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JUAN M. HERREA

Ingeniero Agrónomo, PhD, nacido el 11.07.1975.

Experiencia Investigador – Agroscope – Plant-Production Systems . Desde 2014.

Investigador Adjunto – Universidad de Buenos Aires (UBA) – Instituto de Investigaciones en Biociencias Agrícolas y Ambientales (INBA): 2013-2014.

Científico asociado – Centro Internacional de Mejoramiento de Maíz y Trigo (CIMMYT): 2011-2013.

Postdoc - Swiss Federal Institute of Technology (ETH) – Laboratorio de Agronomía y mejoramiento genético: 2007-2011.

Estadía post-doctoral - Agricultural Research Service - US Department of Agriculture (ARS-USDA) - Soil Plant Nutrient Research Unit: 2007.

Estudiante de doctorado - Swiss Federal Institute of Technology (ETH) - Laboratorio de Agronomía y mejoramiento genético: 2001-2006.

Educación **Swiss Federal Institute of Technology (ETH)** - Suiza. Título: PhD.

University of California Davis (UC Davis) – EE.UU. Plant Breeding Academy.

Universidad de Buenos Aires (UBA) - Argentina. Título: Ingeniero Agrónomo.

Idiomas: Castellano, Ingés, Francés (nivel avanzado), Alemán (nivel intermedio).

Servicios y premios: Investigador externo INBA (ad-honorem), 2020 Chair's Leadership Award (Soil and Water Conservation Society), Associate Editor (Journal of Soil and Water Conservation from 2014-2022), Fellowship for Prospective Researchers (Swiss National Science Foundation), Diploma a mejores promedios (UBA).

Docencia **Universidad de Buenos Aires (UBA) –** Curso de grado "Fertilidad de Suelos y Fertilización" (2012-2014).

Swiss Federal Institute of Technology (ETH) – Curso sobre cultivos alternativos y visitas de campo para estudiantes de Agronomía en la estación experimental del Instituto de Ciencias Agrícolas (2007-2010).

Formación de estudiantes:
Doctorado: Simon Treier (ETH, Desde 2020, Co-supervisor), Paola Bongiovani de Figueiredo (ETH, Desde 2019, Co-supervisor), Lucia Casali (U.B.A, Desde 2013, subdirector de tesis), Carlos Torres Guerrero (COLPOS, 2012-2017), Deborah Britschgi (ETH, 2008-2011, Asesor); Marc Faget (ETH, 2006-2010, Co-supervisor).
Maestría: Carlos Torres Guerrero (COLPOS, 2011-2012, Asesor).
Grado: François Janus (ENSA, 2017, Co-supervisor), Philip Herter (ETH, 2007-2008, Co-supervisor).

Publicaciones en revistas con referato (información en el idioma de la publicación)
ORCID ID: 0000-0002-9398-7224
https://scholar.google.com/citations?hl=en&user=sfuu_RoAAAAJ&view_op=list_works&sortby=pubdate
https://www.researchgate.net/profile/Juan-Herrera-12

49. Metzger K, Liebisch F, **Herrera JM**, Guillaume T, Walder F and Bragazza L. 2023. The use of visible and near-infrared spectroscopy for in situ characterization of agricultural soil fertility: a proposition of best practice by comparing scanning positions and spectrometers. Soil Use and Management. *In press*. https://doi.org/10.1111/sum.12952
48. Turchetta M, Corinzia L, Sussex S, Burton A, **Herrera J**, Athanasiadis IN, Buhmann JM, Krause A. 2022. Learning Long-Term Crop Management Strategies with CyclesGym. Advances in Neural Information Processing Systems 35, https://openreview.net/forum?id=Zx5qJzNesn0
47. Grovermann C, Weiner M, Levy L, Locher M, **Herrera JM**, Winter E. 2022. Three decades of organic wheat improvement: Assessing the impact and returns on investment, Q Open, Volume 2, Issue 1, qoac005, https://doi.org/10.1093/qopen/qoac005
46. Casali L, **Herrera JM**, Rubio G. 2022. Resilient soybean and maize production under a varying climate in the semi-arid and sub-humid Chaco. European Journal of Agronomy 135: 126463.
45. Visse-Mansiaux M, Soyeurt H, **Herrera JM**, Torche JM, Vanderschuren H, Dupuis B. 2022. Prediction of potato sprouting during storage. Field Crops Research 278: 108396.
44. Morisse M, Wells DM, Millet EJ, Lillemo M, Fahrner S, Cellini F, Lootens P, Muller O, **Herrera JM**, Bentley AR, Janni M. 2022. A European perspective on opportunities and demands for field-based crop phenotyping. Field Crops Research 276: 108371.
43. Bousselin X, Cassagne N, Baux A, Valantin-Morison M, **Herrera JM**, Lorin M, Hédan M, Fustec J. 2021. Interactions between plants and plant-soil in functionally complex mixtures including grass pea, faba bean and niger, intercropped with oilseed rape. Agronomy 11: 1493. https://doi.org/10.3390/agronomy11081493
42. Casali L, **Herrera JM**, Rubio G. Modelling maize and soybean responses to climatic change and soil degradation in a region of South America. Agronomy Journal 2020; 1-13.
41. Torres-Guerrero CA, Gutiérrez-Castorena MC, Gutiérrez-Castorena EV, Ortiz Solorio CA, **Herrera JM**. 2020. Cuantificación de los componentes del suelo en secciones delgadas. Boletín de la Sociedad Geológica Mexicana. 72: 1-17.
40. Lüder RMH, Qin R, Richner W, Stamp P, Streit B, **Herrera JM**, Noulas, C. 2020. Small-scale variation in Nitrogen use efficiency parameters in winter wheat as affected by N fertilization and tillage intensity. Sustainability 12: 3621.
39. **Herrera JM**, Noulas C, Stamp P, Levy-Häner L, Pellet D, Qin R. 2020. Nitrogen rate increase not required for no-till wheat in cool and humid conditions. Agronomy 10: 430.
38. **Herrera JM**, Levy Häner L., Mascher F, Hiltbrunner J, Fossati D, Brabant C, Charles R, Pellet D. 2020. Lessons from 20 years of studies of wheat genotypes in multiple environments and under contrasting production systems. Frontiers in Plant Science. 10: 1745. Doi: 10.3389/fpls.2019.01745
37. Wendling M, Charles R, **Herrera J**, Amossé C, Jeangros B, Walter A, Büchi L. 2019. Effect of species identity and diversity on biomass production and its stability in cover crop mixtures. Agriculture, Ecosystems and Environment 281: 81-91.
36. Casali L, Rubio G, **Herrera JM**. 2018. Drought and temperature limit differently tropical and temperate maize hybrids in a subtropical region. Agronomy for sustainable development 38: 49.
35. Schils R, Olesen JE, Kersebaum K-C, Rijk B, Oberforster M, Kalyada V, Khitrykau M, Gobin A, Kirchev H, Manolova V, Manolov I, Trnka M, Hlavinka P, Paluoso T, Peltonen-Sainio P, Jauhiainen L, Lorgeou L, Marrou H, Danalatos N, Archontoulis S, Fodor N, Spink J, Roggero PP, Bassu S, Pulina A, Seehusen T, Uhlen AK, Żyłowska K, Nieróbca A, Kozyra J, Vasco Silva J, Martins Maçãs B, Coutinho J, Ion V, Takáč J, Mínguez MI, Eckersten H, Levy L, **Herrera JM**, Hiltbrunner J, Kryvobok O, Kryvoshein O, Sylvester-Bradley R, Kindred D, Topp CFE, Boogaard H, de Groot H, Lesschen JP, van Bussel L, Wolf J, Zijlstra M, van Loon MP, van Ittersum MK. 2018. Cereal yield gaps across Europe. European Journal of Agronomy 101: 109-120.
34. **Herrera JM**, Levy Häner L, Holzkämper A, Pellet D. 2018. Evaluation of ridge regression for country-wide prediction of genotype-specific grain yields of wheat. Agricultural and Forest Meteorology 252:1-9.

33. Noulas C, **Herrera JM**, Tziouvalekas M, Qin R. 2018. Agronomic Assessment of Nitrogen Use Efficiency in spring wheat and interrelations with leaf greenness under field conditions. Communications in Soil Science and Plant Analysis. *In press.*
32. Qin R, Noulas C, **Herrera JM.** 2017. Morphology and distribution of wheat and maize roots as affected by tillage systems and soil physical parameters in temperate climates: an overview. Archives of Agronomy and Soil Science, pp. 1-16.
31. Gfeller A, **Herrera JM**, Tschuy F, Wirth J. 2018. Explanations for Amaranthus retroflexus growth suppression by cover crops. Crop Protection 104: 11-20.
30. Gauthier M, Pellet D, Monney C, **Herrera JM**, Rougier M, Baux A. Fatty acids composition of oilseed rape genotypes as affected by solar radiation and temperature. Field Crops Research 212: 165-174.
29. Levy Häner L, Courvoisier N, Rechsteiner S, **Herrera JM**, Brabant C, Hund A, Weissflog T, Dierauer H, Pellet D. 2017. Winter Wheat: A review of 15 years of variety research on extensively managed land. Recherche Agronomique Suisse 8: 300-309.
28. **Herrera JM**, Büchi L, Rubio G, Torres-Guerrero C, Wendling M, Stamp P, Pellet D. 2017. Root decomposition at high and low N supply throughout a crop rotation. European Journal of Agronomy 84: 105-112.
27. Levy Häner L, Courvoisier N, **Herrera JM**, Brabant C, Pellet D. 2016. Protein potential of winter wheat varieties. Recherche Agronomique Suisse 7: 364-371.
26. **Herrera JM**, Noulas C, Stamp P, Pellet D. 2016. Little potential of spring wheat genotypes as a strategy to reduce nitrogen leaching in central Europe. *Agronomy 6*: 29.
25. **Herrera JM**, Rubio G, Levy Häner L, Delgado JA, Lucho-Constantino CA, Islas-Valdez S, and Pellet D. 2016. Emerging and established technologies to increase nitrogen use efficiency of cereals. Agronomy 6: 25.
24. Islas-Valdez S, Beltrán-Hernández RI, Gómez-Mercado R, Jiménez-Gonzalez A, **Herrera JM**, Lucho-Constantino CA. 2015. Biological effectiveness of liquid biofertilizer in barley. Environmental Science and Pollution Research 24: 25731-25740.
23. Noulas C, Alexiou I, Karyotis T, **Herrera JM**, Toulios M. 2015. Relationship between the Isotope Dilution and the difference methods for assessing fertilizer nitrogen recovery efficiency. Advances in Geoecology 44: 143-153.
22. Levy-Häner L, Stamp P, Kreuzer M, **Herrera JM**, and Pellet D. 2015. Environmental effects on the expression of genotypic differences in wheat grain viscosity. Crop Science 55: 1311-1319.
21. Baudron F, Delmotte S, Corbeels M, **Herrera JM**, Tittonell P. 2014. Multi-scale trade-off analysis of cereal residue use for livestock feeding vs. soil mulching in the Mid-Zambezi Valley, Zimbabwe. Agricultural Systems 134: 97-106.
20. Mulvaney MJ, Verhulst N, **Herrera JM**, Mezzalama M, Govaerts B. 2014. Improved wheat performance with seed treatments under dry sowing on permanent raised beds. Field Crops Research 164: 189-198.
19. Noulas C, **Herrera JM**, Alexiou I, Karyotis T, Liedgens M, Stamp P, and Toulios M. 2014. Nitrogen leaching of spring wheat (*Triticum aestivum* L.) genotypes varying in nitrogen-related traits. Journal of Plant Nutrition 37: 1012-1024.
18. **Herrera JM,** Verhulst N, Trethowan R, Stamp P, and Govaerts B. 2013. Insights into genotype by tillage interaction effects on the grain yield of wheat and maize. Crop Science 53: 1845-1859.
17. **Herrera JM**, Stamp P, and Liedgens M. 2013. Root growth of spring wheat genotypes varying in nitrogen uptake and other nitrogen-related traits. Journal of Plant Nutrition and Soil Science 176: 561-571.
16. Faget M, Nagel K, Walter A, **Herrera JM**, Jahnke S, Schurr U, and Temperton V. 2013. Root-root interactions - extending our perspective to be more inclusive of the range of theories in ecology and agriculture using in-vivo analyses. Annals of Botany 112: 253-266.
15. Torres-Guerrero CA, Etchevers BJD, Fuentes MH, Govaerts B, De-León González F, **Herrera JM**. 2013. Influencia de la raíces sobre la agregación del suelo. Terra Latinoamericana 31: 57-70.
14. Noulas C, Alexiou I, **Herrera JM**, and Stamp P. 2013. Course of dry matter and nitrogen accumulation of spring wheat genotypes known to vary in parameters of nitrogen use efficiency. Journal of Plant Nutrition 36: 1201-1218.
13. Britschgi D, Stamp P, and **Herrera JM**. 2013. Root growth of neighbouring maize and weeds studied with minirhizotrons. Weed Science 61: 319-327.
12. Schulthess, U, Timsina J, **Herrera JM**, and McDonald A. 2013. Mapping field-scale yield gaps for maize: an example from Bangladesh. Field Crops Research 143: 151-156.

11. Hgaza VK, Diby LN, **Herrera JM**, Sangakkara UR, Frossard E. 2012. Root distribution patterns of white yam (*Dioscorea rotundata* Poir): a field study. Acta Agriculturae Scandinavica 62: 616-626.
10. Faget M, Liedgens M, Feil B, Stamp P, and **Herrera JM.** 2012. Root growth of maize in an Italian ryegrass living mulch studied with a non-destructive method. European Journal of Agronomy 36: 1-8.
9. **Herrera JM**, Delgado JA., Dillon M, Barbarick K, and McMaster GC. 2011. Accumulation of late-applied nitrogen and root dynamics during grain filling in irrigated spring wheat. Communications in Soil Science and Plant Analysis 42: 2235-2249.
8. **Herrera JM**, Feil B, Stamp P, and Liedgens M. 2010. Root growth and NO_3–N leaching of catch crops following spring wheat. Journal of Environmental Quality 39: 845-854.
7. Noulas C, Liedgens M, Stamp P, Alexiou I, and **Herrera JM**. 2010. Subsoil root growth of field grown spring wheat (*Triticum aestivum* L.) genotypes differing in nitrogen use efficiency parameters. Journal of Plant Nutrition 33: 1887-1903.
6. Faget M**,** Liedgens M, Stamp P, Flütsch P, and **Herrera JM.** 2010. A minirhizotron imaging system to identify roots expressing the green fluorescent protein. Computers and Electronics in Agriculture 74: 163-167.
5. Faget M, **Herrera JM,** Stamp P, Aulinger-Leipner I, Frossard E, and Liedgens M. 2009. The use of green fluorescent protein (GFP) as a tool to identify roots in mixed plant stands. Functional Plant Biology 36: 930-937.
4. **Herrera JM** and Liedgens M. 2009. Leaching and utilization of nitrogen during a spring wheat catch crop succession. Journal of Environmental Quality 38: 1410-1419.
3. **Herrera JM**, Stamp P, and Liedgens M. 2007. Interannual variability in root growth of spring wheat (Triticum aestivum L.) at low and high nitrogen supply. European Journal of Agronomy 26: 317-326.
2. **Herrera JM**, Stamp P and Liedgens M. 2005. Root development of catch crops and nitrate losses by leaching after spring wheat. Aspects of Applied Biology 73: 35.
1. **Herrera JM**, Stamp P, and Liedgens M. 2005. Root development of spring wheat genotypes varying in nitrogen-use efficiency. Aspects of Applied Biology 73: 27.

Libros editados:

2. Govaerts B, Verhulst N, **Herrera JM.** Compendium of deliverables of the conservation agriculture course. 2012. CIMMYT, Mexico D.F., Mexico.
1. Govaerts B, Verhulst N, Turmel MS, **Herrera JM.** Compendium of deliverables of the conservation agriculture course. 2011. CIMMYT, Mexico D.F., Mexico.

Capítulos en libros:

6. Herrera JM. 2016. Tecnologías emergentes y establecidas para el control ambiental de los problemas generados por el nitrógeno. Raúl S Lavado (Ed.) Sustentabilidad de los Agrosistemas y uso de fertilizantes. Asociación Argentina de Ciencia de Suelo, Buenos Aires, Argentina.
5. Herrera JM and Stamp P. 2013. Nitrogen management effects on root systems: a synthesis and future needs. Timlin D and Laj R. (Eds.) Enhancing Understanding and Quantification of Soil-Root Growth Interactions. Advances in Agricultural Systems Modeling. Series 4. American Society of Agronomy, Madison, USA.
4. Herrera JM, Verhulst N, and Govaerts B. 2012. Estrategias para la identificación de diversidad genética en rasgos del sistema radicular. Reynolds MP, Pask A, Mullan D y Chávez P (Eds.) Fitomejoramiento fisiológico I: Enfoques Interdisciplinarios para mejorar la adaptación del cultivo. CIMMYT. Mexico D.F., Mexico.
3. Herrera JM, Verhulst N, and Govaerts B. 2012. Strategies to identify genetic diversity in root traits. Reynolds MP, Pask AJD and Mullan DM. (Eds.) Physiological Breeding I: Interdisciplinary Approaches to Improve Crop Adaptation. CIMMYT. Mexico D.F., Mexico.
2. Herrera JM and Delgado JA. 2010**.** Integrated Nitrogen Management. In: Advances in Nitrogen Management for Water Quality. Delgado JA and Follett RF. (Eds.). Soil and Water Conservation Society, Ankeny, Iowa, USA.
1. Herrera JM, Stamp P, and Liedgens M. 2007. Dynamics of root development of spring wheat genotypes varying in nitrogen use efficiency. In: Wheat Production in Stressed Environments. Buck HT, Nisi JE, and Salomón N. (Eds.). Pp.: 197-201. Springer, Dordrecht, The Netherlands.

Artículos en actas de conferencias:

6. **Herrera JM**, Levy Häner L, Holzkämper A, Pellet D. 2016a. Genotypic predictions and environmental characterization by coupling climate suitability and statistical models. International Crop Modelling Symposium, Berlin, Germany.
5. **Herrera JM** and Stamp P. 2012. Efecto de la aplicación de nitrógeno en el crecimiento y la descomposición de raíces de trigo. Jornada científico-técnica sobre cereales invernales, INBA-BIOLAB AZUL, FAUBA.
4. **Herrera JM**, Verhulst N, Burgueno J, Sayre KD, and Govaerts B. 2012. Genotype by cropping system interaction effects on the grain yield of irrigated bread and durum wheat. International 19th Soil Tillage Research Organisation Meeting.
3. Herrera JM. 2012. Agricultura de conservación en la producción de trigo bajo riego. Actas del XIX Congreso Latinoamericano de la ciencia del suelo. Orden 521.
2. Britschgi D, Stamp P, **Herrera JM**, and Liedgens M. 2009. Spatial root interaction of maize and two important weed species. International Symposium "RootRAP", Vienna, Austria.
1. Herter P, Szczerba D, **Herrera JM**, and Hund A. 2009. Modeling the root system of maize to predict water and phosphorus uptake. International Symposium "RootRAP", Vienna, Austria.

Artículos en revistas de extensión:

2. **Herrera JM**. 2011. Investigación para adaptar los principios de Agricultura de Conservación a las condiciones del Pacífico Norte. Revista ENLACE no. 8: 53-54.
1. Stamp P and **Herrera JM.** 2010. Welche Rolle spielt die Wurzel für die Ertragsbildung von Weizen? Getreide Magazin 4:226-230.

Tesis:

PhD: Root studies in crop successions a model experiment with spring wheat and catch crops. Swiss Federal Institute of Technology, Switzerland.

Bachelor: Small-scale farmer's land management strategies in Concordia (In Spanish). Universidad de Buenos Aires, Argentina.

Presentaciones en reuniones:

27. XVe European Society for Agronomy Congress. "Alternatives for Herbicide Reduction with Examples on Oilseed Rape and Sugar Beet". 2018, Geneva, Switzerland. Oral presentation.
26. COST WG1 / EPPN2020 workshop. "How can drones and modern phenotyping methods contribute to the understanding of Genotype × Environment interactions (G × E)?". 2017, Novi Sad, Serbia. Oral presentation.
25. 4-tes Treffen der Innovationsgruppe Getreide & Backwaren. "Site-specific prediction of grain yield of winter wheat genotypes by means of machine learning". 2016, Wädenswil, Switzerland. Oral presentation.
24. EUCARPIA General Congress. "Identifying the best variety at each site with climatic-limitation covariates". 2016, Zürich, Switzerland.
23. International Crop Modelling Meeting. "Genotypic predictions and environmental characterization by coupling climate suitability and statistical models". 2016, Berlin, Germany. Poster
22. 3èmes Journées Nationales Grandes Cultures. "Approaches under evaluation for a more precise recommendation of varieties", Morat, Switzerland. Oral presentation.
21. Seminario organizado por el Instituto de Investigaciones en Biociencias Agrícolas y Ambientales (INBA). "Desarrollo de un método no destructivo para identificar raíces de distintas plantas en el suelo". 2013, University of Buenos Aires, Argentina. Oral presentation.

20. Winter Cereals day. “Efecto de la Aplicación de Nitrógeno en el crecimiento y la descomposición de raíces de trigo”. 2012, Azul, Argentina. Oral presentation.
19. Nineteenth International Soil Tillage Research Organization Meeting. “Genotype by cropping system interaction effects on the grain yield of irrigated bread and durum wheat”. 2012. Montevideo, Uruguay. Oral presentation.
18. Conservation Agriculture Course. “Agricultura de conservación para una producción rentable”. Aguascalientes, México. 2012. Oral presentation.
17. Conservation Agriculture Course. “Agricultura de conservación para una producción rentable”. San Luis Potosí, México. 2012. Oral presentation.
16. Expo Agrícola Jalisco. “Agricultura de conservación para una producción rentable”. Ciudad Guzmán, México. 2012. Oral presentation.
15. XXIII Congreso Argentino y XIX Latinoamericano de la Ciencia del Suelo. “Agricultura de conservación en la producción de trigo bajo riego”. 2012. Mar del Plata, Argentina. Poster.
14. XXXV Fall Seminars. “Agricultura de conservación para una producción sustentable”. 2011. Escobedo, Nuevo León, México. Oral presentation.
13. Workshops organized by Fideicomisos Instituidos con Relación a la Agricultura (FIRA). “Agricultura de conservación para una producción rentable”. 2011. Texcoco, Estado de México, México. Oral presentations.
12. Third Carbon International Symposium. “Reducción de emisiones de gases con efecto invernadero”. 2011. Universidad Autónoma del Estado de México, Toluca, México. Oral presentation.
11. Sexto Simposio Internacional de Trigo. “Avances en la Adopción de Agricultura de Conservación en México”. 2011. Mazatlán, Sinaloa, México. Oral presentation.
10. Segundo Congreso Internacional de Agronomía Tropical. “Agricultura de conservación, la base de una producción sustentable”. 2011. Villahermosa, Tabasco, México. Oral presentation.
9. RootRAP conference. “Root growth and leaching of nitrogen of catch crops - results from a lysimeter project”. 2009. Viena. Austria. Poster.
8. Rhizosphere II. “Effects of catch crops on grain yield, nitrogen uptake and root development of succeeding spring wheat at high and low nitrogen supply”. 2007. Montpellier, France. Poster.
7. Colorado State University. “Root development of spring wheat as affected by genotypes and interannual variability”. 2006. Fort Collins, USA. Oral presentation.
6. Seventh International Wheat Conference. “Root development of spring wheat genotypes varying in nitrogen use efficiency”. 2005. Mar del Plata, Argentina. Oral presentation.
5. American Society of Agronomy- Crop Science Society of America- Soil Science Society of America. “Root development of spring wheat in minirhizotrons as affected by genotypes and interannual variability at low and high nitrogen supply”. 2005. Salt Lake City, USA. Oral presentation.
4. Roots and the Soil Environment II. Association of Applied Biology. “Root development of catch crops and nitrate losses by leaching after spring wheat”. 2005. Nothingham, England. Oral presentation.
3. Roots and the Soil Environment II. Association of Applied Biology. “Root development of spring wheat genotypes”. 2005. Nothingham, England. Oral presentation.

2. Sixth International Symposium on Structure and Function of Roots. “Effect of nitrogen on root development of spring wheat”. 2003. Stara Lesna, Slovakia. Poster.

1. Eleventh Annual Meeting of the Swiss Society of Agronomy. “Rooting patterns of spring wheat genotypes varying in nitrogen use efficiency”. 2002. Zollikofen, Switzerland. Poster.

Contribuciones en reuniones

15. Torres-Guerrero CA, Gutiérrez-Castorena MC, Herrera JM, Gutiérrez-Castorena EV y Ortiz-Solorio, CA. 2018. La descomposición de las raíces y su relación con la estructura del suelo: análisis *in situ* y mosaicos de alta resolución de secciones delgadas. XLII Congreso Nacional Sociedad Mexicana de la Ciencia del Suelo.
14. Torres-Guerrero CA, Gutiérrez-Castorena MDC, Ortiz-Solorio CA, Herrera JM, Gutiérrez EV, Etchevers BJD. 2016. Micromapping the effect of root decomposition on the soil structure. 15TH International Conference on soil micromorphology, Mexico City, Mexico.
13. Baux A, Wegmüller J, **Herrera JM**, Holzkämper A. 2016. Identifying oilseed rape climatic limitation to understand regional and annual yield variability. 14TH European Society of Agronomy Congress. Edinburgh, Scotland.
12. **Herrera JM**, Holzkämper A, Levy-Häner L, Didier Pellet. 2016. Identifying the best variety at each site with climatic-limitation covariates. 20TH General Congress EUCARPIA, Zürich, Switzerland. Oral presentation.
11. Casali L, **Herrera JM**, Rubio G. 2016. Cambio Climático y residuos de cosecha: efecto sobre el Maíz en el Chaco semiárido. XXV Congreso Argentino de la Ciencia del Suelo. Río Cuarto, Argentina. Poster presentation.
10. **Herrera JM**, Levy Häner L, Holzkämper A, Pellet D. 2016. Genotypic predictions and environmental characterization by coupling climate suitability and statistical models. International Crop Modelling Symposium, Berlin Germany. Poster.
9. Calitri F, Necpalova M, Lee J, Zaccone C, Spiess E, **Herrera JM**, Six J. 2016. Regional modelling of nitrate leaching from Swiss organic and conventional cropping systems under climate change. European Geosciences Union General Assembly 216, Vienna, Austria. Poster
8. Mugny C, **Herrera JM**, Baux A, Pellet D. 2015. The development of HOLL oilseed rape in Switzerland: a success story. 2nd High Oleic Oils Congress, Paris, France. Oral presentation.
7. Mugny C, **Herrera JM**, Baux A, Aebi L, Krattiger JP, Von Rotz J, Eberhard P, Pellet D. 2015. Evolution of High Oleic Low Linolenic (HOLL) winter oilseed rape (WOSR) production in Switzerland: how agricultural innovations can open markets and increase production options. 14th International Rapeseed Congress, Saskatoon, Canada. Oral presentation.
6. Mugny C, Baux A, **Herrera JM**, Rougier M, Pellet D. 2015. Effects of solar radiation and temperature on alpha-linolenic acid content of High Oleic Low Linolenic (HOLL) Oilseed Rape. 14th International Rapeseed Congress, Saskatoon, Canada. Poster.
5. Mugny C, **Herrera JM**, Charles R, Baux A, Pellet D. 2015. Management of oilseed rape (OSR) volunteers to secure low alpha-linolenic acid content in High Oleic Low Linolenic (HOLL) OSR crop. 14th International Rapeseed Congress, Saskatoon, Canada. Poster.

4. Casali L, **Herrera JM**, Rubio G. 2014. Predicción de las limitantes del rendimiento de Maíz en Haplustoles del este de Santiago del Estero mediante modelos DSSAT. XXIV Congreso Argentino de la Ciencia del Suelo. Bahía Blanca, Argentina. Oral presentation.
3. Herter P, Szczerba D, **Herrera JM**, Hund A. 2009. Modeling the root system of maize to predict water and phosphorus uptake. International Symposium "Root Research and Applications - RootRAP". Vienna, Austria. Oral presentation.
2. Britschgi D, Stamp P, **Herrera JM**, Liedgens M. 2009. Spatial root interaction of maize and two important weed species. International Symposium "Root Research and Applications - RootRAP". Vienna, Austria. Poster.
1. Faget M, Liedgens M, **Herrera JM**, Frossard E, Stamp P. Green fluorescent protein (GFP) – A tool to identify roots in mixed plant stands. International Symposium "Root Research and Applications - RootRAP". Vienna, Austria. Poster.

Actividades de evaluación:

Revistas: Agriscientia (1), Euphytica (1), Crop Science (2), Journal of Environmental Quality (1), Journal of Soil and Water Conservation (20), Pakistan Journal of Scientific and Industrial Research (1), Journal of Plant Nutrition and Soil Science (3), and Weed Science (1).

Proyectos de investigación: Universidad Autónoma de Chapingo, México (2012); Universidad Autónoma de Nuevo León, México (2011); Swiss Federal Institute of Technology (2006-2010).

Cursos de actualización:

Modelos y estadística: Stics v8 (INRA – Toulouse, 2015); DSSAT v4.5 (University of Georgia, 2010); The art of modelling (University of Wageningen, 2008); Model selection and inference (University of Zürich, 2004); Spatial statistics and time series analysis (University of Basel, 2005); Multivariate analysis techniques (Plant Science Center, Switzerland (PSC), 2004) Linear models (PSC, 2003); Generalized linear models (PSC, 2003).

Agronomía y mejoramiento genético: Field Phenomics (Maricopa, Arizona, 2015); Conservation agriculture (CIMMYT, 2011); Soil ecology (University of Wageningen, 2007); Functional genomics (PSC, 2007); QTL analysis (PSC, 2005); Introduction to phylogenetic analysis (PSC, 2004); Gas exchange measurements (PSC, 2004); Transport processes in plants (PSC, 2004); Understanding the transfer of nutrients and contaminants from the soil to the plant using isotopes (PSC, 2003).

Docencia y gestión: MindManager (México, 2011); Introduction to university teaching and learning (PSC, 2005); Effective leading and coaching (PSC, 2004); Project management for scientific intents (PSC, 2003); Scientific writing (PSC, 2002); Presentations, publishing, communicating (PSC, 2002); Balanced scorecard (Repsol-YPF, 2000); Negotiations (ITBA, 2000); Supply Food Chain Management (FAUBA, 2000); Producer Organizations and Marketing Strategies (FAUBA, 2000); Formulation and evaluation of agricultural development projects (FAUBA, 1999).