



## CURRICULUM VITAE

**Name:** Nicolas Lopez-Villalobos

**Position held:** Professor of Dairy Cattle Breeding and Genetics, Massey University

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### EXPERTISE

Genetic evaluation, genome-wise association studies and genomic selection in of dairy cattle, dairy sheep, dairy goat and dogs. Development of a selection index for once-a-day milking. Modelling of breeding schemes, farm systems, milk payment systems, and processing of dairy products. Experimental designs and data analyses in animal science and agriculture.

Have supervised 39 PhD and 42 Master students, and currently supervising 6 PhD and 3 Master students.

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**H index** (Google Scholar) 38

**288** peer-review publications since 1999.

### EDUCATION BACKGROUND

<b>1995-1999</b>	PhD in Animal Science	Massey University, New Zealand
<b>1992-1994</b>	M.Agr.Sc in Animal Science	Massey University, New Zealand
<b>1981-1985</b>	B.Agr.Sc in Animal Science	Chapingo University, Mexico

### APPOINTMENT & EXPERIENCE

<b>2014-present</b>	Professor	Massey University, New Zealand
<b>2010 to 2014</b>	Associate Professor	Massey University, New Zealand
<b>2002 to 2009</b>	Senior Lecturer	Massey University, New Zealand
<b>1999 to 2002</b>	Research Officer	Massey University, New Zealand
<b>1985 to 1992</b>	Senior Lecturer	Chapingo University, Mexico

### PROFESSIONAL DISTINCTIONS

**2019** Research Prize at the IPN 2019 as a participant of the Project "Selection indices based on molecular markers for a panel of SNPs for bovine growth traits" Granted by the Instituto Politécnico Nacional of Mexico

**2018** McMeekan Memorial Award granted by the New Zealand Society of Animal Production.

**2016** Massey University Research Medal Award as Best Supervisor of the University in Science

**2014** National research ranking in Mexico - Distinction as member of the "National Researchers Systems" with Level III of CONACyT (National Council for Science and Technology) of Mexico.

## TEACHING

- Paper coordinator of course 117.765 Advanced Animal Breeding and Genetics since 2003, Massey University.
- Lectures on breeding objectives in the course 117.371 Animal Production since 2010, Massey University.
- Lectures on crossbreeding in the course 117.381 Solving Problems in Animal Production 2012, Massey University.
- Paper coordinator of the course 117.783 Special Topic in Animal Science (Linear Models for Animal Breeding) since 2004, Massey University.
- Paper coordinator of course 117.245 Principles of Animal Breeding and Genetics in 2021 (new course), Massey University.
- Lectures and projects on Designing Breeding Programs and Selection for Postgraduate Animal Breeding & Genetics Course 2021 to students of Huazhong Agricultural University, China.
- Lectures on breeds and crossbreeding to students of Universidad Autonoma del Estado de Mexico, Mexico since 2015
- Lectures on calculation of genetic gain to students of Universidad Autonoma del Estado de Mexico, Mexico since 2018.

## REFEREED SCIENTIFIC PAPERS SINCE 2010

1. Baudracco, J., Lopez-Villalobos, N., Holmes, C. W. and Macdonald, K. A. 2010. Effects of stocking rate, supplementation, genotype and their interactions on grazing dairy systems: a review. *New Zealand Journal of Agricultural Research* **53**: 109-133. DOI: 10.1080/00288231003777665 ISSN: 0028-8233
2. Berry, S.D., Lopez-Villalobos, N., Beattie, E.M., Davis, S.R., Adams, L.F., Thomas, N.L., Ankersmit-Udy, A.E., Stanfield, A.M., Lehnert, K., Ward, H.E., Arias, J.A., Spelman, R.J. and Snell, R.G. 2010. Mapping a quantitative trait locus for the concentration of  $\beta$ -lactoglobulin in milk, and the effect of  $\beta$ -lactoglobulin genetic variants on the composition of milk from Holstein-Friesian x Jersey crossbred cows. *New Zealand Veterinary Journal* **58**: 1-5.
3. Dukkipati, V.S.R., Blair, H.T., Garrick, D.J., Lopez-Villalobos, N., Whittington, R.J., Reddacliff, L.A., Eppleston, J., Windsor, P. and Murray, A. 2010. Association of microsatellite polymorphisms with immune responses to a killed Mycobacterium avium subsp. paratuberculosis vaccine in Merino sheep. *New Zealand Veterinary Journal* **58**: 237-245.
4. Geary U., Shalloo L., Lopez-Villalobos N. 2010. Development of a dairy processing sector model for the Irish dairy industry. *Advances in Animal Biosciences* 1: 335-335. <http://dx.doi.org/10.1017/S2040470010004784>
5. Geary, U., Lopez-Villalobos, N., Garrick, D.J. and Shalloo, L. 2010. Development and application of a processing model for the Irish dairy industry. *Journal of Dairy Science* **93**: 5091-5100. <http://dx.doi.org/10.3168/jds.2010-3487>
6. Hickson, R.E., Lopez-Villalobos, N., Kenyon, P.R., Ridler, B.J. and Morris, S.T. 2010. Profitability of calving heifers at 2 compared with 3 years of age and the effect of incidence of assistance at parturition on profitability. *Animal Production Science* **50**: 354-358.
7. Lopez-Villalobos, N., Penasa, M., Dal Zotto, R., Cassandro, M., Brade, W., Distl, O., Evans, R.D. and Cromie, A.R. 2010. Calculation of a cow culling merit index including specific heterosis in a multibreed dairy population. *Archiv fur Tierzucht* **53**: 9-17.
8. Morris, S.T., Garrick, D.J., Lopez-Villalobos, N., Kenyon, P.R., Burke, J.L., Blair, H.T., 2010. Growth, feed intake and maternal performance of Angus heifers selected for high or low growth and milk production. *Animal Production Science* **50**: 349-353.
9. Penasa, M., Lopez-Villalobos, N., Evans, R.D., Cromie, A.R., Dal Zotto, R., Cassandro, M., 2010. Crossbreeding effects on milk yield traits and calving interval in spring-calving dairy cows. *Journal of Animal Breeding and Genetics* **127**: 300-307. DOI: 10.1111/j.1439-0388.2009.00840.x
10. Pickles, K.J., Mair, J.A., Lopez-Villalobos, N., Shaw, D.J., Scott, I. and Pomroy, W. 2010. Large intestinal mast cell count and proteinase expression is associated with larval burden in cyathostomin-infected horses. *Equine Veterinary Journal* **42**: 652-657.
11. Ramirez-Restrepo, C.A., Barry, T.N., Marriner, A., Lopez-Villalobos, N., McWilliam, E.L., Lassey, K.R. and Clark, H. 2010. Effects of grazing willow fodder block upon methane production and blood composition in young sheep. *Animal Feed Science and Technology* **155**: 33-43.

12. Ramirez-Restrepo, C. A., Pernthaler, A., Barry, T. N., Lopez-Villalobos, N., Shaw, R., Pomroy, W. E. and Hein, W. R. 2010. Characterization of immune responses against gastrointestinal nematodes in weaned lambs grazing willow fodder blocks. *Animal Feed Science and Technology* **155**: 99-110.
13. van der Linden, D.S., Kenyon, P.R., Blair, H.T., Lopez-Villalobos, N., Jenkinson, C.M.C., Peterson, S.W. and Mackenzie, D.D.S. 2010. Relationship between early postnatal growth and metabolic function of 16-month-old female offspring born to ewes exposed to different environments during pregnancy. *Journal of Developmental Origins of Health and Disease* **1**: 50-59.
14. van der Linden, D.S., Lopez-Villalobos, N., Kenyon, P.R., Thorstensen, E., Jenkinson, C.M.C., Peterson, S.W. and Blair, H.T. 2010. Comparison of four techniques to estimate milk production in singleton-rearing non-dairy ewes. *Small Ruminant Research* **90**: 18-26.
15. van der Linden, D.S., Kenyon, P.R., Blair, H.T., Lopez-Villalobos, N., Jenkinson, C.M.C., Peterson, S.W. and Mackenzie, D.D.S. 2010. Effects of size and nutrition during pregnancy on glucose metabolism, fat metabolism and adrenal function of postpubertal female twin offspring. *Animal Production Science* **50**: 869-879.
16. van der Linden, D.S., Kenyon, P.R., Lopez-Villalobos, N., Jenkinson, C.M.C., Peterson, S.W. and Blair, H.T. 2010. Effects of ewe size and nutrition during pregnancy on performance of 2-year-old female offspring. *Journal of Agricultural Science* **148**: 465-475.
17. Mupeyo, B., Barry, T.N., Pomroy, W.E., Ramirez-Restrepo, C.A., Lopez-Villalobos, N. and Pernthaler, A. 2011. Effects of feeding willow (*Salix* spp.) upon death of established parasites and parasite fecundity. *Animal Feed Science and Technology* **164**: 8-20. <http://dx.doi.org/10.1016/j.anifeedsci.2010.11.015> ISSN: 0377-8401
18. Petrovski, K., Laven, R. and Lopez-Villalobos N. 2011. A descriptive analysis of the antimicrobial susceptibility of mastitis-causing bacteria isolated from samples submitted to commercial diagnostic laboratories in New Zealand (2003-2006). *New Zealand Veterinary Journal* **59**: 59-66. <http://dx.doi.org/10.1080/00480169.2011.552853> ISSN: 0048-0169
19. Petrovski, K.R., Williamson, N.B., Lopez-Villalobos, N., Parkinson, T.J., Tucker, I.G. 2011. Culture results from milk samples submitted to veterinary diagnostic laboratories from August 2003 to December 2006 in New Zealand. *New Zealand Veterinary Journal* **59**: 317-322. <http://dx.doi.org/10.1080/00480169.2011.610286> ISSN: 0048-0169
20. Petrovski, K.R., Caicedo-Caldas, A., Williamson, N.B., Lopez-Villalobos, N., Grinberg, A., Parkinson, T.J. and Tucker, I.G. 2011. Efficacy of a novel internal dry period teat sealant containing 0.5% chlorhexidine against experimental challenge with *Streptococcus uberis* in dairy cattle. *Journal of Dairy Science* **94**: 3366-3375. <http://dx.doi.org/10.3168/jds.2010-3744> ISSN: 0022-0302
21. Baudracco, J., Lopez-Villalobos, N., Romero, L.A., Scandolo, D., Maciel, M., Comeron, E.A., Holmes, C.W. and Barry, T.N. 2011. Effects of stocking rate on pasture production, milk production and reproduction of supplemented crossbred Holstein-Jersey dairy cows grazing lucerne pasture. *Animal Feed Science and Technology* **168**: 131-143. <http://dx.doi.org/10.1016/j.anifeedsci.2011.03.017> ISSN: 0377-8401
22. Alawneh, J., Stevenson, M., Williamson, N., Lopez-Villalobos, N. and Otley, T. 2011. Automatic recording of daily walkover liveweight of dairy cattle at pasture in the first 100 days in milk. *Journal of Dairy Science* **94**: 4431-4440. <http://dx.doi.org/10.3168/jds.2010-4002> ISSN: 0022-0302
23. MacNeil, M.D., Lopez-Villalobos, N. and Norhcutt, S.L. 2011. A prototype national cattle evaluation for feed intake and efficiency of Angus cattle. *Journal of Animal Science* **89**: 3917-3923. <http://dx.doi.org/10.2527/jas.2011-4124> ISSN: 0021-8812
24. McDougall, S., Lopez-Villalobos, N. and Prosser, C.G. 2011. Relationship between estimated breeding value for somatic cell count and prevalence of intramammary infection in dairy goats. *New Zealand Veterinary Journal* **59**: 300-304. <http://dx.doi.org/10.1080/00480169.2011.609475> ISSN: 0048-0169
25. Hill, K.E., Gieseg, M.A., Kingsbury, D., Lopez-Villalobos, N., Bridges, J., and Chambers, P. 2011. The efficacy and safety of a novel lipophilic formulation of methimazole for the once daily transdermal treatment of cats with hyperthyroidism. *Journal of Veterinary Internal Medicine* **25**: 1357-1365. <http://dx.doi.org/10.1111/j.1939-1676.2011.00799.x> ISSN: 1939-1676
26. Alawneh, J.I., Stevenson, M.A., Williamson, N.B., Lopez-Villalobos, N. and Otley, T. 2012. The effect of clinical lameness on liveweight in a seasonally calving, pasture-fed dairy herd. *Journal of Dairy Science* **95**: 663-669. <http://dx.doi.org/10.3168/jds.2011-4505> ISSN: 0022-0302
27. Alawneh, J. I., Stevenson, M. A., Williamson, N. B., Lopez-Villalobos, N. and Otley, T. 2012. The effect of liveweight change on reproductive performance in a seasonally calving, pasture fed dairy herd.

- Livestock Science* 145: 131-139. <http://dx.doi.org/10.1016/j.livsci.2011.12.025> ISSN: 1871-1413
28. Baudracco, J., Lopez-Villalobos, N., Holmes, C. W., Comeron, E. A., Macdonald, K. A., Barry, T. N. and Friggens, N. C. 2012. e-Cow: an animal model that predicts herbage intake, milk yield and live weight change in dairy cows grazing temperate pastures, with and without supplementary feeding. *Animal* **6**: 980-993. <http://dx.doi.org/10.1017/S1751731111002370> ISSN: 1751-7311
  29. Vibart, R.E., Washburn, S.P., Green Jr, J.T., Benson, G.A., Williams, C.M., Pacheco, D. and Lopez-Villalobos, N. 2012. Effects of feeding strategy on milk production, reproduction, pasture utilization, and economics of autumn-calving dairy cows in eastern North Carolina. *Journal of Dairy Science* **95**: 997-1010. <http://dx.doi.org/10.3168/jds.2011-4755> ISSN: 0022-0302
  30. Hickson, R.E., Anderson, W.J., Kenyon, P.R., Lopez-Villalobos, N., Morris, S.T., 2012. A survey detailing the calving performance of primiparous 2-year-old beef heifers and outcomes of assisted calving. *New Zealand Veterinary Journal* **60**: 35-41. <http://dx.doi.org/10.1080/00480169.2011.633878> ISSN: 0048-0169
  31. Hickson R.E., Laven R.L., Lopez-Villalobos N., Kenyon P.R., Morris S.T. 2012. Postpartum anoestrous interval in first-lactation beef and dairy-beef crossbred cows. *Animal Production Science* 52:478-482. <http://dx.doi.org/10.1071/an11288>. ISSN: 1836-0939
  32. Geary, U., Lopez-Villalobos, N., Garrick, D. J. and Shalloo, L. 2012. An analysis of the implications of a change to the seasonal milk supply profile in the Irish dairy industry utilizing a seasonal processing sector model. *The Journal of Agricultural Science* 150: 389-407. <http://dx.doi.org/10.1017/S0021859612000020> ISSN: 0021-8596
  33. Geary, U., Lopez-Villalobos, N., Begley, N., McCoy, F., O'Brien, B., O'Grady, L. and Shalloo, L. 2012. Estimating the effect of mastitis on the profitability of Irish dairy farms. *Journal of Dairy Science* 95: 3662-3673. <http://dx.doi.org/10.3168/jds.2011-4863> ISSN: 0022-0302
  34. Khan, M.K.I., Blair, H.T., Lopez-Villalobos, N. 2012. Lactation curves of different cattle breeds under cooperative dairying conditions in Bangladesh. *Journal of Applied Animal Research* 40: 179-185. <http://dx.doi.org/10.1080/09712119.2011.645039> ISSN: 0971-2119
  35. Leitch, B. J., Bray, J. P., Kim, N. J. G., Cann, B., and Lopez-Vilalobos, N. 2012. Pedicle ligation in ovariohysterectomy: An in vitro study of ligation techniques. *Journal of Small Animal Practice* 53: 592-598. DOI: 10.1111/j.1748-5827.2012.01258.x
  36. Lopez-Villalobos, N. 2012. Analysing the genetic basis of milk production traits. *CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources* 7 (No.028). <http://dx.doi.org/10.1079/PAVSNNR20127028> ISSN: 1749-8848
  37. O'Brien, B., Jago, J., Edwards, J. P., Lopez-Villalobos, N. and McCoy, F. 2012. Milking parlour size, pre-milking routine and stage of lactation affect efficiency of milking in single-operator herringbone parlours. *Journal of Dairy Research* 79: 216-223. <http://dx.doi.org/10.1017/S0022029912000088> ISSN: 0022-0299
  38. Penasa M., Cecchinato A., Dal Zotto R., Blair H.T., Lopez-Villalobos N., Bittante G. 2012. Direct and maternal genetic effects for body weight and price of calves sold for veal production. *Journal of Animal Science* **90**:3385-3391. <http://dx.doi.org/10.2527/jas2011-4487> ISSN: 0021-8812
  39. Pretto D., Lopez-Villalobos N., Penasa M., Cassandro M. 2012. Genetic response for milk production traits, somatic cell score, acidity and coagulation properties in Italian Holstein-Friesian population under current and alternative selection indices and breeding objectives. *Livestock Science* **150**:59-66. <http://dx.doi.org/10.1016/j.livsci.2012.08.001> ISSN: 1871-1413
  40. Riet-Sapriza F.G., Duignan P.J., Chilvers B.L., Wilkinson I.S., Lopez-Villalobos N., Mackenzie D.D.S., MacGibbon A., Costa D.P., Gales N. 2012. Interannual and individual variation in milk composition of New Zealand sea lions (*Phocarctos hookeri*). *Journal of Mammalogy* 93:1006-1016. <http://dx.doi.org/10.1644/11-mamm-a-220.2> ISSN: 0022-2372
  41. Laven L.J., Laven R.A., Parkinson T.J., Lopez-Villalobos N., Margerison J.K. 2012. An evaluation of the changes in distance from the external sole surface to the distal phalanx in heifers in their first lactation. *The Veterinary Journal* **193**: 639-643. <http://dx.doi.org/10.1016/j.tvjl.2012.06.045> ISSN: 1090-0233
  42. Edwards, J. P., N. Lopez-Villalobos, and J. G. Jago. 2012. Increasing platform speed and the percentage of cows completing a second rotation improves throughput in rotary dairies. *Animal Production Science* **52**:969-973. <http://dx.doi.org/10.1071/AN12071> ISSN: 1836-0939
  43. Almawly J., Prattley D., French N. P., Lopez-Villalobos N., Hedgespeth B. and Grinberg A. 2013. Utility of halofuginone lactate for the prevention of natural cryptosporidiosis of calves, in the presence of co-

- infection with rotavirus and Salmonella Typhimurium. *Veterinary Parasitology* 197: 59-67. <http://dx.doi.org/10.1016/j.vetpar.2013.04.029>
44. Baudracco J., Lopez-Villalobos N., Holmes C. W., Comeron E. A., Macdonald K. A., Barry T. N. 2013. e-Dairy: A dynamic and stochastic whole-farm model that predicts biophysical and economic performance of grazing dairy systems. *Animal* 7: 870-878. <http://dx.doi.org/10.1017/S1751731112002376> ISSN: 1751-7311
  45. Chawala A.R., Lopez-Villalobos N., Margerison J. K. and Spelman R. J. 2013. Genetic and crossbreeding parameters for incidence of recorded clinical lameness in New Zealand dairy cattle. *New Zealand Veterinary Journal* 61: 281-285. <http://dx.doi.org/10.1080/00480169.2013.763751> ISSN: 0048-0169
  46. Edwards J. P., Jago J. G and Lopez-Villalobos N. 2013. Short-term application of prestimulation and increased automatic cluster remover threshold affect milking characteristics of grazing dairy cows in late lactation. *Journal of Dairy Science* 96:1886-1893. DOI: <http://dx.doi.org/10.3168/jds.2012-6191> ISSN: 0022-0302
  47. Edwards J. P., Jago J. G. and Lopez-Villalobos N. 2013. Large rotary dairies achieve high cow throughput but are not more labour efficient than medium sized rotaries. *Animal Production Science* 53: 573-579. <http://dx.doi.org/doi:10.1071/AN12312> ISSN: 1836-0939
  48. Edwards JP, Jago JG, Lopez-Villalobos N. 2013. Milking efficiency for grazing dairy cows can be improved by increasing automatic cluster remover thresholds without applying premilking stimulation. *Journal of Dairy Science* 96: 3766-3773. <http://dx.doi.org/doi:10.3168/jds.2012-6394> ISSN: 0022-0302
  49. Edwards J. P., O'Brien B., Lopez-Villalobos N. and Jago J. G. 2013. Overmilking causes deterioration in teat-end condition of dairy cows in late lactation. *Journal of Dairy Research* 80 344-348. <http://dx.doi.org/10.1017/S0022029913000307> ISSN:1469-7629
  50. Edwards J. P., O'Brien B., Lopez-Villalobos N and Jago J. G. 2013. Milking efficiency of swingover herringbone parlours in pasture-based dairy systems. *Journal of Dairy Research* 80: 467-474. <http://dx.doi.org/10.1017/S0022029913000393> ISSN:1469-7629
  51. Geary U., Lopez-Villalobos N., O'Brien B., Garrick D.J., Shalloo L. 2013. Meta-analysis to investigate relationships between somatic cell count and raw milk composition, Cheddar cheese processing characteristics and cheese composition. *Irish Journal of Agricultural and Food Research* 52: 119-133. ISSN: 07916833 [http://www.teagasc.ie/research/journalarchives/vol52no2/ijafr\\_35\\_13.pdf](http://www.teagasc.ie/research/journalarchives/vol52no2/ijafr_35_13.pdf)
  52. Geary U., Lopez-Villalobos N., O'Brien B., Garrick D.J., Shalloo L. 2013. Examining the impact of mastitis on the profitability of the Irish dairy industry. *Irish Journal of Agricultural and Food Research* 52: 135-149. ISSN: 07916833 [http://www.teagasc.ie/research/journalarchives/vol52no2/ijafr\\_35\\_13.pdf](http://www.teagasc.ie/research/journalarchives/vol52no2/ijafr_35_13.pdf)
  53. Paten A.M., Kenyon P.R., Lopez-Villalobos N., Peterson S.W., Jenkinson C.M.C., Pain S.J., Blair H.T. 2013. Lactation biology symposium: Maternal nutrition during early and mid-to-late pregnancy: Comparative effects on milk production of twin-born ewe progeny during their first lactation. *Journal of Animal Science* 91: 676-684. <http://dx.doi.org/10.2527/jas.2012-5752> ISSN: 0021-8812
  54. Prier E.A., Gartrell B.D., Potter M.A., Lopez Villalobos N., McLennan J. 2013. Characterization of hatch-size and growth rates of captive and wild-reared Brown Kiwi (*Apteryx mantelli*) chicks. *Zoo Biology* 32: 541-548. <http://dx.doi.org/10.1002/zoo.21088> ISSN: 1098-2361
  55. Rivero, J., Hodgkinson, S.M. and Lopez-Villalobos, N. 2013. Definition of the breeding goal and determination of breeding objectives for European wild boar (*Sus scrofa* L.) in a semi-extensive production system. *Livestock Science* 157: 38-47. <http://dx.doi.org/10.1016/j.livsci.2013.07.007> ISSN: 1871-1413
  56. Saavedra-Jiménez, L. A., Ramírez-Valverde, R., Núñez-Domínguez, R., García-Muñiz, J. G., Lopez-Villalobos, N. and Ruíz-Flores, A. 2013. Genotype by climate interaction in the genetic evaluation for growing traits of Braunvieh cattle in Mexico. *Tropical Animal Health and Production* 45: 1489-1494 <http://dx.doi.org/10.1007/s11250-013-0387-2> ISSN: 0049-4747
  57. Tuñón G., O'Donovan M., Lopez Villalobos N., Hennessy D., Kemp P., Kennedy E. 2013. Spring and autumn animal treading effects on pre-grazing herbage mass and tiller density on two contrasting pasture types in Ireland. *Grass and Forage Science*. <http://dx.doi.org/10.1111/gfs.12055> ISSN: 1365-2494
  58. Baudracco J., Comeron, E.A., Lopez-Villalobos, N., Romero, L.A., Scandolo, D., Maciel, M., Barry, T.N., and Holmes, C.W. 2013. Effects of herbage allowance on dry matter intake, efficiency of grazing, milk yield and grazing behaviour of crossbred Holstein-Jersey dairy cows grazing alfalfa pastures. *Advances in Dairy Research* 2: 109. <http://dx.doi.org/10.4172/2329-888X.1000109> ISSN: 2329-888X

59. Geary U., Lopez-Villalobos N., Garrick D. J. and Shalloo L. 2014. Spring calving versus split calving: effects on farm, processor and industry profitability for the Irish dairy industry. *The Journal of Agricultural Science* 152: 448-463. doi: 10.1017/S0021859613000397 ISSN: 1469-5146
60. Alawneh J. I., Stevenson M. A., Williamson N. B., Lopez-Villalobos N. and Otley T. 2014. The effects of liveweight loss and milk production on the risk of lameness in a seasonally calving, pasture fed dairy herd in New Zealand. *Preventive Veterinary Medicine*. 113: 72-79 doi:10.1016/j.prevetmed.2013.10.010 ISSN: 0167-5877
61. Tuñón G., Kennedy E., Horan B., Hennessy D., Lopez-Villalobos N., Kemp P., Brennan A., O'Donovan M. 2014. Effect of grazing severity on perennial ryegrass herbage production and sward structural characteristics throughout an entire grazing season. *Grass and Forage Science* 69: 104-118. doi: 10.1111/gfs.12048 ISSN: 1365-2494
62. Edwards J. P., Jago, J. G. and Lopez-Villalobos, N. 2014. Analysis of milking characteristics in New Zealand dairy cows. *Journal of Dairy Science* 97: 259-269. <http://dx.doi.org/10.3168/jds.2013-7051> ISSN: 0022-0302
63. Vazquez-Pelaez, C. G., Garcia-Muniz, J. G. and Lopez-Villalobos, N. 2014. Empirical models used for lactation curve analysis in the chiapas sheep breed using random regression models. *International Journal of Livestock Production* 5: 55-64. <http://dx.doi.org/10.5897/IJLP2013.0177> ISSN: 2141-2448
64. Buckley, F., Lopez-Villalobos, N. and Heins, B. J. 2014. Crossbreeding: implications for dairy cow fertility and survival. *Animal* 8 (supplement 1): 122-133. <http://dx.doi.org/10.1017/S1751731114000901> ISSN: 1751-732X
65. Lopez-Villalobos, N., Edwards, J.P. and Jago J.G. 2014. Estimation of genetic and crossbreeding parameters of milking characteristics of grazing dairy cows. *New Zealand Journal of Agricultural Research* 53: 180-191. DOI: 10.1080/00288233.2014.909504. ISSN: 0028-8233
66. Lopez-Villalobos N., Spelman R.J., Melis J., Davis S.R., Berry S.D., Lehnert K., Holroyd R.E., MacGibbon A.K.H. and Snell R.G. 2014. Estimation of genetic and crossbreeding parameters of fatty acid concentrations in milk fat predicted by mid-infrared spectroscopy in New Zealand dairy cattle. *Journal of Dairy Research* 81:340-349. DOI: 10.1017/S0022029914000272. ISSN: 0022-0299
67. Khan M.K.I., Blair H.T., Lopez-Villalobos N. 2014. Economic values for traits in a breeding objective for dairy cattle in Bangladesh. *Indian Journal of Animal Sciences* 84: 682-686. <http://epubs.icar.org.in/ejournal/index.php/IJAnS/article/view/41651> ISSN: 0367-8318
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215. Arroyo-Rebollar, R., López-Villalobos, N., García-Martínez, A., Arriaga-Jordán, C. M. and Albarrán-Portillo, B. 2021. Relationship between calving interval and profitability of Brown Swiss cows in a subtropical region of Mexico. *Tropical Animal Health and Production* 53: 373. doi:10.1007/s11250-021-02813-0
216. Contla-Hernández, B., Lopez-Villalobos, N. and Vignes, M. 2021. Identifying health status in grazing dairy cows from milk mid-infrared spectroscopy by using machine learning methods. *Animals* 11: 2154. doi: 10.3390/ani11082154
217. Coleman, L., Back, P., Blair, H., López-Villalobos, N. and Hickson, R. 2021. Sire effects on birth weight, gestation length, and pre-weaning growth of beef-cross-dairy calves: A case study in New Zealand. *Dairy* 2: 385-395. doi: 10.3390/dairy2030030
218. Tapia-Escárate, D., Mackintosh, C., Scott, I., Lopez-Villalobos, N., Wilson, P. & Pomroy, W. 2021. Evaluation of cross-grazing deer with sheep or cattle, as means to reduce anthelmintic usage to control gastrointestinal and pulmonary nematodes in farmed red deer (*Cervus elaphus*) in New Zealand. *Veterinary Parasitology*. doi: 10.1016/j.vetpar.2021.109534
219. Ioannou, A., Phillips, H., Keating, S., Barger, A., Lopez-Villalobos, N., Wilson, M., Dillonair, A., Silveston-Keith, R., Ambrisko, T. D. and Gal, A. 2021. Blood-to-saliva glucose time lag in sedated healthy dogs. *Journal of Veterinary Diagnostic Investigation*. Doi: 10.1177/10406387211035367
220. Handcock, R. C., Lopez-Villalobos, N., Back, P. J., Hickson, R. E., & McNaughton, L. R. 2021. Growth, milk production, reproductive performance, and stayability of dairy heifers born from 2-year-old or mixed-age dams. *Journal of Dairy Science*. doi:10.3168/jds.2021-20354

## SUPERVISION OF POSTGRADUATE STUDENTS

### PhD Students

1. Everett-Hincks, J. M. 2004. Lamb rearing performance in highly fecund sheep. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
2. McWilliam, E. L. 2005. Use of willow fodder blocks for improvement of productive and reproductive performance of ewes grazing low quality drought pasture. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
3. Ramirez-Restrepo, C. A. 2005. Use of *Lotus corniculatus* to increase sheep production under commercial dryland farming conditions. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
4. Dooley, L. E. 2005. Selection and segregation of herds for a valuable milk trait. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
5. Schreurs, N. M. 2006. Effect of condensed tannin and fresh forage diets on the formation of indole and skatole in the rumen and on the pastoral odour and flavour of sheep meat. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
6. Bryant, J. R. 2006. Quantifying genetic variation in environmental sensitivity of New Zealand dairy cattle to apply in the development of a dairy cattle simulation model for pastoral systems. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
7. Riet-Saprija, F. G. 2007. Milk composition of the New Zealand sea lion and factors that influence it. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
8. Dipti, P. 2007. Effects on ewe reproduction and lamb mortality of grazing willow fodder blocks during drought. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-Supervisor**
9. Castinel, A. 2006. Causes of neonatal mortality in the New Zealand sea lion (*Phocarctos hookeri*). PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Co-Supervisor.
10. Grinberg, A. 2009. Epidemiological studies of cryptosporidiosis. PhD Thesis, Institute of Veterinary,



- Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-Supervisor.**
11. Hickson, R. E. 2009. Assistance at parturition of primiparous, two-year-old, Angus heifers and the effect of liveweight gain of heifers in early pregnancy on birth weight of the calf. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-Supervisor.**
  12. Khan, M. K. I. 2010. Development of models for the genetic improvement of dairy cattle under cooperative dairying conditions in Bangladesh. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-Supervisor.**
  13. Vlaming, B. J. 2008. Quantifying variation in estimated methane emission from ruminants using the SF6 tracer technique. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
  14. van der Linden, D. S. 2010. Ewe size and nutrition during pregnancy: effects on metabolic and productive performance of the offspring. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
  15. Swainson, N. M. 2011. Methane emissions and mitigation technologies in cattle, sheep and red deer. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
  16. Baudracco, J. 2011. Effects of feeding level and genetic merit on the efficiency of pasture-based dairy systems: field and modelling studies. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
  17. Petrovski, K. R. 2011. In vitro and in vivo studies on treatment and prevention of bovine mastitis. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-supervisor.**
  18. Alawneh, J. I. 2011. Monitoring liveweight to optimise health and productivity in pasture fed dairy herds. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-supervisor.**
  19. Tuñon, G. E. 2013. Improving the use of perennial ryegrass swards for dairying in Ireland. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
  20. Edwards, J. P. 2013. Efficient milking systems for large pastoral dairy farms. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
  21. Asmad, K. 2014. The effect of ewe nutrition during pregnancy on the reproductive system of the offspring. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
  22. Solis-Ramirez, J. 2014. Development of breeding objectives, genetic evaluation, selection and crossbreeding schemes for the genetic improvement of New Zealand dairy goats. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-Supervisor.**
  23. Silva-Villacorta, D. 2014. Determining premium payments for concentration of unsaturated fatty acids in milkfat in New Zealand based on changes in farm and processor profit. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
  24. Cranston, L. 2014. Chicory (*Cichorium intybus*) and plantain (*Plantago lanceolata*); physiological and morphological responses to water stress, defoliation, and grazing preference with implications for the management of the Herb and Legume Mix. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. Advisor on statistical analysis.
  25. Lepori-Honeyman, A. A. 2015. Genomic selection for traits of economic importance in sheep. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
  26. Laven, L. J. 2015. Anatomical studies of claw conformation in New Zealand dairy cattle. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-Supervisor.**
  27. Sneddon, N. W. 2016. A genetic and economic evaluation of lactose in the New Zealand dairy industry. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
  28. Tapia-Escarate, D. 2016. A study on some aspects of the pathogenicity, diagnosis and control of gastrointestinal nematodes in deer. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-Supervisor.**

29. Lembeye, F. 2017. Developing selection indexes & estimation of genetic parameters for traits of economic importance in dairy cattle under once-a-day milking. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
30. Ullah, Z. 2017. Effect of differing forages on the early growth and behaviour development of dairy heifers during pre- and post weaning periods. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
31. Roca Fraga, F. J. 2017. Optimum nutrition of the pregnant ewe : a meta-analytic approach. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Co-Supervisor.**
32. Hurley,A. 2018. Genetics of feed intake and efficiency in grazing dairy cows. PhD Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief Supervisor.**
33. Martin Correa-Luna. 2019. Dietary crude protein and nitrogen utilisation in two contrasting dairy systems. PhD Thesis, **Chief supervisor.** Exam: 27/Nov/2019
34. Rhiannon C Handcock. 2019. A comparison of growth patterns and live weight on milk production and fertility in dairy heifers. PhD Thesis. **Co-supervisor.** Exam: 30/Sep/2019
35. Lucy Coleman. 2020. The use of high genetic merit Angus and Hereford bulls in a New Zealand dairy herd. PhD Thesis. **Co-supervisor.** Exam: 14/09/2020
36. Isabel M Vialoux. 2020. Genetic parameters of body condition score (BCS) and effects of BCS and BCS change on ewe performance. PhD Thesis. **Co-supervisor.** Exam: 10/11/2020
37. Natalia de la Paz Martin. 2021. The effect of sire on growth and meat production of beef-cross-dairy cattle in New Zealand. PhD Thesis. **Co-supervisor.** Exam: ??/04/2021
38. Federico N Duranovich. 2020. Unveiling the potential of proximal hyperspectral sensing for measuring herbage nutritive value in a pasture-based dairy farm system. PhD Thesis. **Chief supervisor.** Exam 10/Nov/2020
39. Megan R Scholtens. 2020. Genetic and genomic studies on milk production and composition, and longevity in New Zealand dairy goats. PhD Thesis. **Chief supervisor.** Exam: 18/Nov/2020
40. Pavithra Ariyathne. 2021. Genetic and Genomic Studies of Animal Welfare and Environmental Traits in Dairy Cattle. **Chief supervisor.** Exam: 12/Mar/2021
41. Natasha Jaques. TBC 2021. Economic and genetic aspects on Lameness in New Zealand dairy goats. PhD thesis, School of Agriculture and Environment, Massey University, Palmerston North. **Chief Supervisor.**
42. Dinesha Jayawardana. TBC 2022. Fertility performance of once a day and twice a day milking cows in New Zealand. PhD thesis, School of Agriculture and Environment, Massey University, Palmerston North. **Chief Supervisor.**
43. Inthujaa Sanjayanj. TBC 2022. Studies on the gross composition and fatty acids profile of milk from cows milked once- and twice-a-day under New Zealand grazing conditions. PhD thesis, School of Agriculture and Environment, Massey University, Palmerston North. **Chief Supervisor.**
44. Marit van der Zeijden. TBC 2022. The impact of once-a-day milking on the physicochemical properties of milk. PhD thesis, School of Food and Advanced Technology, Massey University, Palmerston North. **Co-supervisor.**
45. Andrea Graña Baumgartner. TBC 2023. Exploring innovative ways, based on skin thickness and brown adipose tissue metabolism, for genetic improvement of new-born lamb survival. PhD thesis, School of Agriculture and Environment, Massey University, Palmerston North. **Co-supervisor.**
46. Ana C Marshall. TBC 2024. Genetic and genomic studies on composition and process ability characteristics of dairy sheep milk. PhD thesis, School of Agriculture and Environment, Massey University, Palmerston North. **Chief Supervisor.**

### Masters Students

1. Lemus-Ramirez, V. 2001. Productive performance and efficiency of two lines of Holstein Friesian cows which differ in mature live weight. Thesis for the Master of Applied Science. Massey University, Palmerston North, New Zealand. Co-supervisor.
2. Caicedo-Caldas, A. 2001. Feed intake capacity in Holstein-Friesian cows which differed genetically for body weight. Thesis for the Master of Applied Science. Massey University, Palmerston North, New Zealand. Advisor on statistical analysis.
3. Ramirez-Pacheco, R. 2001. Reproductive performance of cows calving in Spring or Autumn. Thesis for

- the Master of Applied Science. Massey University, Palmerston North, New Zealand. Advisor on statistical analysis.
4. Pereira, M. 2001. Breeding schemes for beef cattle considering selection and crossbreeding. Thesis for the Master of Applied Science. Massey University, Palmerston North, New Zealand. Advisor on statistical analysis.
  5. Schreurs, N. 2002. Effect of grazing undrenched weaner deer on chicory or perennial ryegrass/white clover pasture on gastrointestinal nematode and lungworm viability. Thesis for the Master of Applied Science. Massey University, Palmerston North, New Zealand. Advisor on statistical analysis.
  6. Tolosa, X. 2002. Intake, live weight and feed conversion efficiency of lactating Holstein-Friesian dairy cows which differ genetically in live weight. Thesis for the Master of Science in Animal Science. Massey University, Palmerston North, New Zealand. Advisor on statistical analysis.
  7. Bryant, J. R. 2003. Use of genetic information in the design and management of dairy farm systems. Thesis for the Master of Science in Animal Science. Massey University, Palmerston North, New Zealand. Co-supervisor.
  8. Pinochet-Chateau, R. 2005. Risk in New Zealand dairy farming: Perception and management. Master of Applied Science Thesis. Massey University, Palmerston North. Co-supervisor.
  9. Baudracco, J. 2006. Effects of stocking rate and supplementation on the productivity and profitability of Argentine dairy systems. Thesis for the Master of Science in Animal Science. Massey University, Palmerston North, New Zealand. **Chief supervisor.**
  10. Silva-Villacorta, D. 2005. The productivity of pasture-based dairy farms in New Zealand with different levels of extra feed input. Master of Animal Science Thesis. Massey University, Palmerston North. Co-supervisor.
  11. Glossop, J. C. 2004. Comparison of transcutaneous ultrasound over the right flank with trans rectal ultrasonography in the diagnosis of pregnancy in New Zealand dairy herds. Master of Veterinary Science Thesis. Massey University, Palmerston North. Co-supervisor.
  12. Hickson, R. E. 2005. Yields and persistency of lactation in Friesian and Jersey cows milked once a day. Master of Animal Science Thesis. Massey University, Palmerston North. **Chief supervisor.**
  13. Ordoñez, A. 2005. Effects of application in spring of urea fertiliser on aspects of reproductive performance of pasture-fed dairy cows. Master of Animal Science Thesis. Massey University, Palmerston North. Co-supervisor.
  14. Schweikart-Vial, C. 2005. Exploring the conversion process in organic dairy farms: the case of organic dairy farmers in New Zealand. Master of Applied Science in Natural Resource Management Thesis. Massey University, Palmerston North, New Zealand. Advisor on statistical analysis.
  15. Mair, J. 2006. Intestinal mast cell proteinase expression is associated with larval burden in Cyathostomin infected horses. Master of Veterinary Science Thesis. Massey University, Palmerston North. Advisor on statistical analysis.
  16. Rojas, V. 2006. Use of *Lotus corniculatus* to increase sheep reproduction under commercial dryland farming conditions. Master of Animal Science Thesis. Massey University, Palmerston North. Advisor on statistical analysis.
  17. Diaz-Lira, C. 2006. Willow (*Salix* spp.) fodder blocks for growth and sustainable management of internal parasites in grazing lambs. Master of Animal Science Thesis. Massey University, Palmerston North. Advisor on statistical analysis.
  18. Lazzarini, B. 2010. Milk production and nitrogen partitioning in dairy cows grazing standard and high sugar perennial ryegrass, with and without white clover, during spring and autumn. Master of Animal Science Thesis. Massey University, Palmerston North. Advisor on statistical analysis.
  19. Musonda, K. 2008. Grazing willow (*Salix* spp.) fodder blocks for increased reproductive rates and internal parasite control in mated hoggets. Master of Animal Science Thesis. Massey University, Palmerston North. Advisor on statistical analysis.
  20. Yang, L. 2009. Phenotypic relationships between milk protein percentage, reproductive performance and body condition score in Irish dairy cattle. Thesis for the Master of Science in Animal Science. Massey University, Palmerston North, New Zealand. **Chief supervisor.**
  21. Mupeyo, B. 2010. Effects of feeding willow (*Salix* spp.) upon death of established parasites and parasite fecundity. Master of Animal Science Thesis. Massey University, Palmerston North. Advisor on statistical analysis.
  22. Jones, E. 2010. Growth curves of kiwi birds in New Zealand. Master of Veterinary Science Thesis.

- Massey University, Palmerston North. Advisor on statistical analysis.
23. Roca, J. Lactation curves in crossbred dairy x beef cattle. Master of Animal Science Thesis. Massey University, Palmerston North. Advisor on statistical analysis.
  24. Jury, K. 2011. Genetic analysis of incidence of clinical mastitis in New Zealand dairy cattle. Master of Applied Science in Animal Production Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief-supervisor.**
  25. Chawala, A. R. 2011. The effect of breed and crossbreeding on the incidence of recorded lameness in the New Zealand dairy cattle. Master of Science in Animal Science Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief-supervisor.**
  26. Tan, M. E. 2013. Genome-wide association study for stature in New Zealand dairy cattle. Master of Science in Animal Science Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief-supervisor.**
  27. Chan, F. Y. 2013. Genome wide association studies for temperament in New Zealand dairy cattle. Master of Science in Animal Science Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief-supervisor.**
  28. Harris, R. A. 2015. Phenotypic correlations between linear type conformation traits, production and fertility in a once-a-day milked dairy cattle herd. Master of Veterinary Science Thesis, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North. **Chief-supervisor.**
  29. Yeoh, M. H. 2018. Growth curves of New Zealand heifers. Master of Animal Science Thesis. Massey University, Palmerston North. **Chief-Supervisor.**
  30. Robinson, V. 2015. Effects of cold stress on the submission and conception rates of New Zealand dairy cows. Master of Agricultural Science Thesis. Massey University, Palmerston North. Co-supervisor.
  31. Mkunda, V. 2016 Phenotypic relationship between milk fatty acid profile and live weight change in early lactation in New Zealand dairy cattle. Master of Science in Animal Science Thesis. Massey University, Palmerston North. **Chief-Supervisor.**
  32. Gardner, R. 2017. Milk Production and survival of spring-calving carryover cows in New Zealand dairy herds. Master of Animal Science Thesis. Massey University, Palmerston North. Co-supervisor. Completed.
  33. Martinez Rocha, J. F. 2016. An evaluation of traits other than production and its association with the survival of dairy cows milked once a day in New Zealand. Master of Animal Science Thesis. Massey University, Palmerston North. **Chief-supervisor.**
  34. Scholtens, M. 2016. Genetic evaluation of milk traits, live weight, somatic cell score, and litter size at birth, and development of a selection index for dairy sheep. Master of Science Thesis. Massey University, Palmerston North. Co-supervisor.
  35. Wood, O. 2018. Phenotypic trends for lactation persistency and production yields of Holstein-Friesian, Jersey and crossbred cows milked once-a-day under the New Zealand pasture-based dairy system. Master of Animal Science Thesis. Massey University, Palmerston North. **Chief-supervisor.**
  36. Flay, H. E. 2018. Methane emissions from dairy heifers as affected by residual feed intake and breed. Master of Science in Animal Science Thesis. Massey University, Palmerston North. Supervisor.
  37. Rodriguez-Cutza, L. X. 2019. Relationship between milk urea nitrogen and fertility parameters in dairy cows under New Zealand grazing conditions. Master of Veterinary Studies. Massey University, Palmerston North. **Chief-supervisor.** Report of final mark: 21 Aug 2019
  38. Win, K. S. T. 2019. The efficiency of pasture crude protein utilisation by once-a-day milking cows with the provision of the predicted balanced ration. Master of Science. Massey University, Palmerston North. **Chief-supervisor.** Report of final mark: 2 Sep 2019
  39. Lu, Y. 2020. Milk composition and productive and reproductive performance of cows from A1 and A2  $\beta$ -casein variants, milked once- or twice-a-day. Master of Science Thesis. Massey University, Palmerston North. **Chief-supervisor.**
  40. Jiang, H. 2020. Modelling of lactation curves of using linear and nonlinear random regression in dairy cows milked once a day. Master of Science Thesis. Massey University, Palmerston North. **Chief-supervisor.**
  41. Reis Lacerda Medeiros A. C. 2020. Genetic correlations between milk urea nitrogen and fertility traits in dairy cattle. Master of Science Thesis. Massey University, Palmerston North. **Chief-supervisor.**
  42. Brenda Contla Hernandez. 2020. Predicting health status, lameness and mastitis of dairy cows from milk mid-infrared spectroscopy by using machine learning methods. Master of Science Thesis. Massey

University, Palmerston North. **Co-supervisor.**

43. Tyler Porteous. TBC 2022. Calculation of inbreeding coefficient using single nucleotide polymorphism markers. Master of Science Thesis. Massey University, Palmerston North. **Chief-supervisor.**
44. Katie Starsmore. TBC 2022. Effect that different averaging techniques on the repeatability of methane, carbon dioxide, hydrogen and dry matter intake in indoor dry dairy cows. Master of Science Thesis. Massey University, Palmerston North. **Chief-supervisor.**
45. Micayla Boshoff. TBC 2022. Effect of pregnancy and extended lactation on milk production in dairy goats. Master of Science Thesis. Massey University, Palmerston North. **Co-supervisor.**

### Diploma Students

1. Aditya S Bhalekar, A. S. 2007. Identifying traits for selection criteria for the genetic improvement of New Zealand sport horses. Dissertation for the Diploma in Animal Science, Massey University, Palmerston North. Chief Supervisor.
2. Yang, L. 2008. The relationship among body condition score, milk yield and fertility in dairy cattle. Dissertation for the Diploma in Animal Science, Massey University, Palmerston North. Chief Supervisor.
3. Jury, K. 2009. Breed and heterosis effects for intramammary infection diagnosed using somatic cell count. Dissertation for the Diploma in Animal Science, Massey University, Palmerston North. Chief Supervisor.
4. Sneddon, N. W. 2011. Review on differences for production, reproduction and environmental impact traits between Holstein-Friesian, Jersey and Holstein-Friesian x Jersey crossbred cows. Dissertation for the Diploma in Animal Science, Massey University, Palmerston North. Chief Supervisor.
5. Edwards, J. P. 2011. Factors affecting milking efficiency in expanding dairy herds. Dissertation for the Diploma in Animal Science, Massey University, Palmerston North. Chief Supervisor.

### Honours Students

1. Kylie M. Moore, K. M. 2003. Use of willow supplementation in cattle under drought conditions. Thesis for the Bachelor of Science with Honours in Animal Science. Massey University, Palmerston North. Advisor on statistical analysis.
2. Sheely, L. 2009. Predicting the timing of puberty in dairy cattle. Thesis for the Bachelor of Science with Honours in Animal Science. Massey University, Palmerston North. Chief Supervisor.
3. Clark, B. 2014. Genetic Trends in Massey University No. 4 Dairy Herd. Thesis for the Bachelor of Science with Honours in Animal Science. Massey University, Palmerston North. Chief Supervisor.
4. Richards, T. G. 2015. The supplementary feed responses of New Zealand Holstein-Friesian dairy cows of differing genetic merit and the resulting impacts on dairy farm profitability. Thesis for the Bachelor of Science with Honours in Animal Science. Massey University, Palmerston North. Chief Supervisor.

### International Students

1. Penasa, M. 2009. Crossbreeding effects in dairy cows. PhD Thesis in Animal Science. Padova University, Padova, Italy. Co-supervisor.
2. Pretto, D. 2012. A selection index to improve cheese-making traits of milk in Italian dairy cattle. PhD Thesis in Animal Science. Padova University, Padova, Italy. Co-supervisor.
3. Saavedra-Jiménez, L. A. 2012. Interaccion genotipo por clima en la evaluacion genetica nacional de bovinos Suizo Europeo de registro de Mexico. Tesis en Maestro en Ciencias en Innovacion Ganadera, Universidad Autonoma Chapingo, Chapingo, Estado de Mexico. Asesor.
4. Rivero, J. 2013. Determinacion de estrategias para incrementar la productividad de jabalies en crecimiento en sistemas de produccion semi-extensivos: evaluacion de factores ambientales y geneticos. Tesis de Doctorado en Ciencia Animal. Facultad de Ciencias Agricolas, Universidad Austral de Chile, Valdivia, Chile. Co-supervisor.
5. Chamon, G. TBC 2014. Nutritional strategies from birth to slaughtering in crossbred dairy cattle systems. PhD Thesis in Animal Science. Departamento de Zootecnia, Universidade Federal de Viçosa, Viçosa, MG, Brazil. Co-supervisor. He spent 6 months at Massey University – thesis completed.
6. Gottardo, P. 2014. Genetics of milk fatty acid composition predicted by mid-infrared spectroscopy. PhD Thesis in Animal Science. Padova University, Padova, Italy. Co-supervisor. He spent 6 months at Massey

University – thesis completed.

7. Ramirez, J. J. 2015. Impactos ambientales y económicos de la emisión de gases de efecto invernadero por el ganado bovino lechero en la comarca lagunera. Tesis de Maestría, Universidad Autónoma Chapingo. Co-supervisor.
8. Diego, D. 2015. Productive, reproductive and health performance of probred Holstein versus – Swedush Red & White Holstein in central Argentina. PhD thesis, Universidad Nacional del Rio Cuarto, Argentina. He spent 3 months at Massey University – thesis to be completed in 2108.
9. Alvarez Ruiz A.R. 2017. Suplementación de glutamato y función reproductiva en cabras primiparas durante el periodo de transición al anestro estacional: Efecto sobre los niveles séricos de insulina. Tesis de Maestro en Ciencias en Recursos Naturales y Medio Ambiente en Zonas Áridas. URUZA-Universidad Autónoma Chapingo, Bermejillo, Durango, Mexico.
10. Roveglia, C. 2019. Genetic and phenotypic aspects of production, conformation and somatic cell count traits in Italian Jersey cattle. PhD Thesis in Animal Science. Padova University, Padova, Italy. Co-supervisor. She is for 6 months at Massey University – thesis defended on 19 March 2019.
11. García Medina, A. 2019. Análisis de factores genéticos y no genéticos que afectan el peso al nacimiento de una población multirracial de cabras lecheras de Venezuela. Tesis de Licenciatura, Universidad Autónoma del Estado de México. Asesor de tesis. URL: <http://hdl.handle.net/20.500.11799/105368>
12. Beribe, J.M. 2020. Curvas de lactancia e identificación de QTLs asociados a características productivas en ganado Holando y cruce Holando×Jersey. Tesis de Doctorado en Ciencia Animal, Facultad de Ciencias Veterinarias, Universidad de Buenos Aires, Argentina. Supervisor. Submitted 10 Feb 2020.
13. Lazarinni, B. 2020. Impacto productivo, económico y ambiental de un ordeño diario en vacas lecheras en sistemas pastoriles de Argentina. PhD student, Universidad Nacional del Litoral, Esperanza, Santa Fe, Argentina.