Kyveryga, P.M**, T. Mueller, N. Paul, P. Reeg, and A. Arp. 2015. Guide to On-Farm Replicated Strip Trials. Iowa Soybean Association.

4   Chapmen, K., **P. Kyveryga**, T. Morris, and T. Menke. 2015. Farmer Network Design Manual. 2015. Environmental Defense Fund, Washington, DC.

Patents:

1.   Convey, L., T. Wilcox., B. Van De Woestyne, and P. M. Kyveryga. 2024. In situ determining of soil properties and implement control. Deere $ Company.

2.   Hubner, C, A. Seabert, P. Kyveryga, K. Armstrong. 2023. Generating prescriptive depth values based on soil environment and controlling an actuator of planting depth. Deere $ Company.

EXTENSION CONFERENCE PROCEEDINGS AT IOWA STATE UNIVERSITY

1   Fey, S, J. McDanel, and **P. Kyveryga**. 2021. Interactive Simulator to Quantify Cover Crop Economic, Environmental and Societal Benefits. *In* Proc. Annual Integrated Crop Management Conference, 31th, Iowa State Univ., Ames, IA. 4-5 Dec. 2021.

2   Pritsolas, J., A. Prestholt, **P. Kyveryga**, and R. Pearson. 2019. Quality of Digital Aerial Imagery and Implications for Various Uses in Agriculture. *In* Proc. Annual Integrated Crop Management Conference, 31th, Iowa State Univ., Ames, IA. 4-5 Dec. 2019.

3   A. Laurent, S.Fey, **P. Kyveryga**, and F. Miguez. 2019. Interactive Web-based Tool for Profitable Decision Making from On-Farm Trials. *In* Proc. Annual Integrated Crop Management Conference., 31th, Iowa State Univ., Ames, IA. 4-5 Dec. 2019.

4   Fey, S., **P.M. Kyveryga,** J. Connor, A. Kiel and D. Muth. 2016. Interaction of weather and field profitability on within field profitability in crop production. *In* Proc. Annual Integrated Crop Management Conference, 28th, Iowa State Univ., Ames, IA. 1-2 Dec. 2016.

5   Hay C., A Kiel, T. Seeman, and **P. Kyveryga**. 2016. Crop and Water Response to Drainage. In Proc. International Drainage Symposium. Minneapolis, MN, Sep 6-9, 2016.

6   Pritsolas, J., R. Pearson, J. Connor, and **P. Kyveryga**. 2016. Challenges and Successes when Generating In-Season Multi-Temporal Calibrated Aerial Imagery. *In* Proceeding of 13th International Conference on Precision Agriculture, St. Louis. MO.

7   Fey, S., **P. Kyveryga**, J. Connor, A. Kiel and D. Muth. 2016. Within-Field Profitability Assessment: Impact of Weather, Field Management and Soils. *In* Proceeding of 13th International Conference on Precision Agriculture, St. Louis. MO.

8   Jones, C.S., A. Seeman, **P.M. Kyveryga**, K.E. Schilling, A. Kiel, K.-S. Chan, and C.F. Wolter. 2016. Environmental Performance with Agronomic Management: Raccoon River Watershed Case Study. *In* Proceeding Annual Integrated Crop Management Conference, 27th, Iowa State Univ., Ames, IA. 3-4 Dec. 2014.

EXTENSION PUBLICATIONS AT IOWA STATE UNIVERSITY

5   Kharel, T., S. Swink, C. Youngerman. A., Maresta, K. Czymmek, Q. Kettering., **P. Kyveryga**, T., Musket, V., Hubbard. 2018. Processing/Cleaning Corn Silage and Grain Yield Monitor Data for Standardized Yield Maps across Farms, Fields, and Years. Cornel University, Nutrient Management Spear Program.

6   Ciampitti I, and **P. Kyveryga**. 2016. Rewards and Challenges Starting Your Career with On-Farm Research. Crops, Soils, Agronomy News 61 (10), 32-35. American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America.

7   **Kyveryga, P.M**, T. Mueller, N. Paul, P. Reeg, and A. Arp. 2015. Guide to On-Farm Replicated Strip Trials. Iowa Soybean Association.

8   Chapmen, K., **P. Kyveryga**, T. Morris, and T. Menke. 2015. Farmer Network Design Manual. 2015. Environmental Defense Fund, Washington, DC.

PROGRAM OF STUDY COMMITTEE MEMBERS AT IOWA STATE UNIVERSITY

Ms. Anabelle Laurent, PhD, Crop Science, 2020

Mr. Yones Khaledian, PhD, Soil Geomorphology, 2020

Ms. Ashley Kessler, MS, Agronomy, 2019.

Mr. Barry Christinsen, MS, Agronomy, 2024.

ADVISING DISTANCE MS STUDENTS IN AGRONOMY

Mr. Brett McArtor, creative component "Variable Rate Planting Soybean Simulator". Defense October 14, 2020. Developed an online simulator to process farmer data and identify conditions where variable rate planting seeding is economically feasible. https://analytics.iasoybeans.com/cool-apps/SoybeanVRPsimulator/

Mr. Anthony Martin, creative component "Yield Benefits from Combined Applications of Foliar Fungicides and Insecticides on Soybean". Expected Graduation in Spring of 2025.

Mr. Ahmed Imman, creative component "Effect of a new nitrification inhibitor applied to urea and ammonium nitrate on corn nitrogen uptake and yield in Brazil". Expected Graduation in Spring of 2026.

INVITED LECTURES AT IOWA STATE UNIVERSITY

Iowa Learning Farm Webinar Series, June 8, 2022. "Interactive Cover Crop Economic Simulator".

ISU Carbon Removal Forum. April 22, 2022. Soil Carbon Measurements: Implementation.

Agronomy Department Seminar, Sept 10, 2020. "Quality of Digital Aerial Imagery and Implications for Various Uses in Crop Management".

Agronomy 280, Spring of 2020. "Vegetation Index Time Series of Crop Canopy".

Agronomy 557, Soil Plant Relationship, Fall of 2016. "On-Farm Research and Nutrient Management".

Department of Plant Pathology, Iowa State University, Summarization and interpretations of results from on-farm studies. Sep 16, 2014.

INVITED CONFERENCE SYMPOSIUMS AND LECTURES OUTSIDE IOWA STATE UNIVERSITY

1 **American Society of Agronomy**. MegaSymposium: the New Age of Agriculture Knowledge Transfer. Nelson, S and P. Kyveryga. 2020. Promises and Pitfalls of On-Farm Research. Virtual Annual Meeting.

2 **Nitrogen Use Efficiency Conference, University of Missouri**. Kyveryga, P.M. 2019. Challenges of Calibrating and Normalizing Digital Aerial Imagery of Crop Canopy. Nitrogen Use Efficiency Conference, Columbia, MO.

3 **American Society of Agronomy**. P. Kyveryga. 2019. Statistical Approaches for Analyzing On-Farm Data: Overview and Examples. In Annual Meeting Abstracts. ASA, CSSA, and SSSA, Madison, WI.

4 **FMC Company.** P. Kyveryga. 2017. Replicated On-Farm Strip Trials. July 20, 2017. Annual Meeting of Technical and Research Staff. St. Louis, MO.

5   **Minnesota Valley Testing Laboratories**. 2017. P. Kyveryga. Nitrogen Management Expectations and Surprises. Annual Meeting.

6   **American Society of Agronomy**. 2016. Kyveryga, P.M. Sorting through multiple predictors in field experiments. Symposium: Multivariate Analysis in Agronomy. In Annual Meeting Abstracts. ASA, CSSA, and SSSA, Madison, WI.

7   **HTS Ag Group**. 2016. Kyveryga, P.M. On-Line Nitrogen Risk Assessment Tool. March 2, 2016. Ankeny, IA.

8   **Soil Science Society of America.** 2016. Kyveryga, P.M. Normalization and Calibration of Digital Aerial Imagery for Nitrogen Management Assessment. Symposium: Use of Aerial Imagery in Nutrient Management. In Annual Meeting Abstracts. ASA, CSSA, and SSSA, Madison, WI.

9   **Alberta Wheat Commission.** 2016. Kyveryga, P.M. From On-Farm Research Data to Agronomic Decisions. Tactical Farming Conference. Feb 10-11. Alberta, Canada.

10 **Plant Management Network Webinar.** 2015. Risk and Benefits of Changing Farmers' Common Soybean Seeding Rates. June 12, 2015.

11 **University of Minnesota**, **Department of Soil, Water and Climate**. 2014. Kyveryga, P.M. Interpretations of results from on-farm studies. Dec3, 2014. St. Paul. MN.

12 **AgriFood and Agriculture Canada.** 2014. Kyveryga, P.M. New Opportunity for Soil and Crop Variability Management. Explaining variability in yield response to nitrogen. April 9, 2014. INRI, Quebec, Canada.

13 **Iowa State University and University of Missouri Extension.** 2014. Kyveryga, P.M. Lessons Learned from Iowa On-Farm Studies Testing Manure Nitrogen Variability. Heartland Animal Manure Management Workshop, April 22, 2014. St. Joseph, MO.

14 **No-Tillage Magazine.** 2014. Kyveryga, P.M. Benchmarking No-Till Crop's Macro and Micronutrient Status. 22nd Annual No-Tillage Conference, Jan 17, 2014. INRI, Spring Field, IL.

PROPOSAL REVIEWS

2019-2020 Foundation for Food and Agriculture Research (FFAR)
2018-2021 South Dakota Nutrient Research and Education Council (NREC)
2014- US-Israel Binational Agricultural Research and Development Fund (BARD)

PROFESIONAL SOCIETIES

American Society of Agronomy
Soil Science Society of America
Crop Science Society of America
Soil and Water Conservation Society
International Society of Precision Agriculture