

CURRICULUM VITAE

Guillermo R Balboa (PhD)

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EDUCATION

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|-------------|---------------|--|--|
| 2014 -2018. | PhD Fulbright | Kansas State University. USA | <i>Agronomy</i>
<i>Dissertation title:</i> Closing Yield Gaps in a Corn – Soybean rotation: Impact of Different Management Practices. GPA: 4/4 |
| 2012-2014 | M.S. | Rio Cuarto National University (Argentina) | <i>Crop Production</i>
<i>Thesis title:</i> agronomic criteria comparison of two dosage of nitrogen in corn in well-drained plains of central and southern Cordoba. Equivalent GPA: A/A |
| 2003-2008 | B.S. | Rio Cuarto National University | <i>Agronomical Engineering</i>
<i>Thesis title:</i> relationship between the normalized difference vegetation index and grain yield of corn fertilized by management zones. Equivalent GPA: A/A |

PROFESSIONAL EXPERIENCE

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| Sept 2021-Present | Research Assistant Professor in nutrient management and Digital Agriculture at University of Nebraska Lincoln. |
| Feb 2019-Aug 2021 | Assistant Professor in Farming Systems and Digital Agriculture Department of Vegetal Production. Rio Cuarto National University – Rio Cuarto, Argentina |
| Jul 2018- Feb 2019 | Postdoctoral Fellow in Farming Systems and Digital Agriculture at the Commonwealth Science Industries Research Organization (CSIRO). Canberra, Australia. |
| August 2014-2018 | Graduate Research Assistant at KSUCROPS Crop Production Team, Department of Agronomy, Kansas State University – Manhattan, Kansas, USA. |
| Oct 2008-Jul 2014 | Assistant Professor in Cereal Production Department of Vegetal Production. Rio Cuarto National University – Rio Cuarto, Argentina |

RESEARCH PROYECT

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| 2019-present | Balboa GR. Use of Digital Ag Tools on management practices studies to close yield gaps in South Cordoba Cropping systems. Sponsored by the Science National Ministry. |
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EXTENSION PROYECT

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| 2019-present | Balboa GR. First University Digital Ag Farm in Argentina. Implementing different strategies to incorporate Digital Tools to Pozo de Carril University Farm. Setting a Regional LORA Network (30000 ha) for farmers to join their sensors IoT. |
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PEER-REVIEWED PUBLICATIONS

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| 2019 | Balboa GR, Ciampitti IA. 2019. Estimating biological nitrogen fixation in field-grown soybeans : impact of B value. Plant Soil. doi: doi.org/10.1007/s11104-019-04317-1 |
| 2019 | G.R. Balboa, S.V. Archontoulis, F. Salvagiotti, F.O. Garcia, W.M. Stewart, E. Francisco, P.V. Vara Prasad, and I.A. Ciampitti A systems-level yield gap assessment of maize-soybean rotation under high- and low-management inputs in the Western US Corn Belt using APSIM. Accepted April 2019. Agricultural Systems Journal. |

- 2017 Balboa, G.R.; V.O. Sadras and I.A Ciampitti, Shifts in soybean yield, nutrient uptake, and nutrient stoichiometry: A historical synthesis-analysis. *Crop Sci.* 58:1–12 (2018). Published online in *Crop Science* 11/30/2017.
<https://dl.sciencesocieties.org/publications/cs/articles/58/1/43>
- 2017 Balboa, G.; Stewart, M.; Salvagiotti, F.; Garcia, F.; Francisco, E.; I.A. Ciampitti. 2016. Intensive Soybean Management: An Integrated System Approach. *Better Crops*. Vol. 101. No. 1. International Plant Nutrition Institute.
- 2017 Enrico, J.M.; Garcia, F.; Stewart, M.; Balboa, G.; Ciampitti, I.; F. Salvagiotti. Integrando estrategias de manejo de cultivo y fertilización para reducir las brechas de rendimiento en soja en región pampeana. *Informaciones Agronómicas IAH* 27. International Plant Nutrition Institute.
- 2016 S. Tamagno, G.R. Balboa, Y. Assefa, P. Kovács, S.N. Casteel, F. Salvagiotti, F.O. García, W.M. Stewart, and I.A. Ciampitti. Nutrient Partitioning and Stoichiometry in Soybean: A Synthesis-Analysis. *F. Crop. Res.* 200: 18–27
- 2016 Adee E, Roozeboom K, Balboa GR, Schlegel A and Ciampitti IA (2016) Drought-Tolerant Corn Hybrids Yield More in Drought-Stressed Environments with No Penalty in Non-stressed Environments. *Front. Plant Sci.* 7: 1-9
- 2014 Travaglia, C., Esposito, G., Balboa, G., Masciarelli, O., Fortuna, J., Cardozo, P., Reinoso, H. 2014. Physiological and anatomical behavior of two contrasting maize hybrids grown at high density sowing. *Australian Journal of Crop Science*. Volume: 8 Issue 9 Pages: 1311 - 1318.

MANUSCRIPTS IN PREPARATION

- 2021 G.R. Balboa, F. Salvagiotti, F.O. Garcia, W.M. Stewart, E. Francisco, P.V. Vara Prasad, and I.A. Ciampitti. Evaluation of Management Systems on a Corn-Soybean Rotation: Productivity, Efficiency, and Partial Nitrogen Balance. To be submitted October 2021 to *European Journal of Agronomy*

FIELD RESEARCH REPORTS

- 2020 Balboa, G.R. Determining corn yield potential Season 2019-20. May 2020.
<https://www.produccionvegetalunrc.org/ampliar22.php?id=73>
- 2017 Balboa, G. R. and Ciampitti, I. A. (2017) "Closing Corn Yield Gaps via Improved Management: A Systems Approach," *Kansas Agricultural Experiment Station Research Reports*: Vol. 3: Iss. 6. <https://doi.org/10.4148/2378-5977.7424>
- 2017 Balboa, G. R. and Ciampitti, I. A. (2017) "Closing Soybean Yield Gaps via Improved Management: A Systems Approach," *Kansas Agricultural Experiment Station Research Reports*: Vol. 3: Iss. 6. <https://doi.org/10.4148/2378-5977.7433>
- 2016 Balboa, G. R. and Ciampitti, I. A. (2016) "Breaking Corn Yield Barriers: A Cropping Systems Approach," *Kansas Agricultural Experiment Station Research Reports*: Vol. 2: Iss. 5. <http://dx.doi.org/10.4148/2378-5977.1230>
- 2016 I. A. Ciampitti, G. R. Balboa. 2016. Breaking Soybean Yield Barriers: A Cropping Systems Approach. *Kansas Agricultural Experiment Station Research Reports*. Vol. 2: Iss. 5.
Link: <http://newprairiepress.org/kaesrr/vol2/iss5/12/>
- 2015 Balboa, G.R., and I.A. Ciampitti. 2015. Breaking soybean yield barriers: A cropping systems approach. *Kansas Agricultural Experiment Station*. Vol. 1 : Iss. 2. Link: <http://newprairiepress.org/kaesrr/vol1/iss2/18/>
- 2015 Balboa, G.R., D.R. Hodgins, and I.A. Ciampitti. 2015. Late-season nitrogen fertilizer application in soybean. *Kansas Agricultural Experiment Station*. Volume: 1 Issue 2. Link: <http://newprairiepress.org/kaesrr/vol1/iss2/8/>

PRESENTATIONS AT PROFESSIONAL MEETINGS

- 2020 Esposito, G.P, Cerliani, C., Naville, R. Fissore, M. Borrás, L Balboa G. Optimum corn seeding rate and nitrogen use efficiency. XXVII Argentina Soil Science Congress.
- 2019 Balboa, G.R. Archontoulis, S.V. Salvagiotti, F. Garcia, F.O. Stewart, W.M. Francisco, E. Vara Prasad, P.V. Ciampitti I.A. A systems-level yield gap assessment of maize-soybean rotation under. 7th Mercosur Soybean Congress. high- and low-management inputs in the western us corn belt using apsim
- 2017 Balboa, G.R., V.O. Victor, I.A. Ciampitti. Shifts in Soybean Yield, Nutrient Uptake, and Stoichiometry: A Historical Synthesis-Analysis. ASA, CSSA, SSSA Annual Meeting, Tampa Florida. October 2017. Oral presentation.
- 2017 Balboa, G.R., W. M. Stewart, F. Salvagiotti, F. O. Garcia, E. Francisco, I. A. Ciampitti. Managements Practices to Close Yield Gaps in Soybeans. A Historical Synthesis-Analysis. ASA, CSSA, SSSA Annual Meeting, Tampa Florida. October 2017. Oral presentations.
- 2017 Ciampitti, I.A., O. A. Ortez, G.R. Balboa. Corn Yield App, an on-Farm Tool for Estimating Corn Yields. ASA, CSSA, SSSA Annual Meeting, Tampa Florida. October 2017.
- 2016 Balboa, G., W.M. Stewart, F. Salvagiotti, F.O. Garcia, E. Francisco, J.M. Enrico and Ignacio A. Ciampitti. Management Practices to close Yield Gaps in Maize-Soybean Systems: Experiences in United States, Brazil and Argentina. International Fertilizer Society Meeting, Agronomic Conference Cambridge, UK.
- 2016 Balboa G., M. Stewart, F. Salvagiotti, F.O. Garcia, S. Archontoulis and Ignacio A. Ciampitti. Modeling a Corn-Soybean Rotation with APSIM in Western US Corn Belt. ASA - CSSA - SSSA Annual Meeting, 2016. Phoenix, AZ-USA.
- 2016 Balboa G., Varela S., Maxwell T., Duncan S., Shoups D., Ciampitti I. 2016. On farm research experiences to determine optimum seeding rate in corn. 13th International Conference on Precision Agriculture. St. Louis, MO.
- 2015 Balboa, G., Stewart M., Garcia F., Francisco E, Salvagiotti, F., Ciampitti, A. Closing Yield Gaps in Corn and Soybean: Impact of Different Management Practices. ASA - CSSA - SSSA ESA Annual Meeting, 2015. Minneapolis, MN-USA.
- 2015 Sorghumyield® App, a New Tool for Predicting Sorghum Yields: Validation and Calibration. Ignacio Antonio Ciampitti, Ana Julia Azevedo, Guillermo R. Balboa and Nicolas Bossio, ASA - CSSA - SSSA ESA Annual Meeting, 2015. Minneapolis, MN-USA.
- 2015 Ignacio A. Ciampitti, Guillermo R. Balboa and Gabriela Inveninato Carmona. Nutrient Use Efficiencies in Soybean: A Review. ASA - CSSA - SSSA ESA Annual Meeting, 2015. Minneapolis, MN-USA.
- 2015 Sebastian Varela, P.V. Vara Prasad, Guillermo R. Balboa, Terry Griffin, Allison Ferguson and Ignacio A. Ciampitti Integrated Imagery Approaches for Predicting Plant Growth in Corn Via sUAVS. ASA - CSSA - SSSA ESA Annual Meeting, 2015. Minneapolis, MN-USA.
- 2014 Guillermo R. Balboa, Gabriel P. Esposito, Cecilia Cerliani and Ignacio A. Ciampitti. Site-Specific Variable Nitrogen Rate Model in Corn. ASA - CSSA - SSSA Annual Meeting, 2014. Long Beach, LA-USA.

COURSES TAUGHT

- Cereal Production – Rio Cuarto National University; 2008-2013, 2019-2020 (Undergraduate level)
- Site Specific Management – Rio Cuarto National University; 2009-2013, 2019-2020 (Undergraduate level)
- Crop Physiology – Rio Cuarto National University; 2008-2013, 2019-2020 (Undergraduate level)
- Sorghum Production – Rio Cuarto National University; 2008-2013, 2019-2020 (Undergraduate level)
- Site specific management – Rio Cuarto National University 2019-2020 (Graduate level)

LEADERSHIP

2020-Present	Virtual Teaching Coordinator at the Agronomy Department, Rio Cuarto National University.
2020-Present	Academic Coordinator of the Specialization in Precision Agriculture at Rio Cuarto National University
2015-2016	President of the International Student Organization Fulbrighters at Kansas State University. USA
2015-2016	Vice president of the Agronomy Graduate Student Association (AGSA) at Kansas State University. USA
2014-2016	Member of the International Visiting Scholar Selection Committee at KSUCrops (2014-2016). USA
2011-2013	Secretary and then as Vice director at Crop Production Department, Rio Cuarto National University. Argentina

EXTENSION CONTRIBUTIONS:

2020	AAPRESID National Virtual Congress. Dissertation on Digital Agriculture.
2017	Kansas Soybean Yield Contest. Providing support to certify harvest process and determination of yield for the contest.
2017	Coordination and interpreter for Argentinean agronomist groups that visit KSUCrops.
2016	Sorghum Yield Estimator App. Coordination between the project leader (Dr. Ciampitti) and the development team to generate and calibrate the app.
2016	Soybean planting dates and maturity group: Trends and K-State recommendations. eUpdate K State Research and Extension. Issue 563 April 15 th , 2016. Ciampitti, I.A., Ortey, O.A., Balboa, G.R., Adey, E., Kimball, J., Cramer, G., Sassenrath, G., Duncan, S.
2014-2018	On Farm Precision Ag Research". Processing data and report generation (GIS - Geostatistics techniques).
2014	"Soybean Yield Estimator". Project coordinator: Guillermo Balboa. Project Leader: Dr. Ignacio Ciampitti. Available in Google Play.
2015	"Sorghum yield App". The App got an award in 2015 ASA Meeting. Project coordinator: Guillermo Balboa. Project Leader: Dr. Ignacio Ciampitti.
2015	On-Farm soybean seeding rate studies: 2014 season – North Central Kansas. eUpdate K State Research and Extension. Issue 508 May 1st, 2015. Ciampitti, I.A., Balboa, G.R. Corn seeding rate recommendations. eUpdate K State Research and Extension. Issue 555 March 18th, 2016. Ciampitti, I.A., Balboa, G.R.

SCHOLARSHIP AND AWARDS

2017	Kansas Corn Next Generation Scholarship for Graduate Student Scholarship
2017	Dr. Neal F and Florence E Morehouse Scholarship at Kansas State University
2016	Crawford Foundation Training Award. To pursue a training in Adelaide University from January to March 2017, Australia.
2016	Gerald O. Mott Scholarship from the Crop Science Society of Agronomy (June 2016) The G. O. Mott Scholarship recognizes meritorious graduate students in crop science in the US. The award is administrated by the Crop Science Society of America.
2016	John H. Parker Scholarship recipient at Kansas State University for the academic year 2016-2017.
2015	IPNI Student Award (November 2015).
2014	Fulbright Scholarship to perform PhD degree at Kansas State University (March 2014).

- 2014 Monica Mourier Archibald Award (October 2014). Administrated by the Institute of International Education (IIE) as a contribution in my first year of my PhD Program.
- 2008 Highest GPA of the Department of Agronomy at Rio Cuarto National University in (December 2008). As awarded by the Argentina Ministry of Education (Cordoba, Argentina).

PROFESSIONAL MEMBERSHIPS

- 2014-present American Society of Agronomy, Crop Science Society of America, Soil Science Society of America.
- 2008-present Soil Science Society of Argentina.

LANGUAGES

English: bilingual proficiency.

Spanish: Native.

SOFTWARE

APSIM

QGIS

R

Graph Pad Prisma

Agisoft Metashape

Microsoft Office Pachkage

WEBSITES AND SOCIAL MEDIA

Administrator and content manager of the Department of Vegetal Production

URL www.produccionvegetalunrc.org

Administrator and content manager of the Agricultura Digital Argentina Project Website.

Department of Vegetal Production

URL <http://agriculturadigital.ar>

Administrator and content manager of the Department of Vegetal Production YouTube Channel

URL www.youtube.com/ProdVegetalUNRC