Nicolas Giordano

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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. I am driven by advancing crop management recommendations, integrating state-of-the-art statistical and crop eco-physiology principles, with focus on process improvement and proven ability to collaborate with peers to improve processes and tools.

Strengths: team-player, proactive, ambitious, articulate

ACADEMIC AND PROFESSIONAL EXPERIENCE

KANSAS STATE UNIVERSITY – GRADUATE RESEARCH ASSISTANT (Jan 2021 – Present)

My research focuses on understanding genetic, environmental, management and physiological drivers of wheat grain yield and protein concentration on both regional (Central Great Plains) and global scales. Research spans from understanding impacts of late nitrogen applications, designing genotype-specific N recommendation models, unraveling the genetic architecture of genotype x environment interactions and deployment of statistical models to quantify risk on wheat planting decisions. Most recently, research centers on defining sustainable wheat systems by major stakeholders across the entire wheat value chain.

Key accomplishments:

- Development of *IDataField* and end-to-end platform for planning, executing, monitoring and collecting data from field trials. *IDataField* reduces data retrieving cost and speeds up innovation (*e.g.* 90% time reduction in green canopy cover data collection with UAV pipeline) through structured database generation. *IDataField* has been deployed to two university research programs and is designed to be expanded globally.
- Published four articles on highly rated peer-reviewed journals including Field Crops Research (x2), Crop Science (x1) and Frontiers in Agronomy.
- Timely coordination and execution of field trials across 10 locations over four years. Crew manager, guiding eight summer interns every year.
- Mentored two undergraduate students from the University of Buenos Aires and University of La Plata helping them analyze data and write up their undergraduate thesis.

- Statistical consulting with animal science specialists in Argentina, Chile and the US to identify drivers of marbling score in Wagyu steers and improve average daily gain predictions on Angus steers.
- Served as Teaching Assistant in Crop Science (AGRON 220) during one semester as well as guest lecturer for World Food Crops course (AGRON 325) during three years, sharing insights of agriculture in Argentina.

KUME MAPU SA – FIELD AGRONOMIST (Mar 2020 – Dec 2020)

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.

Key accomplishments:

- Redesigned crop rotations and field management zones on family farming company.
- Timely execution of summer crops harvest and winter row crops and pastures planting.

UNIVERSITY OF KENTUCKY - WHEAT BREEDING INTERN (Apr 2018 – Nov 2018)

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 SRL – FIELD AGRONOMIST (Dec-Mar 2015-2020)

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

ALFIN S.C.A. – FIELD AGRONOMIST (July 2019)

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

SKILLS

Programming Languages and Software

- R
    - 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 algorithms.
    - *Tidyverse* frameworks for data wrangling, visualization (ggplot2) and web apps deployment (*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
    - Statistical modeling: 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.

EDUCATION

Doctor of Philosophy (Ph.D.) in Agronomy (Jan 2021 – Present)

Kansas State University, Department of Agronomy

Bachelor of Science (B.S.) in Agricultural Engineering (2014 – 2019)

University of Buenos Aires, College of Agriculture