Caio L. dos Santos

CONTACT INFORMATION

716 Farmhouse Ln
Department of Agronomy
Iowa State University
Ames, Iowa, USA

clsantos@iastate.edu
cldossantos.github.io

SUMMARY

I am currently a Ph.D. student in the Agronomy department at Iowa State University. Most of my research is focused on utilizing crop models, such as the Agricultural Production Systems Simulator (APSIM) to assess spatial and temporal variability of cropping systems. The goal is to assess the risk associated with different management decisions. There are several research areas that fascinate me. A short list of those would be: crop physiology, crop models, remote sensing, soil fertility, and statistical models.

EDUCATION

Ph.D., Crop Production and Physiology **2020 - Present**
Expected graduation date: December 2025
Department of Agronomy
Iowa State University, Ames, Iowa, US

Minor in Statistics
Major advisor: Fernando Miguez

M.Sc., Crop, Soil, and Environmental Sciences **2018 - 2020**
Department of Crop, Soil, and Environmental Sciences
University of Arkansas, Fayetteville, Arkansas, US

Major advisors: Larry Purcell and Trent Roberts
Thesis: Managing Corn Nitrogen Fertility in Arkansas Based on Data from an Unmanned Aerial System

B.S., Agronomy **2013 - 2018**
College of Agriculture "Luiz de Queiroz"
University of Sao Paulo, Piracicaba, Sao Paulo, Brazil

PUBLICATIONS

- Peer-reviewed

1. Pessotto, M. V., Roberts, T.L., Bertucci, M., **dos Santos**, C., Ross, J., and Savin, M. 2023. Determining cardinal temperatures for eight cover crop species. Agrosystems, Geosciences & Environment, 6, e20393.
2. **dos Santos**, C. L., Miguez, F. E., King, K. A., Ruiz, A., Sciarresi, C., Baum, M. E., Danalatos, G. J. N., Stellman, M., Wiley, E., Pico, L.O., Thies, A., Puntel, L. A., Topp, C. N., Trifunovic, S., Eudy, D., Mensah, C., Edwards, J. W., Schnable, P. S., Lamkey, K. R., ... , and Archontoulis, S. V. 2023. Accelerated leaf appearance and flowering in maize after four decades of commercial breeding. Crop Science, 1–13.
3. Ruiz, A., Trifunovic, S., Eudy, D.M., Sciarresi, S. C., Baum, M., Danalatos, G.J.N., Elli, E.F., Kalogeropoulos,G., King, K., **dos Santos**, C.L., Thies, A., Pico, L.O., Castellano, M.J., Schnable, P.K., Topp, C., Graham, M., Lamkey, K.R., Vyn, T.J., and Archontoulis, S.V. 2023. Harvest Index has increased over the last 50 years of maize breeding. Field Crops Research, 300, 10900.
4. **dos Santos**, C.L.; Abendroth, L.J.; Coulter, J.A.; Nafziger, E.D.; Suyker, A.; Yu, J.; Schnable, P.S.; Archontoulis, S.V. 2022. Maize Leaf Appearance Rates: A Synthesis From the United States Corn Belt. Frontiers in Plant Science, 13.

5. **dos Santos**, C.L., T.L. Roberts, and L.C. Purcell. 2021. Leaf Nitrogen Sufficiency Level Guidelines for Midseason Fertilization in Corn. Agronomy Journal, 113, 1974-1980.
6. **dos Santos**, C.L., T.L. Roberts, L.C. Purcell. 2020. Canopy greenness as a midseason nitrogen management tool in corn production. Agronomy Journal. 112, 5279-5287.
7. **dos Santos**, C.L., M. Salmeron, and L.C. Purcell. 2019. Soybean phenology prediction tool for the Midsouth. Agricultural and Environmental Lettters, 4, 190036.
8. **dos Santos**, C.L., A.F. De Borja Reis, P. Mazzafera, J.L. Favarin. 2018. Determination of the water potential threshold at which rice growth is impacted. Plants 7, 48.

- Extension publications

1. Purcell, L.C., C.L. **dos Santos** , and M. Salmerón. 2021. Soybean Development Stage Predictions. Cooperative Extension Service, University of Arkansas.
2. **dos Santos**, C.L., T.L. Roberts and L.C. Purcell. 2020. Dark Green Color Index as a midseason nitrogen management tool in corn production systems. In N.A.Slaton (eds.). Wayne E. Sabbe Arkansas Soil Fertility Studies 2019, (In press). Arkansas Agricultural Experiment Station, University of Arkansas Division of Agriculture, Fayetteville.
3. **dos Santos**, C.L., T.L. Roberts and L.C. Purcell. 2020. Nitrogen sufficiency level guidelines for pretassel fertilization in Arkansas. In N.A.Slaton (eds.). Wayne E. Sabbe Arkansas Soil Fertility Studies 2019, (In press). Arkansas Agricultural Experiment Station, University of Arkansas Division of Agriculture, Fayetteville.
4. dos Santos, C.L., L.C. Purcell, and W.J. Ross. 2018. Developing a new staging system for soybean. In: J.D. Ross (eds.). Arkansas Soybean Research Series 2016. (In press). Arkansas Agricultural Experiment Station, University of Arkansas Division of Agriculture, Fayetteville.

Software

Soystage – Online decision support tool for the Midsouthern U.S. **2019**
http://soystage.uark.edu

pacu: Precision Agriculture Computational Utilities **2024**
https://github.com/cldossantos/pacu

Honors and Awards

Agronomy Teaching Fellowship, **2023**
Department of Agronomy
Iowa State University

Outstanding Master's student **2020**
Crop, Soil, and Environmental Sciences Department
University of Arkansas

2nd Place in the master's division at Gamma **2019**
Sigma Delta Student Competition
Fayetteville, Arkansas, US

Service and Offices held

Member of the Curriculum Committee of the Crop, Soil, and **2019**
Environmental Sciences Major University of Arkansas
Fayeteville, Arkansas, US

President of the Crop, Soil, and Environmental **2019**
Sciences Graduate Student Club
University of Arkansas
Fayeteville, Arkansas, US

Vice president of the Crop, Soil, and Environmental Sciences Graduate Student Club
University of Arkansas
Fayeteville, Arkansas, US — **2018**

Teaching Experience

Teaching assistant in Crop Development, Production, and Management (AGRON 280)
Iowa State University
Ames, Iowa, US — **2023**

Guest Lecturer in Soybean Production (CSES 3322)
University of Arkansas
Fayeteville, Arkansas, US — **2023**

Teaching assistant in Crop and Soil Modeling (AGRON 525)
Iowa State University
Ames, Iowa, US — **2022 - 2024**

Teaching assistant in Soil Fertility (CSES 5114)
University of Arkansas
Fayeteville, Arkansas, US — **2020**