

Published manuscripts (Information in language of publication)
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Articles in scientific journals

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* 49: 763-781.
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**, Toullos 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 Toullos 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 NO₃-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.

Edited books:

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.

Chapters of books:

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.

Conference articles:

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.

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4. Levy L, **Herrera JM**, Rechsteiner S, Courvoisier N, Pellet D, Scheuner S, Weisflog T, Brabant C, Foiada F, Hund A. Alternatives to secure wheat quality with lower supplies of nitrogen fertilizer. Cereal Technology 71: 206-216.
3. Pellet D, Levy L, Courvoisier N, Baux A, Schwaerzel R, **Herrera JM**, Dupuis B, Hiltbrunner J, Charles R. 2017. Les grandes cultures fourragères ou alimentaires: concurrence ou complémentarité? Bulletin SGPW-SSA. 29:5.
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.

Dissertations:

- 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.