Nicolas Giordano

As a young agronomist, my foremost challenge is to be an active agent of the change needed to accelerate farmers' technology implementation through data-driven processes. Advancing crop management recommendations by integrating state-of-the-art statistical models and crop eco-physiology principles.

Date of Birth: April 29th, 1996.

Nationality: Argentinian, Italian.

2018C Throckmorton Hall, Manhattan, KS-66506 | Phone: 785-473-8442 | email: ngiordano@ksu.edu

@ngiordano96 giordanon giordanon

EDUCATION

Doctor of Philosophy in Agronomy Jan 2021 – Present

Kansas State University, Manhattan, KS, United States of America
GPA: 3.9

Research focused on winter wheat nitrogen economy, genotype by environment interactions, and risk assessment on farm management decisions.

Bachelor of Science in Agricultural Engineering Mar 2014 – Mar 2020

University of Buenos Aires, Buenos Aires, Argentina GPA: 7.8/10

Thesis: “Application timings and types of foliar fungicide products effects on late-season diseases in Soybean (Glycine max)”.

Student Intern in Wheat Breeding Apr 2018 – Nov 2018

University of Kentucky, Lexington, KY, United States of America

Wheat breeding program of soft red winter wheat for Kentucky.

PROFESSIONAL EXPERIENCE

Kansas State University, Manhattan, KS, USA Jan 2021 – Present

Graduate Research Assistant

Advisor: Dr. Romulo P. Lollato

My research focuses on management, environmental and physiological drivers of wheat grain yield and protein response to late nitrogen applications. Another part of my research studies the relations of wheat grain yield and protein concentration in response to nitrogen input from the perspective of phenotypic plasticity. Furthermore, I study the genetic basis of genotype x environment interactions of winter wheat grain yield in the Central Great Plains. Further research implements Bayesian hierarchical models to conduct risk assessment of plant density and seeding management decisions. Another research focus I have centers on defining sustainable wheat systems by major stakeholders across the entire wheat supply chain.

Kume Mapu S.A. Mar 2020 – Dec 2020

Grain Crops Technician

I conducted multiple activities related to my family farming company. My major responsibilities included harvest logistics, row crop and pasture planting, crops scouting, range and cattle management.

University of Kentucky, Lexington, KY, USA Apr 2018 – Nov 2018

Intern in Wheat Breeding Program

Advisor: Dr. David A. Van Sanford

My role was to collect data from multiple field experiments from a soft winter wheat breeding program. Activities involved collecting a wide variety of plant traits, including fusarium head blight disease incidence. I helped in setting up greenhouse experiments, fields husbandry operations and lab sample processing and data entry.

Pedro A. Lacau e Hijos S.R.L. Dec-Mar 2015-2020

Grain Crops Technician

Summer internships at a family farming company. My responsibilities involved summer crops scouting over approximately 8.000 acres each season and harvest coordination. Crops included maize, soybeans, sunflower and wheat.

ALFIN S.C.A. July 2019

Grain Crops Technician

Winter internship at subtropical farming operation. Responsible of coordinating maize harvest on a 7600-acre farm in northeastern region of Argentina.

STUDENT ADVISING

Undergraduate students committee

- Agustin Serazzi – National University of La Plata, Argentina. Main advisor: Maria Rosa Simon. Degree: B.S. Agricultural Engineering. Graduation: December 2023.
- Chiara Ripa – University of Buenos Aires, Argentina. Main advisor: Daniela Becheran. Degree: B.S. Agricultural Engineering. Thesis under preparation.

External consultant

- Jazmin Gastaldi – University of Buenos Aires, Argentina. Main advisor: Karina D 'Andrea. Degree: B.S. Agricultural Engineering. Graduation: December 2023.

RESEARCH PUBLICATIONS

PEERED REVIEWED ARTICLES (accepted 3, under review 2)

- **Giordano N.**, D. Hayes, T.J. Hefley, J. Lacasa, B.L. Beres, L. Haag, and R.P. Lollato. A Bayesian framework to model variance of grain yield response to plant density. Plant Methods. Under review.
- Lollato R.P., L.O. Pradella, **N. Giordano**, L.P. Ryan, J.R. Soler, L.M. Simao, B.R. Jaenisch, and R. Horton. Winter. Wheat Response to Plant Density in Yield Contest Fields. Crop Science. Under review.
- **Giordano, N.,** V.O. Sadras, A.A. Correndo, and R.P. Lollato. 2024. Cultivar-specific phenotypic plasticity of yield and grain protein concentration in response to nitrogen in winter wheat. Field Crops Research, 306, p.109202
- **Giordano, N.**, V.O. Sadras, and R.P. Lollato. 2023. Late-season nitrogen application increases grain protein concentration and is neutral for yield in wheat. A global meta-analysis. Field Crops Research, 290, p. 108740.
- Sadras, V.O., **N. Giordano**, A.A. Correndo, M. Cossani, J.M. Ferreyra, O.P. Caviglia, J.A. Coulter, I.A. Ciampitti, and R.P. Lollato. 2022. Temperature-driven developmental modulation of yield response to nitrogen in wheat and maize. Frontiers in Agronomy. 4:903340.

SCIENTIFIC PROCEEDINGS (11)

- Romero Soler, J.A., L.O. Pradella, **N. Giordano**, G. Cruppe, and R.P. Lollato. 2023. Does Winter Wheat Yield Response to Fungicide Application Depend on Nitrogen Management? Kansas Agricultural Experiment Station Research Reports 9 (4), 16

- Lollato, R.P., **N. Giordano**, L. Ryan, L.M. Simão, J.A. Romero Soler, and L.O. Pradella. 2023. Wheat Variety-Specific Response to Seeding Rate Under Intensive Management Conditions in Western Kansas in 2021–2022. Kansas Agricultural Experiment Station Research Reports 9 (4), 20
- Simão, L.M., A. Patrignani, J. Grané, L.O. Pradella, **N. Giordano**, J. Romero Soler, and R.P. Lollato. 2023. Previous Crop Impacts on Wheat Variety Performance in Central Kansas During the 2021–2022 Growing Season. Kansas Agricultural Experiment Station Research Reports 9 (4), 15
- **Giordano, N**. and Lollato, R.P., 2022. Nitrogen Fertilization and Wheat Variety Interact with Environment Independently to Determine Wheat Yield in Kansas. Kansas Agricultural Experiment Station Research Report s, p.15.
- Lollato, R.P., **Giordano, N**., Ryan, L., Simão, L.M., Soler, J.R. and Pradella, L.O., 2022. Wheat Variety-Specific Response to Seeding Rate Under Intensive Management Conditions in Western Kansas in 2020–2021. Kansas Agricultural Experiment Station Research Reports, 8(5), p.1.
- Lollato, R.P., Pradella, L.O., Ryan, L., Simão, L.M., **Giordano, N.**, Soler, J.R. and Haag, L.A., 2022. Wheat Grain Yield Response to Seed Cleaning and Seed Treatment as Affected by Seeding Rate During the 2020–2021 Growing Season in Kansas. Kansas Agricultural Experiment Station Research Reports, 8(4), p.11.
- Cruppe, G., **Giordano, N.,** Ryan, L., Pradella, L.O., Soler, J.R., Simão, L.M., Valent, B. and Lollato, R.P., 2022. Winter Wheat Variety Response to Timing and Number of Fungicide Applications During the 2020–2021 Growing Season in Kansas. Kansas Agricultural Experiment Station Research Reports, 8(4), p.12.
- Cruppe, G., **Giordano, N.**, Simão, L.M., Ryan, L., Pradella, L.O., Soler, J.R. and Lollato, R.P., 2022. Winter Wheat Response to Timing of Fungicide Application During the 2020–2021 Growing Season. Kansas Agricultural Experiment Station Research Reports, 8(4), p.10.
- Lollato, R.P., Pradella, L.O., **Giordano, N.**, Ryan, L., Simão, L.M. and Soler, J.R., 2022. Wheat Yield Response to Nitrogen Rate Depends on Foliar Fungicide Application. Kansas Agricultural Experiment Station Research Report s, p.53.
- **Giordano, N.**, R.P. Lollato. 2022. Revisiting the impacts of late season nitrogen fertilization on wheat crops. Proceedings of the 2022 Great Plains Soil Fertility Conference pp. 71-77.
- **Giordano, N.**, and R.P. Lollato. 2021. Do different wheat varieties respond differently to nitrogen rates in terms of grain yield and grain protein concentration in Kansas? Kansas Agricultural Exp. St. Research Report 7(8), 8.

ABSTRACTS AND PROFFESIONAL MEETINGS PRESENTATIONS (14)

- **Giordano, N.,** V.O. Sadras, A.A. Correndo, and R.P. Lollato. 2023. Cultivar-specific phenotypic plasticity of yield and grain protein concentration in response to nitrogen in winter wheat. In: ASA-CSSA-SSSA International Meetings, October 2023. St Louis, MO. Oral.
- Romero J.A., A. Featherstone, **N. Giordano**, K.A. Onofre and R.P. Lollato. 2023. Phenotypic Plasticity of Winter Wheat Varieties in the Republic of Georgia. In: ASA-CSSA-SSSA International Meetings, October 2023. St Louis, MO. Poster.

- Nores Allende M., **N. Giordano**, L.O. Pradella and R.P. Lollato. 2023. Dual-Purpose Yield Penalty in Wheat Depends on Grazing Termination Timing Relative to the Initiation of the Critical Period. In: ASA-CSSA-SSSA International Meetings, October 2023. St Louis, MO. Poster.
- **Giordano N.**, D. Hayes, T.J. Hefley, J. Lacasa, B.L. Beres, L. Haag, and R.P. Lollato. 2023. Re-Thinking Wheat Yield Response to Plant Density: Risk Assessment of Seed Treatment and Cleaning Methods. In: ASA-CSSA-SSSA International Meetings, October 2023. St Louis, MO. Poster.
- Severo B.S., **N. Giordano**, and R.P. Lollato. 2023. Winter Wheat Response to Plant Population in Environments with High Resource-Availability. In: ASA-CSSA-SSSA International Meetings, October 2023. St Louis, MO. Poster.
- **Giordano, N.**, J.A. Romero, E. van Versendaal and C.M. Hernandez. 2023. Data Hackathon presentation. Predicting wheat grain yield in the Magruder Plots. In NUE Conference, Stillwater OK. August 2023.
- **Giordano, N.**, Victor O. Sadras, and R.P. Lollato. 2022. Late-season N application increases grain protein concentration and is neutral for yield in wheat. A global meta-analysis. In: ASA-CSSA-SSSA International Meetings, November 2022. Baltimore, MD. Oral.
- **Giordano, N.**, J. Romero Soler, L.O. Pradella, L.M. Simão, L.P. Ryan, J. Peraza, A. Patrignani, and R.P. Lollato. 2022. Idatafield, an App for merging data from replicated plot trials. In: ASA-CSSA-SSSA International Meetings, November 2022. Baltimore, MD. Poster.
- **Giordano, N.**, L.B. Munaro, S. Haley, S. Jones-Diamond, G. Zhang, J.E. Lingenfelser, J.J. Johnson, A.K. Fritz, and R.P. Lollato. 2022. Phenotypic plasticity of yield is a positive trait for winter wheat in drought-prone environments. In: ASA-CSSA-SSSA International Meetings, November 2022. Baltimore, MD. Poster.
- **Giordano, N.**, A. Correndo, V.O. Sadras, and R.P. Lollato. 2022. Phenotypic plasticity unravels genotype-specific response to N in winter wheat. In: ASA-CSSA-SSSA International Meetings, November 2022. Baltimore, MD. Poster.
- **Giordano, N.**, J. Lacasa, J.F. Rybecky, and C.M. Hernandez. 2022. Data Hackathon presentation. Spatial prediction of maize grain yield in Nebraska fields. In: NUE Conference, August 2022. Lincoln, NE. Oral.
- **Giordano, N.,** Victor O. Sadras, and R.P. Lollato. 2022. Late-season N application increases grain protein concentration and is neutral for yield in wheat. A global meta-analysis. In: NUE Conference, August 2022. Lincoln, NE. Poster.
- **Giordano, N.**, R.P. Lollato. 2022. Revisiting the impacts of late season nitrogen fertilization on wheat crops. 2022 Great Plains Soil Fertility Conference. Poster.
- **Giordano, N.**, and R.P. Lollato. 2021. Does late-season nitrogen impact grain protein concentration in wheat? A global meta-analysis. In: ASA-CSSA-SSSA International Meetings, November 2021. Salt Lake City, UT. Poster.

TEACHING

- Graduate Teaching Assistant in Crop Science AGRON 220. Major Professor: Dr. R.V. Veenstra. August- December 2023.
- Workshop for AGSA Stats and Programming Committee. Workshop title: Unearthing Insights: Systematic Reviews and Meta-analysis in R. March 2023.
- Guest Lecturer for "World Food Crops" AGRON 325. Lecture: "Crop production in Argentina". February 2022, 2023, 2024.

SKILLS

Languages

- **Spanish (native)**
- **English (proficient)**

Programming Languages and Software

- **R**
  - R-Markdown and R Studio IDE
  - Statistical modelling: Linear and non-linear mixed models (*lme4, nlme, nls*), meta-analysis (*metafor*), multivariate analysis (principal components, discriminant and cluster analysis with k-means algorithm), regression and classification tree-based models (trees -*rpart, partykit*-). Bayesian hierarchical modeling with *brms*, *stan* and custom build metropolis-hasting sampling algorithm.
  - Data wrangling and visualization: wrangling (*tidyverse* frameworks) and visualization (ggplot2). Advanced iteration with *purr* package an parallel processing with *multidplyr* to analyze large datasets.
  - User interface: development of web apps through *shinny* and *flexdashboard*.
  - Other libraries: Retrieving weather (PRISM, DAYMET, CHIRPS) and soil data (SoilGrids) from libraries; Weather API-Client sources (Daymet, NASAPOWER, CHIRPS); and soil gridded data (Polaris database).
- **Python 3**
  - Jupyter notebooks and Jupyter Lab, VS Code and Spyder IDE.
  - Statistical modelling: wide variety of machine learning models using scikit-learn.
  - Data wrangling and visualization: pandas, numpy, matplotlib and bokeh.
  - Geospatial analysis: spatial data wrangling and visualization by integrating python capabilities and Arc with arcpy site package.
  - User interface: development of user web apps in python using streamlit library. Development of geoprocessing tools for ArcGIS Pro integrating arcpy and Arc.
- **Communication and Client Server**
  - Zoom, Teams, Skype, Google Meet, Outlook.

LEADERSHIP AND SERVICE

- Referee of the following journals: Field Crops Research, Crops and Pasture Science, Journal of Productivity Analysis.
- Chair of Stats and Programming Committee of the Agronomy Graduate Students Association. January 2024-Present.
- Social Chair of the Agronomy Graduate Students Association. January-December 2022.
- Stats and Programming Committee member of the Agronomy Graduate Students Association. January 2022 – Present.
- President of JornaderosAgro. President of a young-student non-profit organization focused on creating opportunities for undergraduate students to visit farmers across the central Pampas region in Argentina. February – December 2019.
- Member of JornaderosAgro. October 2017 – December 2019.
- Member of El Ombu non-profit organization. I actively participated as a member of a non-profit organization focused on bringing education into Ciudad Oculta neighborhood in the suburbs of Buenos Aires. March 2017- March 2018.

AWARDS

- 1st place in Data Hackathon Competition. In NUE Conference, Stillwater, OK. August 2023.
- 2nd place in Data Hackathon Competition. In NUE Conference, Lincoln, NE. August 2022.
- 1st place in Poster Competition. In NUE Conference, Lincoln, NE. August 2022.
- 2nd place at Graduate Student Poster Competition. In ASA-CSSA-SSSA Annual Meeting, Salt Lake City UT, C-3 Division Crop Ecology, Management and Quality. November 2021.
- Scholarship – Scharder/Massier Graduate Excellence Fund in Agronomy. July 2021.

EXTENSION PUBLICATIONS (3)

- Lollato, R.P., L.O. Pradella, J.A.R Soler, **N. Giordano**, et al., 2023. Dual-purpose wheat variety performance 2023. Kansas St. Univ. Agric. Exp. St. and Coop. Ext. Serv. MF3312.
- Lollato, R.P., J.A.R Soler, **N. Giordano**, L. Ryan, L.O. Pradella, M. Mota, G. Moreira, J.L.M. Castro, W.M. da Silva, L.H. Conti Affonseca, M. Nkrumah, G. Sueiro, B.N. Davila, G.O. de Leon, and J. Lingenfelser. 2022. Wheat dual-purpose variety performance 2022. Kansas St. Univ. Agric. Exp. St. and Coop. Ext. Serv. MF3312.
- Lollato, R.P., L.O. Pradella, G.O. de Leon, **N. Giordano**, J.R. Soler, B.N. Dávila Díaz, L. Ryan, M. Bartaburu, A.G. Mier, R. Rebesquini, and J. Lingenfelser. 2021. Wheat variety date of first hollow stem, fall forage yield, and grain yield for 2020-21. Kansas St. Univ. Agric. Exp. St. and Coop. Ext. Serv. MF3312.

EXTENSION PRESENTATIONS

- Wheat plot tours extension talks. Topic: Late season nitrogen management in wheat. Approximate attendance: 180 farmers, crop consultants and professionals. May 2022.

- Kansas Agribusiness Retailers Association Crop Production Update. Does late season N affect grain protein concentration in wheat? A global review. Approximate attendance: 30 crop consultants/professionals. December 2021.

REFERENCES

- Dr. Romulo P. Lollato. Associate Professor, Kansas State University. E-mail: lollato@ksu.edu
- Dr. V.O. Sadras. South Australian R&D Institute. E-mail: victor.sadras@sa.gov.au
- Dr. David A. Van Sanford. Associate Professor, University of Kentucky. E-mail: dvs@uky.edu
- Dr. Emilio H. Satorre. Associate Professor, University of Buenos Aires. E-mail: satorre@agro.uba.ar
- Dr. Virginia Verges. Post-doctoral Researcher, University of Kentucky. E-mail: vlverg2@uky.edu
- Mr. Martin Sanin. Crop Production CEO, Pedro A. Lacau e Hijos SRL. E-mail: martinsanin@lacau.com.ar
- Mr. Ignacio Lanusse. Crop Production CEO, ALFIN SCA. E-mail: pikilanusse@gmail.com