



**XLII Congreso Anual
de la Sociedad Chilena
de Producción Animal**

2017

**Termas de Catillo, 17 al 19 de
Octubre de 2017**

SIMPOSIO CONGRESO SOCHIPA 2017 "Producción Animal de precisión"

1. Dr. Mariano Oyarzabal presentará la conferencia: "**Monitoreo de la productividad de pastizales naturales y pasturas mediante el uso de sensores remotos**"

Formación

Ingeniero Agrónomo (2000). Facultad de Agronomía de la Universidad de Buenos Aires

Doctor en Ciencias Agropecuarias (2007). Escuela para Graduados de la Facultad de Agronomía Alberto Soriano, Universidad de Buenos Aires

Cargos

Responsable técnico del Laboratorio de Análisis Regional y Teledetección, IFEVA-Facultad de Agronomía, Universidad de Buenos Aires

Jefe de Trabajos Prácticos Regular con dedicación parcial. Departamento de Métodos Cuantitativos y Sistemas de Información, Facultad de Agronomía, UBA

Áreas de interés en investigación

Ecología de pastizales y Teledetección aplicada

Publicaciones de interés

Texeira, M., Oyarzabal, M., Piñeiro, G., Baeza, S., Paruelo, J.M. 2015. Land cover and precipitation controls over long-term trends in carbon gains in the grassland biome of South America. *Ecosphere* 6(10). Article 196

López Mársico, L., A. Altesor, M. Oyarzabal, P. Baldassini, J. M. 2015. Grazing increases below-ground biomass and net primary production in a temperate grassland. *Plant and Soil* 392:155–162

Cavagnaro, R., M. Oyarzabal, M. Oesterheld and A. Grimoldi. 2015. Screening of biomass production of cultivated forage grasses in response to mycorrhizal symbiosis under nutritional deficit conditions. *Grassland Science* 60:178-184

Capítulos de libros

Irisarri, J.G.N., Oesterheld, M., Oyarzabal, M., J. M. Paruelo, J.M., and Durante, M. 2013. Monitoring the ecosystem service of forage production. Pp 87-103. In: Di Bella, C., Alcaraz-Segura, D. and Straschnoy, J. *Earth Observation of Ecosystem Services*. CRC Press – Taylor & Francis Group, Boca Raton

Castro, A.J., Alcaraz-Segura D., Cabello J., Oyarzabal M., López-Carrique E., Paruelo J.M. 2013. Missing gaps in the estimation of the carbon gains service from Light Use Efficiency models. Pp 105-124. In: Di Bella, C., Alcaraz-Segura, D. and Straschnoy, J. *Earth Observation of Ecosystem Services*. CRC Press – Taylor & Francis Group, Boca Raton

Oesterheld, M., M. Oyarzabal, and J. M. Paruelo. 2014. Aplicación de la teledetección y los sistemas de información geográfica al estudio y seguimiento de los sistemas ganaderos. Páginas 283-301. En J. M. Paruelo, Di Bella, C.D. y Milkovic, M., editores. *Percepción Remota y Sistemas de Información Geográfica. Sus aplicaciones en Agronomía y Ciencias Ambientales*. Editorial Hemisferio Sur, Buenos Aires

Oyonarte, C., D. Alcaraz-Segura, M. Oyarzabal, J. Cabello, and J. M. Paruelo. 2014. Sistemas de apoyo a la gestión de áreas protegidas

basado en el seguimiento de la productividad primaria. Páginas 259-281. En J. M. Paruelo, Di Bella, C.D. y Milkovic, M., editores. Percepción Remota y Sistemas de Información Geográfica. Sus aplicaciones en Agronomía y Ciencias Ambientales. Editorial Hemisferio Sur, Buenos Aires

Oesterheld, M., Paruelo, J.M. y Oyarzabal, M. 2011. Estimación de la productividad primaria neta aérea a partir de diferencias de biomasa y de integración de la radiación absorbida. En: Bases Ecológicas y Tecnológicas para el manejo de pastizales. Altesor, A.; Ayala, W. y Paruelo, J.M., Eds. Instituto Nacional de Investigación Agropecuaria, Montevideo, pp. 113-119. ISBN 978-9974-38-308-1. 234 páginas

Oyarzabal M., Oesterheld M. y Grigera G. 2011. ¿Cómo estimar la eficiencia en el uso de la radiación mediante sensores remotos y cosechas de biomasa?. En: Bases Ecológicas y Tecnológicas para el manejo de pastizales. Altesor, A.; Ayala, W. y Paruelo, J.M., Eds. Instituto Nacional de Investigación Agropecuaria, Montevideo, pp. 121-133. ISBN 978-9974-38-308-1. 234 páginas

Paruelo, J.M., Oyarzabal, M. y Oesterheld M. 2011. El Seguimiento de los recursos forrajeros mediante sensores remotos: bases y aplicaciones. En: Bases Ecológicas y Tecnológicas para el manejo de pastizales. Altesor, A.; Ayala, W. y Paruelo, J.M., Eds. Instituto Nacional de Investigación Agropecuaria, Montevideo, pp. 135-145. ISBN 978-9974-38-308-1. 234 páginas

2. Dr. Felipe Pino, presentará la conferencia "**Nutrición y alimentación de precisión en rumiantes en crecimiento y engorda**"

Ph.D. Ciencias Animales, Mención Nutrición de Rumiantes Universidad Estatal de Pensilvania (2017), Tesis: "Factors that Affect Rumen Fermentation and Total Tract Digestion in Precision Feeding Dairy Heifers". Analizó factores que afectan la digestibilidad de forrajes y almidones en vaquillas de lechería, en sistemas de alimentación de precisión y en comparación con sistemas tradicionales de alimentación ad-libitum.

Médico Veterinario, Universidad de Chile (2009). Tesis: "Evaluación Productiva de la raza Wagyu en cruce con otras razas presentes en Chile".

Publicaciones de interés

Pino, F., and A. J. Heinrichs. 2016. Effect of trace minerals and starch on digestibility and rumen fermentation in diets for dairy heifers. *J. Dairy Sci* 99(4):2797-2810.

Gelsinger, S. L., F. Pino, C. M. Jones, A. M. Gehman, and A. J. Heinrichs. 2016. Effects of a dietary organic mineral program including mannan oligosaccharides for pregnant cattle and their calves on calf health and performance. *The Professional Animal Scientist* 32(2):205-213.

Pino, F., and A. J. Heinrichs. 2016. Sorghum forage in precision-fed dairy heifers diets. *J. of Dairy Science* 100:1-12.

K. Kliak, F. Pino and A.J. Heinrichs. 2016. Effect of forage to concentrate ratio with sorghum silage as a source of forage on rumen fermentation, N-C balance, and purine derivative excretion in limit-fed dairy heifers. *J. of Dairy Science* 100:1-11.

F. Pino, Urrutia, N.L., Gelsinger, S. I., and A. J. Heinrichs. 2016. Long term effect of organic trace mineral on growth, reproductive performance and first-lactation in dairy heifers. *Submitted to Journal of Dairy Science*.

K. Kliak, F. Pino and A.J. Heinrichs. 2017. Analysis of selected rumen microbial populations in dairy heifers limit fed diets varying in trace mineral form and starch content. *Journal of Livestock Science* 198 (2017) 93-96.

3. Ing. Brian Dela Rue presentará la conferencia: "***Precision Dairy Farming: technology available, applications, and management needs and challenges***"

Master of Applied Science in Engineering, 2003, Lincoln University.

Post-grad Diploma in Horticultural Science (Postharvest Engineering), 1997, Massey University

NZCE (Civil Engineering), 1981-1985, Waikato, Christchurch, Wellington Polytechnics.

https://www.researchgate.net/profile/Brian_Dela_Rue

Area of expertise & interest:

On-farm technological innovation systems, performance and effective use of new technologies in dairy systems, labour productivity, and improving information and co-ordination between farmers and technology developers.

Current research:

Our research programme has focused on the application of advanced management technologies to dairy farming as part of the Precision Agriculture objective of a 7-year multi-disciplinary programme (Transforming the Dairy Value Chain). My research has investigated the opportunities, performance and value to farmers of animal monitoring and management technologies. This has included studies to evaluate the field performance of technologies, including heat detection systems, mastitis detection systems, lameness detection and herd testing using in-line sensors. I am currently researching the use and potential value of data in grazing management, and the gap between actual and potential pasture harvest on dairy farms. Earlier on-farm research included the feasibility of automatic milking in NZ pasture-based dairy systems.

Publications in last 5 years.

Petersson-Wolfe, S., Steele, N., Swartz, T and Dela Rue, B. 2017. Opportunities for identifying animal health and well-being disorders using precision technologies. In book: Large Dairy Herd Management, pp.1279-1292. DOI: 10.3168/ldhm.1595

Eastwood, C.R., Dela Rue, B.T. and Gray D.I. 2016. Using a network of practice approach to match grazing decision support tool design with farmer practice. *Animal Production Science Online Early* DOI: 10.1071/AN16465

Dela Rue, B.T. and Eastwood C.R. 2016. Individualised feeding of concentrate supplement to dairy cows – Practices and perceptions of New Zealand dairy farmers and their advisors. *Animal Production Science* 57(7) DOI: 10.1071/AN16471

Eastwood, C., Chaplin, S., Dela Rue, Lyons, N., and Gray. D. 2016. Understanding the roles of farm advisors in precision dairy farming. International Precision Dairy Farming Conference, At Leeuwarden, The Netherlands

Edwards, J.P., Dela Rue, B.T. and Jago, J.G. 2015. Evaluating rates of technology adoption and milking practices on New Zealand dairy farms. *Animal Production Science*, 55(6), pp.702-709.

Kamphuis, C., Dela Rue, B. and Eastwood, C.R., 2016. Field validation of protocols developed to evaluate in-line mastitis detection systems. *Journal of dairy science*, 99(2), pp.1619-1631.

Hills, J.L., García, S.C., Dela Rue, B. and Clark, C.E.F., 2015. Limitations and potential for individualised feeding of concentrate supplements to grazing dairy cows. *Animal Production Science*, 55(7), pp.922-930.

Kamphuis, C., DelaRue, B., Turner, S.A. and Petch, S.F., 2015. Devices used by automated milking systems are similarly accurate in estimating milk yield and in collecting a representative milk sample compared with devices used by farms with conventional milk recording. *Journal of Dairy Science*, 98(5), pp.3541-3557.

Dela Rue, B.T., Kamphuis, C., Burke, C.R. and Jago, J.G., 2014. Using activity-based monitoring systems to detect dairy cows in oestrus: a field evaluation. *New Zealand veterinary journal*, 62(2), pp.57-62.

Kamphuis, C., B. Dela Rue, Mein, G. and Jago, J. 2013. Development of protocols to evaluate in-line mastitis-detection systems. *Journal of Dairy Science*.96(6) pp 4047-4058.

Gregorini, P., Dela Rue, B., Pourau, M., Glassey, C. and Jago, J., 2013. A note on rumination behavior of dairy cows under intensive grazing systems. *Livestock Science*, 158(1), pp.151-156.

Kamphuis, C., B. Dela Rue, G. Mein, J. Jago. 2013. Development of protocols to evaluate in-line mastitis-detection systems. *Journal of Dairy Science* 96:4047-4058.

Gregorini, P., Dela Rue, B., Pourau, M., Glassey, C. and Jago, J. 2013. A note on rumination behavior of dairy cows under intensive grazing systems. Submitted as a Short Communication to *Livestock Science* journal.

Kamphuis, C, Burke CR, Dela Rue BT, Jago J. 2012. Field evaluation of 2 collar-mounted activity meters for detecting cows in estrus on a large pasture-grazed dairy farm. *Journal of Dairy Science* 95:3045-3056.