

Professional Résumé of Accomplishments

Petro M. Kyveryga

Affiliate Assistant Professor, Agronomy Department

<u>Degrees Held</u>	<u>Institution</u>	<u>Date</u>
Ph.D. Soil Science/Soil Fertility.	Iowa State University, Ames, Iowa	2005
B.S. Agrochemistry and Soil Science.	National Agricultural University of Ukraine, Kyiv, Ukraine	1996
A.S. Horticulture.	Agricultural College, Zalishchyky, Ukraine	1991

Summary of Professional Experience

2015-current Director of Analytics, Iowa Soybean Association.

- Providing leadership for the Iowa Soybean Analytics, On-Farm Network and Environmental Programs & Services in areas of research coordination, data acquisition, data analyses, and result interpretations.
- Coordinating collaborative research projects with university and industry research groups in areas of statistics, crop, nutrient and pest management, remote sensing and predictive modeling.
- Communicating results of on-farm studies via written farmer-friendly publications and peer-reviewed scientific articles.
- Technical Editor-Precision Agriculture, Agronomy Journal, American Society of Agronomy.
- Member of the Scientific Review Panel for the NutrientStar nutrient evaluation program, Environmental Defense Fund.
- Chair of Biometry and Statistical Computing Section of the American Society of Agronomy.

2013-2015 Operations Manager-Analytics, Analytics, Iowa Soybean Association.

- Providing leadership for Iowa Soybean On-Farm Network and Environmental Programs & Services for identifying and evaluating the best methods for data acquisition, data analyses, and result interpretations.
- Coordinating collaborative research projects with university and industry research groups. Major research areas: statistics and data analysis, crop, nutrient and pest management, remote sensing and geographic information systems.
- Communicating results of on-farm studies via written farmer-friendly publications and peer-reviewed scientific articles.

- Leading the development of technical program for the Iowa Soybean Association Research (former On-Farm Network) Conferences.
- Technical Editor-Precision Agriculture, Agronomy Journal, American Society of Agronomy.
- Committee Member for the Agronomic Industry Award of the American Society of Agronomy

2007-2013. Senior Research Associate, On-Farm Network, Iowa Soybean Association.

- Developed and tested various methods of data analyses and result interpretations.
- Identified research areas for on-farm studies.
- Coordinated collaborative research projects with universities, industry and non-government organizations.
- Communicated results of on-farm studies via written farmer-friendly publications and peer-reviewed scientific articles.
- Associate and Screening Editors, Agronomy Journal, American Society of Agronomy.

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

- Developed methods for estimating economic optimal rates of nitrogen fertilization for corn using data collected from on-farm studies.
- Identified research areas for various on-farm studies.
- Communicated results of on-farm studies via written farmer-friendly publications and peer-reviewed scientific articles.

2005-2006. Graduate Research Assistant, Department of Agronomy, Iowa State University.

- Conducted on-farm research studies for (1) identifying factors affecting nitrification rates of fall-applied anhydrous ammonia and (2) estimating economic optimum rates of nitrogen fertilization for corn using yield monitoring technologies, aerial imagery and chlorophyll meters.
- Managed laboratory personal and calibrated laboratory equipment for measuring total nitrogen content, nitrate, and pH in the soil and crop tissue samples.

Other ISU Personal Record

MS in Statistics, distance
education

Dec 2015-curent

Department of Statistics

Professional Association

American Society of Agronomy
Soil Science Society of America
Crop Science Society of America
Soil and Water Conservation Society

Awards, Honors, and Recognition

Fellow of American Society of Agronomy, 2017

1st place. The Conservation Innovation Grant Poster Award NRCS, July 30, 2008, Tucson AR.

Gamma Sigma Delta, the Honor Society of Agriculture, Iowa State University, 2001

The Distinguished Young Scientist Award, National Agricultural University of Ukraine, 1998.

Teaching Experience

Nitrogen transformation, processes, management, and evaluation. A series of invited lectures for a graduate course in Soil Plant Relationship (Agron 553), Agronomy Department, Iowa State University, Fall 2012 and 2013.

Developed a teaching curriculum and co-authored a textbook in Soil Fertility and Agricultural Chemistry, National University of Life and Environmental Sciences of Ukraine, 2010-2011.

International Assignment

Served as a technical assistant and student supervisor in the U.S. Department of State NIS Secondary School Partnership Program between the U.S. and Ukrainian high schools focused on agriculture, environment, and science. About 90 students participated in the program between 1998 and 2001.

Publication

Peer-reviewed:

- 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.
- 2 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.
- 3 Kandel, Y.R., C. L. Hunt, P.M. Kyveryga, T.A. Mueller, and D. S.Muller. 2018. Differences in Small Plot and On-Farm Trials for Yield Response to Foliar Fungicide on Soybean. *Plant Disease*. 140. 140-145.
- 4 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 J.* 110:1-37.
- 5 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. *Forestry and Meteorology.* 247:170-180.
 - 6 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.
 - 7 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.* May-June. Vol 71. 223-235.
 - 8 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.
 - 9 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* (on line).
 - 10 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.
 - 11 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. *Agron. J.* 105:84-95.
 - 12 Kyveryga, P.M., and T.M. Blackmer. 2013. 4R Management: Differentiating nitrogen management categories in Iowa. *Better Crops and Food, International Plant Nutrition Institute.* 97:4-6.
 - 13 Kyveryga, P.M., and T.M. Blackmer. 2012. On-farm evaluations to calibrate tools for estimating late-season nitrogen status of corn. *Agron. J.* 104:1284-1294.
 - 14 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. *Agron. J.* 103:796-804.
 - 15 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.
 - 16 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.
 - 17 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. *Agron. J.* 102:858-866.

- 18 Zhang, J., A.M. Blackmer, T.M. Blackmer, and P.M. Kyveryga. 2010. Fertilizer bands affect early growth of corn. *Commun. in Soil Sci. Plant Anal.* 41:1306-1314.
- 19 Zhang, J., A.M. Blackmer, T.M. Blackmer, and P.M. Kyveryga. 2010. Fertilizer bands and dual effects of nitrogen on corn plants. *Better Crops and Food.* 2:17-19.
- 20 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.
- 21 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. *Agron. J.* 101:269-277.
- 22 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.
- 23 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. *Agron. J.* 100:658-664.
- 24 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. *Agron. J.* 99:1048-1056.
- 25 Kyveryga, P.M., A.M. Blackmer, and T.F. Morris. 2007. Alternative benchmarks for economically optimal rates of nitrogen fertilization for corn. *Agron. J.* 99:1057-1065.
- 26 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. *Agron. Sustain. Dev.* 27:313-320.
- 27 Kyveryga, P.M., A.M. Blackmer, J.W. Ellsworth, and R. Isla. 2004. Soil pH effects on nitrification of fall-applied anhydrous ammonia. *Soil Sci. Soc. Am. J.* 68:545-551.

Books/Book Chapters:

- 1 Kyveryga, P.M., T.M. Mueller, and D.S. Mueller. 2018. On-Farm Replicated Strip Trials. In *Precision Basics*, a text book for undergraduate students. (in print). American Society of Agronomy.
- 2 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.* Cornell University, Nutrient Management Spear Program.
- 3 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.

Selected Conference Proceedings

- 1 Wilkins, C., S. Fey, B. Wirt, and P.M. Kyveryga. 2017. View from the Sky: Mapping Corn Nitrogen Status at the Watershed Level. *In Proc. Annu. Integrated Crop Manage. Conf.*, 29th, Iowa State Univ., Ames, IA. 29-30 Nov. 2017.
- 2 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. Annu. Integrated Crop Manage. Conf.*, 28th, Iowa State Univ., Ames, IA. 1-2 Dec. 2016.
- 3 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*
- 4 Pritsolas, J., R. Pearson, J. Connor, and P. Kyveryga. 2016. 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.*
- 5 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.*
- 6 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 Proc. Annu. Integrated Crop Manage. Conf.*, 27th, Iowa State Univ., Ames, IA. 3-4 Dec. 2014.
- 7 Kyveryga, P., P. Reeg, T. Mueller and C. Anderson. 2014. Incorporating risk into 4R Nutrient Management. p. 132-141. *In Proc. Annu. Integrated Crop Manage. Conf.*, 26th, Iowa State Univ., Ames, IA. 3-4 Dec. 2014.
- 8 Reeg, P., P. Kyveryga, and T. Mueller. 2014. Continuous improvement in crop, nutrient, pest and soil water management. p. 42-46. *In Proc. Annu. Integrated Crop Manage. Conf.*, 26th, Iowa State Univ., Ames, IA. 3-4 Dec. 2014.
- 9 Mueller, T., P. Reeg, and P. Kyveryga, and. 2014. Increasing profitability in soybean production by optimizing planting rates. p. 47-51. *In Proc. Annu. Integrated Crop Manage. Conf.*, 26th, Iowa State Univ., Ames, IA. 3-4 Dec. 2014.
- 10 Blackmer, T.M., and P.M. Kyveryga. 2012. Precision tools to evaluate alternative weed management systems in soybean. CDROM 1187. *In R. Khosla (ed.) Proc. 11th Int. Conf. on Precision Agriculture, Indianapolis, IN. 15–18 July. Intern. Soc. Precis. Agric.*
- 11 Blackmer, T.M., and P.M. Kyveryga. 2012. Digital aerial imagery guides statewide nutrient management survey. CDROM 1215. *In R. Khosla (ed.) Proc. 11th Int. Conf. on Precision Agriculture, Indianapolis, IN. 15–18 July. Intern. Soc. Precis. Agric.*

- 12 Blackmer, T.M., and P.M. Kyveryga. 2010. A systematic approach for using precision agriculture tools for on-farm evaluations in Iowa. CDROM 135. *In* R. Khosla (ed.) Proc. 10th Int. Conf. on Precision Agriculture, Denver, CO. 18–21 July. ASA, SSSA, and CSSA, Madison, WI.
- 13 Kyveryga, P.M., T.M. Blackmer, and R. Pearson. 2010. Using late-season uncalibrated digital aerial imagery for predicting corn nitrogen status within fields. CDROM 94. *In* R. Khosla (ed) Proc. 10th Int. Conf. on Precision Agriculture, Denver, CO. 18-21 July. ASA, SSSA, CSSA, Madison, WI..
- 14 Kyveryga, P.M., T.M. Blackmer, and P.C. Caragea. 2008. Using soil and terrain attributes to delineate management zones in corn yield response to nitrogen fertilization. CDROM 277. *In* R. Khosla (ed) Proc. 9th Int.. Conf. on Precision Agriculture, Denver, CO. 20-23 July. ASA, SSSA, CSSA, Madison, WI.
- 15 Kyveryga, P.M., and A.M. Blackmer. 2001. Effects of soil pH on nitrification and losses of fall-applied anhydrous ammonia. p. 103-105. *In* Proc. Annu. Integrated Crop Manage. Conf., 13th, Iowa State Univ., Ames, IA. 6 Dec. 2001.

Recent Invited Symposium Presentations and University Departmental Seminars

- 1 Kyveryga, P.M. 2016. Sorting through multiple predictors in field experiments. Symposium: Multivariate Analysis in Agronomy. *In* Annual Meeting Abstracts. ASA, CSSA, and SSSA, Madison, WI.
- 2 Kyveryga, P.M. 2016. Symposium: Use of Aerial Imagery in Nutrient Management. *In* Annual Meeting Abstracts. ASA, CSSA, and SSSA, Madison, WI.
- 3 Kyveryga, P.M. 2016. 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.
- 4 Kyveryga, P.M. 2014. Interpretations of results from on-farm studies. Dec 3, 2014. Department of Soil, Water and Climate, University of Minnesota, St. Paul. MN.
- 5 Kyveryga, P.M. 2014. Computing and Big Data in Agriculture: Farmer networks using data to improve crop management. *In* Annual Meeting Abstracts [CD-ROM], ASA, CSSA, and SSSA, Madison, WI.
- 6 Kyveryga, P.M. T.M. Morris, H. Tao. 2014. N & P Decision Support Tools for Sustainable Agriculture & Environment: (II) Using rainfall and feedback information about corn nitrogen status and yield response. *In* Annual Meeting Abstracts [CD-ROM], ASA, CSSA, and SSSA, Madison, WI.
- 7 Kyveryga, P.M. 2014. Summarization and interpretations of results from on-farm studies. Sep 16, 2014. Department of Plant Pathology, Iowa State University.
- 8 Kyveryga, P.M. 2014. New Opportunity for Soil and Crop Variability Management. Explaining variability in yield response to nitrogen. April 9, 2014. INRI, Quebec, CA.
- 9 Kyveryga, P.M. 2013. Categorical data analysis: using logistic regressions in nitrogen fertilizer evaluation studies. *In* Annual Meeting Abstracts [CD-ROM], ASA, CSSA, and SSSA, Madison, WI.

- 10 Kyveryga, P.M. 2013. The On-Farm Network. Smarter agriculture/dialogue on critical data for agriculture workshop, October 10-11, 2013, Potomac. MD

Selected Farmer Friendly On-Line Publications:

- 1 [Guide to On-Farm Replicated Strip Trials. Sep 2015.](#)
- 2 [Adaptive nitrogen management: Post-season evaluations of farmer management practices to improve nitrogen use in corn production. April 2014.](#)
- 3 [2011 Nutrient Benchmarking Summaries. December 2011.](#)
- 4 [On-line fungicide economic calculator for soybean. 2011.](#)
- 5 [Understanding soil nitrogen dynamics. October 2008.](#)
- 6 [Managing nitrogen for economic and environmental performance. July 2008.](#)
- 7 [Predicting the reliability of the late-spring soil nitrate test. 2008.](#)

Proposals Funded

Use of High Density Protein Maps and Remote Sensing to Understand Protein Levels in U.S. Produced Soybeans. 2018. United Soybean Board. Jointly with Agricultural and Biosystem Engineering Dept, ISU.

Modeling temporal and spatial variability in drainage tile nitrate concentrations 2016. IA Nutrient Research Center. Jointly with Agronomy Dept, ISU.

Predicting the risk of excessive nitrate accumulation in tile drainage water. 2016. Iowa Department of Agriculture and Land Stewardship. Jointly with Agronomy Dept., ISU.

Hierarchical models for multilocation on-farm trials with foliar fungicides on soybean. 2015. Jointly with Dept. Statistics, ISU.

Decisions Based on Statistics from On-Farm Trials: 2016. NIFA USDA Grant jointly with University of Missouri and Cornell University.

Adaptive nutrient management, Natural Resource Conservation Services. 2012. Principle Investigator: ISA On-Farm Network and Environmental Program & Services.

Nitrogen efficiency project. USDA/ NRCS Conservation Innovation Grant, 2007. Principle Investigator: ISA On-Farm Network

Multi-state outcome-based nitrogen use efficiency project for corn production. USDA/ NRCS Conservation Innovation Grant 2006.