## Victor E. Cabrera, Ph.D.

Professor and Extension Specialist in Dairy Management University of Wisconsin-Madison, Department of Dairy Science 1675 Observatory Dr. 279, Madison, WI 53706 +1-608-625-8506, vcabrera@wisc.edu, http://DairyMGT.info

Improving dairy farm management by providing scientific decision support tools

#### **Biography**

Dr. Cabrera combines applied research, interdisciplinary approaches, and participatory methods to deliver practical, user-friendly, and scholarly decision support tools for dairy farm management. These scientific tools are improving dairy farm profitability, environmental stewardship, and long-term sustainability of the dairy farm industry. Dr. Cabrera's research and Extension programs are having a global impact. Dr. Cabrera and his workgroup had developed 49 decision support tools, published 58 refereed articles, and 8 book chapters. Dr. Cabrera has presented in more than 88 scientific sessions, and given extension talks in more than 384 extension meetings in Wisconsin, other States, and several other countries. Dr. Cabrera work in the past 9 years has been pivotal to attract more than \$4.0 million to support his research and extension initiatives. Dr. Cabrera has been distinguished with the University of Wisconsin-Madison Vilas Faculty Mid-Career Investigator Award, Second Mile Extension award of the Wisconsin Association of County Agricultural Agents, the Pound Extension Award and the Alfred Toepfer Faculty Fellow Award from the University of Wisconsin College of Agriculture and Life Sciences, the Distinguished Achievement Award from the University of Florida School of Natural Resources and Environment, and the Foundation Scholar Award in Dairy Production from the American Dairy Science Association.

### **Professional experience**

2018 - Present	Professor
	Extension Specialist in Dairy Management
	Department of Dairy Science
	University of Wisconsin-Madison
	30% Research, 70% Extension
2014 – 2018	Associate Professor
	Extension Specialist in Dairy Management
	Department of Dairy Science
	University of Wisconsin-Madison
	30% Research, 70% Extension

2008 – 2013	Assistant Professor
	Extension Specialist in Dairy Management
	Department of Dairy Science
	University of Wisconsin-Madison
	30% Research, 70% Extension
2006 – 2008	Assistant Professor
	Extension Specialist in Dairy Management
	Department of Extension Animal Sciences and Natural Resources
	New Mexico State University
	25% Research, 75% Extension
1999 – 2001	Extension Program Planner
	Inter-American Development Bank, Peru
1994 – 1997	Agricultural Educator and Extension Agent
	Valle Grande Rural Institute, Peru

## **Academic Education**

2004 – 2006	Postdoctoral Research Associate
	Farm risk decision-making
	University of Miami
2001 – 2004	Ph.D.
	Ecology and Economics
	University of Florida
1997 – 1999	M.S.
	Farming Systems Research and Extension
	University of Florida
1995	Diploma
	Management of Agricultural Schools
	UNEFA, Madrid-Paris
1993	Engineer
	Agricultural Production
	La Molina Agrarian University, Peru
1988 – 1991	B.S.
	Sciences – Agronomy
	La Molina Agrarian University, Peru

# **Honors and Awards**

2016	Vilas Faculty Mid-Career Investigator Award	
	University of Wisconsin-Madison	
2013	Second Mile Award	
	Wisconsin Association of Agricultural Agents	
2012	Pound Extension Award	
	College of Agricultural and Life Sciences	
	University of Wisconsin-Madison	

2012	Distinguished Achievement
	School of Natural Resources and Environment
	University of Florida
2011	Foundation Scholar Award in Dairy Production
	American Dairy Science Association
2011	Alfred Toepfer Faculty Fellow Award
	University of Wisconsin-Madison
1998 – 1999,	Outstanding International Student
2001 – 2004	University of Florida
2002	Outstanding Contributions to Farming Systems in Nicaragua
	Agricultural Development Foundation, Nicaragua
1999	Honor and Membership
	The Fraternity of Alfa Zeta
1999	Achievement and Membership
	The Honor Society of Agriculture Gamma, Sigma, Delta

#### Refereed Journal Articles (58; 26 since 2014)

- 1. Jabarzareh, A., A. Sadeghi-Sefidmazgi, G. Ghorbani, and **V. E. Cabrera**. Accepted May 25 2018. Economic evaluation of sexed semen use in Iranian dairy farms according to field data. Reprod Dom Anim. 2018;1–8.
- 2. Mur-Novales, R., F. Lopez-Gatius, P. Fricke, **V. E. Cabrera** . 2018. An economic evaluation of management strategies to mitigate the negative impact of twinning in dairy herds. Journal of Dairy Science 101:8335–8349.
- 3. \* **†Cabrera, V. E.** 2018. Helping dairy farmers to improve economic performance utilizing data-driving decision support tools. Animal 1-11. doi:10.1017/S1751731117001665.
- 4. \*Bach, A., and **V. E. Cabrera**. 2017. Robotic milking: feeding strategies and economic returns. Journal of Dairy Science 100:7720-7728.
- 5. †Liang, D. F. Sun, M. A. Wattiaux, **V. E. Cabrera**, J. L. Hedtcke, and E. M. Silva. 2017. Effect of feeding strategies and cropping systems on greenhouse gas emission from Wisconsin certified organic dairy farms. Journal of Dairy Science 100:5957-5973.
- 6. López-Gatius, F., C. Andreu-Vázquez, R. Mur-Novalesd, **V. E. Cabrera**, R. H. F. Hunter. 2017. The problem of twin pregnancies in dairy cattle. A review on practical prospects. Livestock Science 197:12-16.
- 7. Krpalkova, L, **V. E. Cabrera**, J. Kvapilik, and J. Burdych. 2016. Associations of reproductive and health problems with the performance and profit of commercial dairy cows. Agricultural Economics 62:385-394.
- 8. Krpalkova, L, **V. E. Cabrera**, J. Kvapilik, and J. Burdych. 2016. Dairy farm profit according to herd size, milk yield, and number of cows per worker. Agricultural Economics 62:225-234.
- 9. Batista, E. O. S., L. M. Vieira, M. F. Sá Filho, P. D. Carvalho, H. Rivera, **V. E. Cabrera**, M. C. Wiltbank, P. S. Baruselli, and A. H. Souza. 2016. Field fertility in Holstein bulls: Can type of breeding strategy (artificial insemination following

- estrus versus timed artificial insemination) alter service sire fertility? Journal of Dairy Science 99:2010-2015.
- Kalantari A. S., L. E. Armentano, R. D. Shaver, and V. E. Cabrera. 2016. Economic impact of nutritional grouping in dairy herds. Journal of Dairy Science 99:1672-1692.
- 11. **†Cabrera, V. E.**, and A. S. Kalantari. 2016. Economics of production efficiency: Nutritional grouping. Journal of Dairy Science 99:825–841.
- 12. Qi, L., B. E. Bravo-Ureta, and **V. E. Cabrera**. 2015. From cold to hot: Climatic effects and productivity in Wisconsin dairy farms. Journal of Dairy Science 98:8664–8677.
- Mahnani, A., A. Sadeghi-Sefidmazgi, and V. E. Cabrera. 2015. Consequences and economics of metritis in Iranian Holstein dairy farms. Journal of Dairy Science 98:6048-6057.
- 14. Shahinfar, S., J. N. Guenther, D. Page, A. Samia-Kalantari, **V. E. Cabrera**. P. M. Fricke, and K. A. Weigel. 2015. Optimization of reproductive management programs using lift chart analysis and cost sensitive evaluation of classification errors. Journal of Dairy Science 98:3717-3728.
- 15. †Liang, D., and **V. E. Cabrera**. 2015. Optimizing productivity, herd structure, environmental performance, and profitability of dairy cattle herds. Journal of Dairy Science 98:2812-2823.
- 16. Kalantari, A. S., **V. E. Cabrera**. 2015. Stochastic economic evaluation of dairy farm reproductive performance. Canadian Journal of Animal Science 95:59-70.
- 17. Contreras-Govea, F. E., **V. E. Cabrera**, L. E. Armentano, R. D. Shaver, P. M. Crump, D. K. Beede, and M. J. VandeHaar. 2015. Constraints for nutritional grouping in Wisconsin and Michigan dairy farms. Journal of Dairy Science 98:1336-1344.
- Aguirre-Villegas, H. A., T. H. Passos-Fonseca, D. J. Reinemann, L. E. Armentano, M. A. Wattiaux, V. E. Cabrera, J. M. Norman, and R. Larson. 2015. Green cheese: Partial life cycle assessment of greenhouse gas emissions and energy intensity of integrated dairy and bioenergy systems. Journal of Dairy Science 98:1571-1592.
- 19. Kalantari, A. S., **V. E. Cabrera**, D. Solis. 2015. A comparison analysis of two alternative dairy cattle replacement strategies: Optimization versus simulation models. Revista Economía Agraria 18:12-24. ISSN 0718-9141.
- 20. Krpalkova, L, **V. E. Cabrera**, J. Kvapilik, J. Burdych, and P. Crump. 2014.
  Associations between age at first calving, rearing average daily weight gain, herd milk yield level and dairy herd production, reproduction, and profitability of costs. Journal of Dairy Science 97:6573-6582.
- 21. Dutreuil, M., M. Wattiaux, C. A. Hardie, and **V. E. Cabrera.** 2014. Feeding strategies and manure management for cost effective mitigation of greenhouse gas emissions from dairy farms in Wisconsin. Journal of Dairy Science 97:5904-5917.
- 22. Hardie, C., M. Wattiaux, M. Dutreuil, R. Gildersleeve, N. Keuler, and **V. E. Cabrera.** 2014. Feeding strategies on certified organic dairy farms in Wisconsin and their

- impact on milk production and income over feed costs. Journal of Dairy Science 97:4612-4623.
- 23. **Cabrera, V. E.** 2014. Economics of fertility in high-yielding dairy cows on confined TMR systems. Animal 8:211-221.
- 24. Krpalkova, L, **V. E. Cabrera**, M. Vacek, M. Stipkova, L. Stadnik, and P. Crump. 2014. Impact of prepubertal and postpubertal growth and age at first calving on production and reproduction traits during the first 3 lactations in Holstein dairy cattle. Journal of Dairy Science 97:3017-3027.
- 25. Shahinfar, S, A. Kalantari, **V. E. Cabrera**, K. Weigel. 2014. Short communication: Prediction of retention pay-off using a Machine Learning algorithm. Journal of Dairy Science 97:2949-2952.
- 26. Shahinfar, S. D. Page, J. Guenther, **V. E. Cabrera**, P. Fricke, and K. Weigel. 2014. Prediction of insemination outcomes in Holstein dairy cattle using alternative machine learning algorithms. Journal of Dairy Science 97:1-12.
- 27. Giordano, J. O., P. M. Fricke, and **V. E. Cabrera**. 2013. Economics of resynchronization strategies including chemical tests to identify non-pregnant cows. Journal of Dairy Science 96:949-961.
- 28. Kalantari, A. S., **V. E. Cabrera**. 2012. The effect of reproductive performance on the dairy cattle herd value assessed by integrating a daily dynamic programming with a daily Markov chain model. Journal of Dairy Science 95:6160-6170.
- 29. Giordano, J. O., A. Kalantari, P. M. Fricke, M. C. Wiltbank, and **V. E. Cabrera**. 2012. A Daily herd Markov-chain model to study the reproductive and economic impact of reproductive programs combining timed artificial insemination and estrous detection. Journal of Dairy Science 95:5442-5460.
- 30. **Cabrera**, **V. E.** 2012. A simple formulation and solution to the replacement problem: A practical tool to assess the economic cow value, the value of a new pregnancy, and the cost of a pregnancy loss. Journal of Dairy Science 95:4683-4698.
- 31. Giordano, J. O., P. M. Fricke, M. C. Wiltbank, and **V. E. Cabrera**. 2011. An economic decision-making decision support system for selection of reproductive management programs on dairy farms. Journal of Dairy Science 94:6216-6232.
- 32. Valvekar, M., J. P. Chavas, B. W. Gould, and **V. E. Cabrera**. 2011. Revenue risk management, risk aversion and the use of LGM-Dairy insurance. Agricultural Systems 104:671-678.
- 33. **Cabrera, V.E.**, Janowski, J.M. 2011. Wisconsin dairy business and production survey: Comparison between farms planning to expand and farms not planning to expand. Journal of Extension 3RIB1.
- 34. Pinzón-Sánchez, C., **V. E. Cabrera**, and P. L. Ruegg. 2011. Decision tree analysis of treatment strategies for mild and moderate cases of clinical mastitis. Journal of Dairy Science 94:1873-1892.
- 35. Chidmi, B., D. Solís and V. E. Cabrera. 2011. Analyzing the sources of technical efficiency among heterogeneous dairy farms: A quantile regression approach.

- Journal of Development and Agricultural Economics 3(7):318-324.
- 36. **Cabrera, V. E.** 2010. A large Markovian linear program for replacement policies to optimize dairy herd net income for diets and nitrogen excretion. Journal of Dairy Science 93:394-406.
- 37. Valvekar, M., V. E. Cabrera, and B. W. Gould. 2010. Identifying cost-minimizing strategies for guaranteeing target dairy income over feed cost via use of the Livestock Gross Margin dairy insurance program. Journal of Dairy Science 93:3350-3357.
- 38. **Cabrera, V. E.**, D. Solis, and J. del Corral. 2010. Determinants of technical efficiency among dairy farms in Wisconsin. Journal of Dairy Science 93:387-393.
- 39. Inostroza, J. F., R. D. Shaver, **V. E. Cabrera**, and J. M. Tricarico. 2010. Effect of diets containing a controlled-release urea product on milk yield, composition and component yields in commercial Wisconsin dairy herds and economic implications. Professional Animal Scientist 26:175-180.
- 40. Breuer, N. E., C. W. Fraisse, and **V. E. Cabrera**. 2010. The Cooperative Extension Service as a boundary organization for diffusion of climate forecast: A 5-year study. Journal of Extension 4RIB7.
- 41. **Cabrera, V.E.**, D. Solis, and D. Letson. 2009. Optimal crop insurance under climate variability: contrasting insurer and farmer interests. Transactions of the ASABE 52, 623-631.
- 42. **Cabrera, V.E.**, L. J. Stavast, T. T. Baker, M. K. Wood, D. S. Cram, R. P. Flynn, and A. L. Ulery. 2009. Soil and runoff response to dairy manure application on rangeland. Agriculture, Ecology, and Environment 131:255-262.
- 43. AitSahlia, F., C. Wang, **V. E. Cabrera**, S. Uryasev, and C. W. Fraisse. 2009. Optimal crop planting schedules and financial hedging strategies. Annals of Operations Research DOI: 10.1007/s10479-009-0551-2.
- 44. Liu, J., C. Men, **V. E. Cabrera**, S. Uryasev, and C. W. Fraisse. 2008. Optimizing crop insurance under climate variability. Journal of Applied Meteorology and Climatology 47:2572-2580.
- 45. **Cabrera, V. E.**, R. Hagevoort, D. Solis, R. Kirksey, and J. A. Diemer. 2008. Economic impact of milk production in the State of New Mexico. Journal of Dairy Science 91:2144-2150.
- 46. **Cabrera, V. E.**, C. P. Mathis, R. Kirksey, and T. T. Baker. 2008. Development of a seasonal prediction model for manure excretion by dairy cattle. The Professional Animal Scientist 24:175-183.
- 47. Fraisse, C. W., **V. E. Cabrera,** N. E. Breuer, J. Baez, J. Quispe, E. Matos. 2008. El Niño Southern Oscillation Influences on Soybean Yields in Eastern Paraguay. International Journal of Climatology 28:1339-1407.
- 48. **Cabrera, V. E.**, N. E. Breuer, and P. E. Hildebrand. 2008. Participatory modeling in dairy farm systems: a method for building consensual environmental sustainability using seasonal climate forecasts. Climatic Change 89:395-409.

- 49. Breuer, N. E., **V. E. Cabrera**, K. T. Ingram, K. Broad, and P. E. Hildebrand. 2008. AgClimate: A case study in participatory decision support system development. Climatic Change 87:385-403.
- 50. **Cabrera, V. E.**, S. Jagtap, and P. E. Hildebrand. 2007. Strategies to limit (minimize) nitrogen leaching on dairy farms driven by seasonal climate forecasts. Agriculture, Ecosystems, and Environment 122:479-489.
- 51. **Cabrera, V. E.**, D. Letson, and G. Podesta. 2007. The value of the climate information when Farm Programs matter. Agricultural Systems 93:25-42.
- 52. **Cabrera, V. E.**, A. de Vries., and P. E. Hildebrand. 2006. Manure nitrogen production in North Florida dairy farms: A comparison of three models. Journal of Dairy Science 89:1830-1841.
- 53. **Cabrera, V. E.**, N. E. Breuer, and P. E. Hildebrand. 2006. North Florida dairy farmer perception toward the use of seasonal climate forecast technology. Climatic Change 78:479-491.
- 54. **Cabrera, V. E.**, C. Fraisse, D. Letson, G. Podesta, and J. Novak. 2006. Impact of climate information in reducing farm risk by selecting crop insurance programs. Transactions of the ASABE 49:1223-1233.
- 55. **Cabrera, V. E.**, P. E. Hildebrand, J. W. Jones, D. Letson, and A. de Vries. 2006. An integrated North Florida dairy farm model to reduce environmental impacts under seasonal climate variability. Agriculture, Ecosystems, and Environment 113:82-97.
- 56. Fraisse, C. W., J. G. Bellow, N. E. Breuer, V. E. Cabrera, L. Hatch, G. Hoogenboom, K. Ingram, J. W. Jones, J. J. O'Brien, J. Paz, and D. Zierden. 2006. AgClimate: A Climate Forecast Information System for Agricultural Risk Management in the Southeastern USA. Computer and Electronics in Agriculture 53:13-27.
- 57. **Cabrera, V. E.**, N. E. Breuer, P. E. Hildebrand, and D. Letson. 2005. The dynamic north-Florida dairy farm model: a user-friendly computerized tool for increasing profits while minimizing environmental impacts. Computers and Electronics in Agriculture 49:286-308.
- 58. **Cabrera, V. E.**, P. E. Hildebrand, and J. W. Jones. 2005. Modeling the effect of household composition on the welfare of limited-resource farmers in Coastal Cañete, Peru. Agricultural Systems 86:207-222.

## Chapter Books (8; 3 since 2014)

- 1. Overton, M. W., and **V. E. Cabrera.** 2017. Monitoring and quantifying value of change in reproductive performance. In: Large Dairy Herd Management Book (http://ldhm.adsa.org). American Dairy Science Association.
- 2. Liang, D., and **V. E. Cabrera.** 2017. Dairy Farm Management Strategies to Reduce Greenhouse Gas Emissions: Mitigation Strategies and Economic Considerations in the US. in: Agricultural Research Updates. Volume 20. Nova

<sup>\*</sup>Article of the month; †Editor choice; ‡Invited review

- Science Publishers.
- 3. Krpálková, L., V. E. Cabrera, J. Kvapilik, J. Burdych, M. Štipková, P. Crump, L. Stádnik, and M. Vacek. 2014. Optimal growth of heifers and effect of milk yield level on dairy herd production, reproduction, and profitability. LAP LAMBERT Academic Publishing, Saarbrücken, Deutschland, Germany.
- 4. **Cabrera, V. E.** 2012. DairyMGT: A suite of decision support systems in dairy farm management. IN Decision Support Systems. Jao C. (Ed), INTECH, Rijeka, Croatia.
- 5. **Cabrera, V. E.**, P. E. Hildebrand. 2012. Chapter 7th: Linear programming for dairy herd simulation and optimization: An integrated approach for decision-making. IN Linear programming New frontiers in theory and applications. Zoltan, A. M. (Ed.), Nova Science Publishers, Inc., Hauppauge, NY.
- 6. **Cabrera, V. E.**, D. Solís, G. A. Baigorria, and D. Letson. 2009. Chapter 7th: Managing climate variability in agricultural analysis. IN: Long, J.A., and D. S. Wells (Eds), Ocean circulation and El Niño: New research, p. 163-179, Nova Science Publishers, Inc., Hauppauge, NY.
- Hoogenboom, G., C. W. Fraisse, J. W. Jones, K. T. Ingram, J. J. O'Brien, J. G. Bellow, D. Zierden, D. E. Stooksbury, J. O. Paz, A. Garcia y Garcia, L. C. Guerra, D. Letson, N. E. Breuer, V. E. Cabrera, L. U. Hatch, and C. Roncoli. 2007. Climate-based agricultural risk management tools for Florida, Georgia and Alabama, USA. In: Sivakumar, M. V. K. and J. Hansen (Eds.), Climate Prediction and Agriculture: Advances and Challenges, p. 273-278, Springer, Berlin.
- 8. Langeveld, J.W.A., A. Crawford, M. Paine, S. Pinheiro, W. de Boef, I. S. Kristensen, J. Hermansen, B. Dedieu, P. E. Hildebrand, V. E. Cabrera, D. Jansen, and J. Dixon. 2006. Project setup and learning processes in participative systems oriented research initiatives. In: Langeveld, H., N. Roling (Eds), Changing European farming systems for a better future. New visions for rural areas. p. 89-91, Wageningen Academic Publishers, Wageningen.

# Computerized Decision Support Tools (49, all updated or upgraded since 2014)

- 1. Cabrera, V. E. Bulk tank SCC and milk value.
- 2. Cabrera, V. E. Repro Money Extension program in Wisconsin 2010-2014.
- 3. Gaspar, N., and **V. E. Cabrera.** Economic evaluation of CholiPEARL use on preventing subclinical Ketosis.
- 4. **Cabrera, V. E.** Characteristics of organic, grazing, and conventional dairy farms in the state of Wisconsin.
- 5. **Cabrera, V. E.**, and K. A. Weigel. Integrated genomic testing for Jersey heifer calf decision support tool.
- 6. Cabrera, V. E., and G. Lopes. Premium on beef dairy program.

- 7. Shahinfar, S., A. Kalantari, **V. E. Cabrera**, and K. A. Weigel. Retention Pay-Off (RPO) calculator.
- 8. Cabrera, V. E. Nutritional grouping in Wisconsin and Michigan dairy farms.
- 9. Cabrera, V. E. The economic value of a dairy cow.
- 10. Cabrera, V. E., L. Armentano, and R. D. Shaver. FeedVal v6.0.
- 11. **Cabrera, V. E.**, and J. O. Giordano. UW-CornellDairyRepro\$Plus: A reproductive analysis tool that includes heat detection devices.
- 12. **Cabrera**, **V. E.** Dairy reproductive economic analysis.
- 13. Gould, B. W. and V. E. Cabrera. Livestock Gross Margin-Dairy analyzer.
- 14. **Cabrera**, **V. E**. Grouping strategies for feeding lactating dairy cattle.
- 15. Cabrera, V. E. Exploring timing of pregnancy impact on income over feed cost.
- 16. Cabrera, V. E., and A. S. Kalantari. Milk curve fitter.
- 17. **Cabrera, V. E.**, and P. Meyer. Projecting dairy herd size and make-up using the herd structure and simulation model.
- 18. Cabrera, V. E., and K. Bolton. Working capital decision support system.
- 19. **Cabrera, V. E.**, and J. O. Giordano. UW-DairyRepro\$: A reproductive economic analysis tool.
- 20. **Cabrera**, **V. E**. Dairy extension feed cost evaluator. Benchmarks feed costs and income over feed costs for participating herds.
- 21. Cabrera, V. E., and B. W. Gould. Net guarantee income over feed cost.
- 22. Cabrera, V. E., and J. Vanderlin. The Wisconsin dairy farm ratio-benchmarking tool.
- 23. **Cabrera, V. E.**, and J. Janowski. Decision support system program for dairy production and expansion.
- 24. Cabrera, V. E. Optigen evaluator.
- 25. Cabrera, V. E., and B. W. Gould. Estimating your mailbox milk price.
- 26. Cabrera, V. E. Milk component price analysis.
- 27. Cabrera, V. E. Economic analysis of 3X milking.
- 28. Valvekar, M., **V. E. Cabrera**, M. Wattiaux, and B. W. Gould. Livestock Gross Margin-Dairy feed equivalent calculator.
- 29. **Cabrera, V. E**. Dairy ration feed additive break-even analysis.
- 30. Cabrera, V. E., K. Bolton, and R. D. Shaver. Income over feed cost.
- 31. **Cabrera, V. E.**, K. Bolton, and P. Hoffman. Cost-benefit of accelerated feeding program for dairy heifers.
- 32. Cabrera, V. E. Livestock Gross Margin-Dairy optimum coverage.
- 33. Cabrera, V. E. Economic evaluation of using rbST.
- 34. Cabrera, V. E., and B. W. Gould. Livestock Gross Margin-Dairy premium sensitivity.
- 35. Cabrera, V. E. Economic value of sexed semen programs.
- 36. Cabrera, V. E. Income over feed supplement cost.

- 37. Cabrera, V. E. Return to labor.
- 38. Cabrera, V. E. Heifer replacement.
- 39. Cabrera, V. E. Income over feed cost.
- 40. Cabrera, V. E. Heifer break-even.
- 41. Cabrera, V. E. Livestock Gross Margin-Dairy premium calculator.
- 42. Cabrera, V. E. Corn feeding strategies
- 43. Cabrera, V. E. Lactation benchmark curves.
- 44. Cabrera, V. E. Value of a springer.
- 45. **Cabrera**, **V. E**. Dairy farm nutrient manager.
- 46. Cabrera, V. E. Alfalfa yield predictor.
- 47. Cabrera, V. E. Grazing-N: application that balances nitrogen in grazing systems.
- 48. Cabrera, V. E. Seasonal prediction model of manure excretion.
- 49. Cabrera, V. E. DyNoFlo: Dynamic North Florida farm model.

#### **Invited Research Presentations (10; 4 since 2014)**

- 1. Bach, A., and **V. E. Cabrera**. 2016. Nutritional approaches in robotic herds. Journal of Dairy Science 99 (Suppl. 1):35.
- 2. **Cabrera**, **V. E.** 2015. Economics of production efficiency: Nutritional grouping. Journal of Dairy Science 98 (Suppl. 2):350.
- 3. **Cabrera, V. E.** 2014. Impact of decision support tools available for dairy farm management. American Dairy Science Association Annual Meeting. Kansas City, MO. 23 July 2014.
- 4. **Cabrera, V. E.** 2014. Economics of fertility in high-yielding dairy cows on confined TMR systems. In Proceedings. International Cow Fertility Conference, New Science New Practices. Westport, Mayo, Ireland. 18-21 May 2014.
- 5. **Cabrera, V. E.** 2013. Grouping strategies to improve feed efficiency. 26<sup>th</sup> American Dairy Science Association Discover Conference: Dairy Feed Efficiency. Naperville, IL. 23-26 September 2013.
- 6. **Cabrera, V. E.** 2011. The need for applied research and decision support tools in dairy farm management and decision-making. 2011 American Dairy Science Association Foundation Lecture. New Orleans, LO. 12 July 2011.
- 7. **Cabrera, V. E.** 2011. Economic comparison of reproductive management programs. 21<sup>st</sup> American Dairy Science Association Discover Conference: Improving Reproductive Efficiency of Lactating Dairy Cows. Itasca, IL. 11 May 2011.
- 8. **Cabrera, V. E.** 2011. The economic value of changes in 21-day pregnancy rate and what controls this value. 21<sup>st</sup> American Dairy Science Association Discover Conference: Improving Reproductive Efficiency of Lactating Dairy Cows. Itasca, IL. 10 May 2011.
- 9. **Cabrera**, **V. E.** 2011. Exploring methods to assess the economic value of dairy cattle reproductive programs. Midwest American Dairy Science Association

- Meeting. Des Moines, IA. 15 March 2011.
- Cabrera, V. E. 2009. A large Markovian linear program model for dairy herd decision-making. American Dairy Science Association Annual Meeting. Montreal, Canada. 15 July 2009.

#### Papers and Abstracts at Scientific Meetings (78; 19 since 2014)

- Liang, D., T. Rutherford, B. Jones, R. D. Shaver, and V. E. Cabrera. 2017. Trade-off between farm profitability and greenhouse gas emission. Journal of Dairy Science 100 (Suppl. 2): M147.
- Santana, R. A. V., A. F. Brito, V. E. Cabrera, F. A. Barbosa, A. K. Hoshide, A. F. Benson, A. N. Hafla, H. M. Darby, K. J. Soder, R. Kersbergen. 2017. Economic and environmental performance of traditional and grass-fed organic dairies using the Integrated Farm System Model. Journal of Dairy Science 100 (Suppl. 2): 329.
- 3. Wu, Y., V. E. Cabrera, R. D. Shaver. 2017. Maximizing income over feed cost by grouping cows with mixed-integer programing. Journal of Dairy Science 100 (Suppl. 2): 327.
- 4. Mur-Novales, R., I. Garcia-Ispierto, B. Serrano-Pérez, V. E. Cabrera, F. López-Gatius. 2017. Pre-ovulatory follicular size and the subsequent conception rate in dairy cows. Journal of Dairy Science 100 (Suppl. 2): 310.
- Liang D., T. F. Rutherford, B. L. Jones, R. D. Shaver, and V. E. Cabrera. 2016.
   Developing a feed allocation model to maximize income over feed cost and minimize enteric methane emission considering farmer's risk preferences and reduce enteric methane production. Journal of Dairy Science 99 (Suppl. 1): 589.
- 6. Liang, D. F. Sun, M. A. Wattiaux, V. E. Cabrera, J. Hedtcke, and E. M. Silva. 2016. Impact of corn or soybean in crops and lactating cow diets on estimated greenhouse gas emission from Wisconsin certified organic dairy farms. Journal of Dairy Science 99 (Suppl. 1): 1201.
- 7. **Cabrera, V. E.** 2015. Economics of production efficiency: Nutritional grouping. Journal of Dairy Science 98 (Suppl. 2): 350.
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# Invited Papers in Extension Conference Proceedings (24, 12 since 2014)

- Cabrera, V. E. 2018. What are the economic advantages of grouping and feeding dairy cows by nutritional need? Proceedings of 29<sup>th</sup> Annual Florida Ruminant Nutrition Symposium. Gainesville, FL 5-7 February 2018.
- Mur-Novales, R. M., and V. E. Cabrera. 2017. What type of semen should I use? Proceedings Dairy Cattle Reproduction Council Annual Convention. Reno, NV 7-9 November 2017.
- 3. **Cabrera, V. E.**, A. Ricci, and P. M. Fricke. 2017. Economics of dairy cattle improved fertility programs. Proceedings of the VI National and I International Congress of Turkish Society of Veterinary Gynecology. Marmaris, Turkey 12-15 October 2017.
- 4. **Cabrera, V. E.,** and A. Bach. 2017. Feeding strategies and economic returns in robotic milking systems. Four-State Dairy Nutrition and Management Conference. Dubuque, IA, 14-15 June 2017.
- 5. Colazo, M. G., J. O Giordano, and **V. E. Cabrera**. 2016. Economic evaluation of two reproductive management strategies in Alberta dairy herds. Western Canadian Dairy Seminar, Red Deer, Alberta, Canada.
- 6. **Cabrera, V. E.** 2016. Helping dairy farmers to improve economic performance utilizing data-driven decision support system tools. 67<sup>th</sup> European Federation of Animal Science (EAAP). 29 August September 2. Belfast, U.K.
- 7. **Cabrera, V. E.** 2016. Interaction between reproductive management and economic efficiency: Use of the UW-Cornell Dairy Repro tool. In Proceedings of XXI International Congress ANEMBE of Bovine Medicine, Santiago de Compostela, Spain, May 11-13, 2016.
- 8. **Cabrera**, **V. E.** 2016. Impact of nutritional grouping on the economics of dairy production efficiency. Tri-State Dairy Nutrition Conference. April 18-20, 2016. Grand Wayne Center, Fort Wayne, Indiana.
- Cabrera, V. E. 2015. Tools for making economic reproductive decisions. Pp. 102-111 in Proceedings Dairy Cattle Reproduction Council Annual Convention. Buffalo, NY 12-13 November 2015.
- Cabrera, V. E., and A. Kalantari. 2014. Dietary grouping strategies to improve profitability on dairy farms. In Proceedings XIX International Congress ANEMBE of Bovine Medicine, pp. 151-159, Oviedo, Spain, 25-27 June 2014.
- 11. Cabrera V. E. 2014. Using simulators to improve profitability on dairy farms. In

- Proceedings XIX International Congress ANEMBE of Bovine Medicine, pp. 160-170, Oviedo, Spain, 25-27 June 2014.
- Cabrera, V. E., and A. Kalantari. 2014. Strategies to improve economic efficiency of the dairy. In Proceedings Western Canadian Dairy Seminar, Red Deer, Alberta, Canada, (WCDS) Advances in Dairy Technology 26:45-55.
- 13. Dutreuil, M., Gildersleeve, R., and **V. E. Cabrera**. 2012. Dealing with high feed cost: Supplementation on pasture. In Proceedings *4<sup>th</sup> Annual World Dairy Expo Grazing Seminars*. Alliant Energy Center, Madison, WI. 5 October 2012
- 14. Hardie, C. A., V. E. Cabrera, M. Dutreuil, and R. Gildersleeve. 2012. Characterization of certified organic Wisconsin dairy farms: Management practices, feeding regimes, and milk production. In Proceedings UW-Extension Grazing, Teaching, and Technology Conference. US Dairy Forage Research Center, Prairie du Sac, WI. 28 August 2012
- 15. Dutreuil, M., **V. E. Cabrera**, R. Gildersleeve, and C. A. Hardie. 2012. Factors affecting profitability on Wisconsin dairy farms. In Proceedings *UW-Extension Grazing, Teaching, and Technology Conference*. US Dairy Forage Research Center, Prairie du Sac, WI. 28 August 2012.
- 16. **Cabrera, V. E.**, F. Contreras, R. D. Shaver, L. E. Armentano. 2012. Grouping strategies for feeding lactating dairy cattle. Pp. 40-44 in Proceedings Four-State Dairy Nutrition and Management Conference. Dubuque, IA, 13-14 June 2012.
- 17. **Cabrera, V. E.** 2011. Grouping strategies for feeding lactating dairy cattle. Pp. 17-33 in Proceedings 15<sup>th</sup> Annual UW-Arlington Dairy Day, Arlington, WI, 8 December 2011.
- Cabrera, V. E., Giordano, J., Fricke, P. 2011. Economics of resynchronization with chemical tests to identify non-pregnant cows. Pp. 57-67 in Proceedings Dairy Cattle Reproduction Council Annual Convention. Kansas City, MO, 10-11 November 2011.
- 19. Cordoba, M., and **V. E. Cabrera**. 2010. Repro Money: A team based program to improve the reproductive performance of your herd. Pp. 53-58 in Proceedings 14<sup>th</sup> Annual UW-Arlington Dairy Day, Arlington, WI, 8 December 2010.
- 20. **Cabrera, V. E.**, and J. O. Giordano. 2010. Economic decision making for reproduction. Pp. 77-86 in Proceedings Dairy Cattle Reproduction Council Annual Convention. St. Paul, MN, 11-12 November 2010.
- 21. **Cabrera, V. E.** 2010. The Wisconsin dairy feed cost evaluator. Pp. 105-114 in Proceedings Four-State Dairy Nutrition and Management Conference. Dubuque, IA, 9-10 June 2010.
- 22. **Cabrera, V. E.** 2009. When to use sexed semen on heifers. 14 pages in Proceedings 13<sup>th</sup> Annual UW-Arlington Dairy Day, Arlington, WI, 9 December 2009.
- 23. **Cabrera, V. E.** 2009. When to use gender biased semen: economics. Pp. 83-91 in Proceedings Dairy Cattle Reproduction Council Annual Convention. St. Paul, MN, 12-13 November 2009 and Boise, ID, 19-20 November 2009.
- 24. Cabrera, V. E., R. D. Shaver, and M. A. Wattiaux. 2009. Optimizing income over

feed supplement costs. Pp. 116-120 in Proceedings Four-State Dairy Nutrition and Management Conference. Dubuque, IA, 10-11 June 2009.

#### Refereed Extension Abstracts/Paper Proceedings (22, 7 since 2014)

- 1. Liang, D, J. Tricarico, K. Weigel, **V. E. Cabrera**. 2017. Evaluating the effect of herd structure and milk production improvement on farm profitability and enteric methane emission. Journal of Dairy Science 100 (Suppl. 2): 412.
- 2. **Cabrera, V. E.** 2016. Impact of nutritional grouping on the economics of dairy production efficiency. 67<sup>th</sup> European Federation of Animal Science (EAAP). 29 August September 2. Belfast, U.K.
- 3. Alvarez, A., V. E. Cabrera, and J. Heras. 2016. Profitability ranges in small and medium dairy farms in Northeast Spain in 2015. In Proceedings of XXI International Congress ANEMBE of Bovine Medicine, Santiago de Compostela, Spain, May 11-13, 2016.
- 4. Lopes, G., and, **V. E. Cabrera**. 2014. Premium beef semen on dairy calculator. Journal of Animal Science 92 (E-Suppl. 2):288.
- Dutreuil, M., M. Wattiaux, R. Gildersleeve, and V. E. Cabrera. 2014. Modeling the impact of feeding and manure management strategies on Wisconsin organic, conventional and grazing farms to mitigate greenhouse gas (GHG) emissions. In Proceedings, the Midwest Organic and Sustainable Education Service Conference. La Crosse, WI. 27 February to 1 March 2014.
- 6. Contreras-Govea, F. E., **V. E. Cabrera**, L. E. Armentano, R. D. Shaver, and P. M. Crump. 2014. Constraints for nutritional grouping in Wisconsin dairy farms. *Journal of Animal Science 91 (E-Suppl. 2):TH192.*
- 7. Cordoba, M. C., P. M. Fricke, P. L. Ruegg, R. D. Shaver, K. A. Weigel, and **V. E. Cabrera**. 2014. An update on the Repro Money Program: A farmer-directed team-based extension program to improve reproductive performance in Wisconsin dairy herds. *Journal of Animal Science 91 (E-Suppl. 2):TH198.*
- 8. Hardie, C. A., M. Dutreuil, R. Gildersleeve, and **V. E. Cabrera**. 2013. A comparison of feeding strategies on Wisconsin organic dairy farms. In Proceedings *The Midwest Organic and Sustainable Education Service Conference*. La Crosse, WI. 23 February 2013.
- 9. Cordoba, M. C., P. M. Fricke, P. L. Ruegg, R. D. Shaver, K. A Weigel, and V. E. Cabrera. 2012. Repro Money: A farmer directed team-based extension program to improve reproductive performance in Wisconsin dairy herds. 2012 Agricultural and Natural Resources Conference from UW-Extension. Wisconsin Dells. 10-12 October 2012.
- Cabrera, V. E., R. D. Shaver, and P. C. Hoffman. 2012. Feed management decision-making tools for Wisconsin dairy farms. 2012 Agricultural and Natural Resources Conference from UW-Extension. Wisconsin Dells. 10-12 October 2012.
- 11. Cordoba, M. C., P. M. Fricke, P. L. Ruegg, R. D. Shaver, K. A Weigel, and V. E.

- **Cabrera**. 2012. Repro Money: A farmer directed team-based extension program to improve reproductive performance in Wisconsin dairy herds. *Journal of Animal Science* 90 (E-Suppl. 3):T81.
- 12. Hardie, C. A., **V. E. Cabrera**, M. Dutreuil, R. Gildersleeve, and M. Wattiaux. 2012. Characterization of certified organic Wisconsin dairy farms: Management practices, feeding regimes, and milk production. *Journal of Animal Science* 90 (E-Suppl. 3):M239.
- 13. Giordano, J. O., A. S. Kalantari, and **V. E. Cabrera**. 2011. Economic and reproductive outcome of programs combining timed artificial insemination and estrous detection simulated with a daily Markov-chain model. In Proceedings *21st ADSA Discover Conference: Improving Reproductive Efficiency of Lactating Dairy Cows*. Itasca, IL. 9-12 May 2011.
- 14. Dutreuil, M., M. Wattiaux, and V.E. Cabrera. 2011. Impact of feeding strategies on milk production and milk income over feed cost: A case study of organic, grazing, and conventional Wisconsin dairy farm. In Proceedings *The Midwest Organic and Sustainable Education Service Conference*. La Crosse, WI. 25 February 2011.
- Janowski, J. M., and V. E. Cabrera. 2010. Differences between expanding and non-expanding Wisconsin dairy farms. *Journal of Animal Science* 93 (E-Suppl. 1):T321.
- 16. Giordano, J. O., P. M. Fricke, M. C. Wiltbank, and **V. E. Cabrera**. 2010. An economic decision-making model for comparing reproductive management programs in dairy herds. *Journal of Dairy Science* 93 (E-Suppl. 3):58.
- Cabrera, V. E., and J. Vanderlin. 2010. The Wisconsin dairy ratio benchmark tool. In Proceedings *National Farm Business Management Conference*. Fargo, ND. 13-17 June 2010.
- 18. **Cabrera, V. E.**, J. Pantoja, P. L. Ruegg, and G. Shook. 2009. Decision-making for early postpartum subclinical mastitis. *Journal of Dairy Science* 92 (E-Suppl. 1):T13.
- 19. Janowski, J., **V. E. Cabrera**. 2009. A stochastic decision support system tool for dairy expansion. *Journal of Dairy Science* 92 (E-Suppl. 1):T236.
- 20. Inostroza, J. F., **V. E. Cabrera**, R. D. Shaver, and J. M. Tricarico. 2009. Evaluation of the economic impact of Optigen® use in commercial dairy herd diets with varying feed and milk prices. *Journal of Dairy Science* 92 (E-Suppl. 1):M131.
- 21. Valvekar, M., V. E. Cabrera, and B. W. Gould. 2009. Analysis of program performance and cost under alternative policy configurations and market conditions. *Journal of Dairy Science* 92 (E-Suppl. 1):W102.
- 22. Inostroza, J. F., **V. E. Cabrera**, R. D. Shaver, J. M. Tricarico. 2009. Evaluation of the economic impact of Optigen® use in commercial dairy herd diets with varying feed and milk prices. Proceedings *Alltech 25th International Symposium*. 17-20 May 2009. Lexington, KY.

#### **Extension Presentations between 2009 and 2013**

Audience	Number Presentations	Number Attendees
Wisconsin	140	> 4,000
US – Other States	36	> 2,500
Other Countries	125	> 9,000

#### **Extension Presentations since 2014**

Year	Number Presentations/Sessions <sup>1</sup>	Number Attendees
2014	23	2,124
2015	17	1,060
2016	20	1,725
2017	23	3,843
Total	83	8,532

<sup>1</sup>Country (times): Argentina (3), Canada (2), China (7), Costa Rica (1); Czech Republic (1), Germany (1), Italy (4), Ireland (1), Mexico (1), North Cyprus (1), Panama (1), Peru (4), Poland (1), Slovakia (2), Spain (10), Turkey (2), Uruguay (1), United Kingdom (1).

#### Abbreviation key for attendees

F = Farmers

C = Farm consultants, veterinarians, nutritionists, reproductive specialists, etc.

E = Extension faculty, county extension agents, etc.

A = Academia, students, instructors

G = Government functionaries (USDA, Department of Agriculture, etc.)

I = Allied industry representatives

N = Insurance agents

L = Lenders, bank representatives, financial specialists

	Date	Title, event, location	Attendance
1.	<b>2017</b> 12/5	<b>Decision-making in dairy farm management.</b> Zhejiang Academy of Agricultural Sciences, Hangzhou, China	A, E <b>20</b>
2.	11/30	Cost benefits of new technologies. Phibro Technical Seminar. Puerto Vallarta, Mexico.	C, I, E <b>100</b>
3.	11/09	Breeding decision dilemma: What type of semen should I use? Dairy Cattle Reproduction Council Annual Convention. Reno, NV.	C, I, A <b>100</b>
4.	11/08	Capitalizing on improved fertility: What are my options? Dairy Cattle Reproduction Council Annual	C, I, A <b>300</b>

#### Convention. Reno, NV. Preconference seminar

5.	10/30- 11/03	International Course Nestle Dairy Farming Institute – Level 3 – <b>Dairy farm economic decision making</b> . Harbin, China.	F, E, G <b>50</b>
6.	10/14	Economics of dairy cattle improved fertility programs. VI National and I International Congress of Turkish Society of Veterinary Gynecology. Marmaris, Turkey	C, I, F <b>300</b>
7.	09/21- 22	Workshop: <b>Aspectos críticos para maximizar la rentabilidad de ganaderías lecheras</b> . General Pico, Argentina.	C <b>30</b>
8.	09/18	Workshop: <b>Aspectos críticos para maximizar la rentabilidad de ganaderías lecheras</b> . Villa Maria, Argentina.	A, I, C, F <b>70</b>
9.	09/13	Strategic management options to maximize dairy farm profitability. Strategic Account Management Program. Kusadasi, Turkey.	I, C, F <b>60</b>
10.	09/13	<b>Economic impacts of mastitis.</b> Strategic Account Management Program. Kusadasi, Turkey.	I, C, F <b>60</b>
11.	08/7-11	International Graduate Study Course Nestle Dairy Farming Institute – Level 4. <b>Advanced Dairy Herd Management</b> . Harbin, China.	A, C <b>18</b>
12.	08/01	Herramientas de soporte para la toma de decisiones prácticas en el manejo de la ganadería lechera. XL Reunión Científica Anual, Asociación Peruana de Producción Animal. Universidad Nacional Toribio Rodríguez de Mendoza, Chachapoyas, Peru.	A, C, I, F <b>400</b>
13.	07/18	<b>Nutritional considerations in robotic herds.</b> Dairy Robotics Workshop. University of Nebraska Extension. Plainview, NE.	F, C, I <b>120</b>
14.	06/30	Aspectos críticos para maximizar la rentabilidad de ganaderías lecheras. Congreso CEBS, Tilajari San Carlos, Costa Rica.	C, I <b>500</b>
15.	06/14	Feeding strategies and economic returns in robotic milking systems. Four-State Dairy Nutrition and	C, I, A, E <b>300</b>

Management Conference. Dubuque, IA.

16. 05/24	Economics of nutritional grouping. Lely North America FMS Conference. Fair Oaks Farms, IN.	C, I, E, A <b>300</b>
17. 04/10	Critical aspects to improve dairy farm feed efficiency. Parnell meeting. Kansas City, MO.	l 15
18. 03/30	Kde sú ešte možnosti redukcie nákladov na farmách dojníc? AgroBiznis 2017. Nitra, Slovakia	C, I, F, E, A <b>300</b>
19. 03/28	<b>Ekonomická hodnota dojnice.</b> Meeting of the Holstein Association of Slovakia. Nitra, Slovakia	C, I, F, E <b>200</b>
20. 02/10	Reproductive economic management: tools and concepts. Cremona, Italy	C, I <b>100</b>
21. 02/09	Il valore economico di una bovina da latte e le sue enormi implicazioni. Cirio Agricola Dairy Meeting, Caserta, Italy.	C, I, F <b>250</b>
22. 02/08	Gestione di opportunità strategiche per massimizzare il profitto di un allevamento da latte. Cirio Agricola Dairy Meeting, Caserta, Italy.	C, I, F <b>300</b>
23. 02/08	Strategie di alimentazione per ottimizzare efficienza alimentare e profittabilità. Cirio Agricola Dairy Meeting, Caserta, Italy.	C, I, F <b>300</b>
<b>2016</b> 24. 11/18	Research and extension at 2015/2016 sabbatical in Spain – Webinar.	C, I, F <b>40</b>
25. 11/7-11	International Course Nestle Dairy Farming Institute – Level 3 – <b>Dairy farm economic decision making</b> . Harbin, China.	F, E, G <b>20</b>
26. 10/26	Workshop: <b>Decision support tools for evaluating economics of reproductive programs</b> . Wroclaw, Poland.	C, I <b>25</b>
27. 10/25	Economics of fertility in high-yielding dairy cows. Dairy reproductive conference. October 25-26, 2016. Wroclaw, Poland.	C, I <b>100</b>

28. 8/29- 9/2	*Helping dairy farmers to improve economic performance utilizing data-driven decision support system tools. 67th European Federation of Animal Science (EAAP). Belfast, U.K.	A, E, C <b>100</b>
29. 8/1-6	International Graduate Study Course Nestle Dairy Farming Institute – Level 4. <b>Advanced Dairy Herd Management</b> . Harbin, China.	A, C <b>20</b>
30. 07/13	Importance and use of data to evaluate reproduction economics. 2016 Parnell Forum - The Power of Data. Napa Valley, California.	C, I, E <b>50</b>
31. 06/14- 16	<b>The economic value of dairy cows</b> . SK Farms. Bratislava, Slovakia.	C, I <b>10</b>
32. 05/25- 28	*Fertility associated economic losses of farms. 4th Health Management & Symposium, Maritim Pine Beach Otel - Antalaya, Turkey.	C, I, A, G <b>400</b>
33. 05/20	*Economic value of dairy cows. Department of Cattle Breeding. Institute of Animal Science, Prague, Czech Republic.	A, E, C, I <b>150</b>
34. 05/12	Rangos de rentabilidad en explotaciones pequeñas y medianas de vacuno lechero en el noroeste de España durante el año 2015. ANEMBE 2016, Santiago de Compostela, Spain. Spain.	F, C, I, A <b>50</b>
35. 05/11	*Interacción entre la gestión reproductiva y la eficiencia económica: Herramienta Wisconsin-Cornell Dairy Repro. ANEMBE 2016 Seminario: Gestión de la reproducción en granja: Uso e interpretación de los datos reproductivos Santiago de Compostela, Spain.	F, C, I, A <b>70</b>
36. 04/27- 28	Mejora de la Rentabilidad lechera a través de la recría. BLANCA from the Pyrenees, Spain.	C, I, F <b>40</b>
37. 04/18- 20	*Impact of nutritional grouping on the economics of dairy production efficiency. Tri-State Dairy Nutrition Conference. Grand Wayne Center, Fort Wayne, Indiana.	A, C, I, F <b>400</b>
38. 04/12- 14	*GIORNATA BUIATRICA Ottimizzazione dei costi economici attraverso la buona gestione veterinaria: Dry cow period, Reproduction, Value of a cow. Reggio	C, I, F, A <b>120</b>

Emilia, Italy.

39. 04/04- 06	<b>Efficiency improvement of dairy farms</b> . BLANCA from the Pyrenees, Spain. April 04-06, 2016.	C, I, F <b>50</b>
40. 02/16- 17	<b>Economic efficiency of dairy farms</b> . BLANCA from the Pyrenees, Spain. February 16-17, 2016.	C, I, F <b>40</b>
<b>2015</b> 41. 11/30- 12/04	International Course Nestle Dairy Farming Institute – Level 3 – <b>Dairy farm economic decision making</b> . Harbin, China.	F, E, G <b>20</b>
42. 11/16	Critical aspects of profitability on dairy farms. Universidad Autonoma de Barcelona.	E, A <b>25</b>
43. 11/13	*Tools for making economic reproductive decisions.  Dairy Cattle Reproduction Council Annual Convention.  Buffalo, NY.	F, C, A, E, I <b>150</b>
44. 10/30	Critical aspects to maximize profitability in dairy farming. Fiera Internazionale del Bovino da Latte. Cremona, Italy	F, C, G, I <b>100</b>
45. 10/21	Wisconsin research advancement and vision for the future. IRTA, Torre Marimon, Barcelona, Spain.	E, A <b>15</b>
46. 10/13- 10/14	*Economic evaluation of reproductive programs. Wisconsin Repro Workshop. Blanca from the Pyrenees. Lleida, Spain.	F, C, I <b>48</b>
47. 10/8	*The money you would gain by improving herd fertility. CEVA Herd Health Symposium. Carts Resort, North Cyprus.	F, C, I <b>100</b>
48. 09/14- 09/16	*Workshop of dairy farm management tools. Río Cuarto, Argentina.	F, C, I, G, I <b>72</b>
49. 09/16	Dairy farm management tools. Consultant group. Río Cuarto, Argentina.	C, I <b>30</b>
50. 09/16	Dairy farm management tools. Teknal group. Río Cuarto, Argentina.	C, I <b>30</b>
51. 09/09	*Losses of milk production in gradual dry off. CEVA -	F, C, I

	Blanca Workshop, Lleida, Spain.	48
52. 7/27-31	International Graduate Study Course Nestle Dairy Farming Institute – Level 4. <b>Advanced Dairy Herd Management</b> . Harbin, China.	A, C <b>20</b>
53. 07/22	Economic tools for dairy farm decision-making. Dairy Japan Magazine group in Madison. University of Wisconsin-Madison	F, C, E, A <b>10</b>
54. 5/18	The Wisconsin dairy farm industry. University of Wisconsin Idea Seminar.	A <b>40</b>
55. 05/08	Decision support tool for genomic testing of calves.	E, A <b>20</b>
56. 05/07	Four-State Planning Meeting. Dubuque, IA. <b>Dairy management tools.</b> Brazilian group in Madison.  University of Wisconsin-Madison	F, C, E, A <b>40</b>
57. 04/16	*Estrous Detection, Timed-Al or a combination. CEVA Training. Berlin, Germany. 15 April 2015.	C, I <b>50</b>
58. 04/15	*Economic value of improving reproductive performances. CEVA Training. Berlin, Germany. 15 April 2015.	C, I <b>50</b>
59. 01/06- 01/26	*Management tools to increase dairy cow feed efficiency. Seven locations. Wisconsin Feed Efficiency Workshops 2015.	F, C, E <b>150</b>
60. 01/13- 01/14	*Reproduction management and its economic value. Wisconsin University & Blanca Workshop. Practical High-Level Dairy Management. Blanca from the Pyrenees, Lleida, Spain.	F, C, I <b>48</b>
<b>2014</b> 61. 11/19	Strategies to improve economic efficiency. Shur-Gain	F, C, I
	Dairy Seminar. Stratford, Canada.	120
62. 11/18	Strategies to improve economic efficiency. Shur-Gain Dairy Seminar for Veterinarians. Stratford, Canada.	C, I <b>20</b>
63. 10/27	<b>Decision support tools for dairy farm management.</b> COCHRAN group from Mexico, Guatemala, and Trinidad & Tobago. University of Wisconsin-Madison.	A, G <b>6</b>
64. 10/24	Dairy farm decision-making using DairyMGT.info	F, C

	tools. Farm La Querencia, Lurín, Lima, Peru.	12
65. 10/22	Dairy farm production systems. XXXVII Reunión Científica de la Asociación Peruana de Producción Animal - APPA. Facultad de Medicina Veterinaria y Zootecnia, Universidad Micaela Bastidas, Abancay, Perú.	C, A, I <b>200</b>
66. 10/21	Selected group of decision support tools for dairy farm management. Seminario Internacional Innovación en Reproducción. Pre-Congreso XXXVII Reunión Científica de la Asociación Peruana de Producción Animal - APPA. Facultad de Medicina Veterinaria y Zootecnia, Universidad Micaela Bastidas, Abancay, Perú.	C, A, I <b>50</b>
67. 10/21	Reproductive economic decisions. Seminario Internacional Innovación en Reproducción. Pre-Congreso XXXVII Reunión Científica de la Asociación Peruana de Producción Animal - APPA. Facultad de Medicina Veterinaria y Zootecnia, Universidad Micaela Bastidas, Abancay, Perú.	C, A, I <b>50</b>
68. 09/09- 09-11	<b>Economic impacts of lameness.</b> Putting values to the health and replacements in dairy farms. Universidad Tecnológica de Uruguay Technical Workshops. 3 locations: Colonia, Florida, San Jose. Uruguay.	C, F <b>40</b>
69. 09/09- 09-11	Economic impacts of reproductive affections. Putting values to the health and replacements in dairy farms. Universidad Tecnológica de Uruguay Technical Workshops. 3 locations: Colonia, Florida, San Jose. Uruguay.	C, F <b>40</b>
70. 09/09- 09-11	<b>Economic impacts of mastitis.</b> Putting values to the health and replacements in dairy farms. Universidad Tecnológica de Uruguay Technical Workshops. 3 locations: Colonia, Florida, San Jose. Uruguay.	C, F <b>40</b>
71. 09/06	Milk production sustainable systems. Kellogg Foro Latin America. Panama City, Panama. 4-7 September 2014.	A, G, E <b>50</b>
72. 06/26	*The application of simulators to improve profitability of dairy farms. XIX International Congress of Bovine Medicine. Oviedo, Spain.	F, C, I <b>200</b>

73. 06/26	*Group feeding management in dairy farming. XIX International Congress of Bovine Medicine. Oviedo, Spain.	F, C, I <b>200</b>
74. 06/12	<b>Group feeding.</b> Improvement of the dairy farm enterprise. Continued Professional Development. Blanca from the Pyrenees. Lleida, Spain.	C, I <b>20</b>
75. 06/12	<b>Labor management and organization.</b> Improvement of the dairy farm enterprise. Continued Professional Development. Blanca from the Pyrenees. Lleida, Spain.	C, I <b>20</b>
76. 06/12	The herd value and its management implications. Improvement of the dairy farm enterprise. Continued Professional Development. Blanca from the Pyrenees. Lleida, Spain. 10-12 June 2014.	C, I <b>20</b>
77. 06/12	The cow value and its management implications. Improvement of the dairy farm enterprise. Continued Professional Development. Blanca from the Pyrenees. Lleida, Spain. 10-12 June 2014.	C, I <b>20</b>
78. 06/11	<b>Feed price management.</b> Improvement of the dairy farm enterprise. Continued Professional Development. Blanca from the Pyrenees. Lleida, Spain. 10-12 June 2014.	C, I <b>20</b>
79. 06/11	Value of reproductive programs. Improvement of the dairy farm enterprise. Continued Professional Development. Blanca from the Pyrenees. Lleida, Spain. 10-12 June 2014.	C, I <b>20</b>
80. 06/10	The challenge of growing the dairy farm. Improvement of the dairy farm enterprise. Continued Professional Development. Blanca from the Pyrenees. Lleida, Spain. 10-12 June 2014.	C, I <b>20</b>
81. 03/12	Decision support tools for dairy farm management and decision-making with emphasis on reproduction and nutrition. First workshop of Alta-Cialis Advantage Group. Junín, Santa Fe, San Francisco, Esperanza, Argentina. Four times.	F, C,   <b>40</b>
82. 03/12	*Strategies to improve economic efficiency of the dairy. Western Dairy Canadian Dairy Seminar. Red Deer, Canada.	F, C, I <b>900</b>

**Grants: Funding Support for Research and Extension** 

- 1. Cabrera, V. E., K. A. Weigel, H. White, M. Ferris, J. Patel, and M. Livny. 2017-2019. A virtual dairy farm brain. UW2020 Initiative. \$500,000.
- 2. Combs, D., **V. E. Cabrera**, K. Nielsen. 2017-2019. UW-Madison-Nestle Dairy Farm Institute Collaborative Training Agreement. **\$771,000**.
- 3. **Cabrera, V. E.**, B. Gould, K. A. Weigel, H. White, M. Ferris, J. Patel, and M. Livny. 2018-2021. A virtual dairy farm brain. National Science Foundation, Cyber-Physical Systems (CPS) program. \$1,000,000. Not Selected.
- 4. Choi, C., N. Cook, and **V. E. Cabrera.** 2018-2021. Advancing decision-making and design tools in the milk-energy-water nexus through sustainable large-scale dairy housing. National Science Foundation, Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS) program. **\$2,500,000.** *Not Selected.*
- 5. **Cabrera**, **V. E.** 2017-2018. Continue delivering high-impact dairy farming decision support tools. University of Wisconsin-Madison Graduate School. **\$51,500**.
- 6. Smith, R., A. Brito, S. Grandy, E. Silva, **V. E. Cabrera**, M. Ruark. 2017-2020. Managing positive feedbacks to optimize forage nutritive value and soil health on organic dairy farms. OREI-USDA program. **\$872,000.** *Not Selected*.
- 7. Choi, C., V. E. Cabrera, and Cook, N. 2017-2018. Development of sustainable dairy cattle housing for heat stress mitigation. USDA Hatch Multistate Multiple Investigator. \$60,000.
- 8. Choi, C., N. Cook, and V. E. Cabrera. 2018-2020. Sustainable dairy housing design and cost analysis using computational and stochastic simulations and field assessments. USDA-NIFA-AFRI. **\$500,000.** *Pending.*
- 9. Cabrera, V. E. 2016-2018. Vilas Faculty Mid-Career Investigator Award. \$50,000.
- 10. **Cabrera, V. E.** 2015-2016. Precision feeding for improving feed efficiency of lactating dairy cattle. The Organisation for Economic Co-operation and Development (OECD-Europe). Co-operative Research Programme: Biological Resource Management for Sustainable Agricultural Systems. **\$14,000**.
- 11. Brito, A. F., A. S. Grandy, R. G. Smith, E. Silva, and **V. E. Cabrera**. 2015-2016. A Planning network of organic farmers, researchers, and dairy processors to optimize productivity and resiliency of forage production on organic dairy farms. OREI-USDA Planning Grant. **\$50,000**.
- 12. **Cabrera, V. E.**, and R. D. Shaver. 2015-2019. Nutritional grouping strategies for feeding dairy cattle to improve health, profit, and environmental outcomes of dairy farms. USDA Hatch Multistate Multiple Investigator. **\$121,000**.
- 13. **Cabrera, V. E**. 2013-2017. Improving long-term dairy farm sustainability applying whole-farm best management practices that enhance profitability and decrease environmental impacts: A high-level integrated assessment. USDA Hatch Multistate Single Investigator. **\$165,000**.

- 14. **Cabrera, V. E.**, and K. A. Weigel. (Co-PDs). 2013-2014. Development of a genomic testing decision support tool for Jersey dairy calves. American Jersey Cattle Association Research Foundation. **\$11,000**.
- 15. Bravo-Ureta, B. (PD), A. De Vries, A., R. Mosheim, and V. E. Cabrera. 2012-2016. Interaction between productivity growth and environmental factors for multi-output farms with a dairy focus. USDA National Institute of Food and Agriculture, Agriculture and Food Research Initiative Competitive Grant Programs: Agriculture Economics and Rural Communities. \$318,000.
- 16. VandeHaar, M. (PD), K. A. Weigel, L. E. Armentano (WI-PD), D. Moody Spurlock, R. Tempelman, R. Veerkamp, V. E. Cabrera, M. Worku, M. Hanigan, C. Staples, D. Beede, R. D. Shaver, M. A. Wattiaux, J. Dijkstra, R. Pursley, and M. Weber Nielsen. 2011-2016. Genomic selection and herd management tools to improve feed efficiency of the dairy industry. USDA National Institute of Food and Agriculture, Agriculture and Food Research Initiative Competitive Grants Program: Improving Sustainability by Improving Feed Efficiency of Animals. \$5,000,000.
- 17. Cabrera, V. E. (PD), P. M. Fricke, P. L. Ruegg, R. D. Shaver, K. A. Weigel, and M. C. Wiltbank. 2010-2015. An integrated approach to improving dairy cow fertility. USDA National Institute of Food and Agriculture, Agriculture and Food Research Initiative Competitive Grants Program: Integrated Solutions for Animal Agriculture. \$1,000,000.
- 18. **Cabrera, V. E.** (PD), R. R. Gildersleeve, M. A. Wattiaux, and D. K. Combs. 2010-2014. Strategies of pasture supplementation on organic and conventional grazing dairies: Assessment of economic, production and environmental outcomes. USDA National Institute of Food and Agriculture Organic Agriculture Research and Extension Initiative. **\$575,000.**
- 19. **Cabrera**, **V. E**. 2011-2013. Development of a suite of dairy reproduction decision support tools. USDA Hatch Multistate Single Investigator. **\$83,000**.
- 20. Gould, B. W., and V. E. Cabrera. (Co-PDs). 2011-2013. Delivery of educational materials to increase LGM-Dairy utilization by dairy farm operators in general and limited resource operators. USDA Risk Management Education and Outreach Partnership Program, Competitive Cooperative Partnership Agreements. \$86,000.
- 21. Gould, B. W., and **V. E. Cabrera**. (Co-PDs). 2011-2013. Training in the use and utilization of an integrated dairy price and margin risk management system for planning purposes. USDA National Institute of Food and Agriculture, North Central Risk Management and Education Center. **\$50,000**.
- 22. Nienhuis, J. (PD), **V. E. Cabrera**, and international partners. 2011-2013. Seeds of Hope. US Agency for International Development. **\$186,000**.
- 23. Wattiaux, M. A. (PD), B. Barham, M. Bell, **V. E. Cabrera**, and J. Harrison Pritkin. 2009-2013. Integrated analysis of diverse dairy systems in Mexico and Wisconsin: Building capacity for multidisciplinary appraisal of sustainability. USDA National Institute of Food and Agriculture International Science and

- Education Grants Program. \$150,000.
- 24. Gould, B. W., and **V. E. Cabrera.** (Co-PDs). 2011-2012. An integrated Web-based information system to improve Wisconsin dairy farms' price risk management and sustainability. University of Wisconsin-Madison Graduate School. **\$15,000**.
- 25. Reinemann, D. J. (PD), and **V. E. Cabrera.** 2010-2012. Energy intensity, carbon footprint, and environmental impact of pasture based dairy. USDA Natural Resource and Conservation Service, Grazing Land Conservation Initiative, Wisconsin Department of Agriculture Trade and Consumer Protection. **\$75,000.**
- 26. Bolton, K., and **V. E. Cabrera.** (Co-PDs). 2010-2011. A Sustainable Wisconsin Dairy Farm Financial Management Model. USDA North Central Risk Management and Education Center. **\$47,000.**
- 27. Albarran, B. (PD), **V. E. Cabrera**, and other 4 from Mexico, 3 from Wisconsin, and 5 from Canada. 2010-2011. Linkage for Sustainable Development of Dairy Production Systems in Canada, the United States and México with an Emphasis on Social and Environmental Concerns. North American Research Linkages Program: Foreign Affairs and International Trade Canada. **\$20,000**.
- 28. Powers, W. (PD), **V. E. Cabrera**, and other 28 scientists. 2010-2011. Planning grant: A regional approach to climate change planning for dairy and beef production systems. USDA Agriculture and Food Research Initiative Competitive Grants Program: Regional Approaches to Climate Change. **\$50,000.**
- 29. **Cabrera**, **V. E.** 2010-2011. Translation of Dairy Management Tools. The Babcock Institute for International Dairy Research and Development. **\$10,000**.
- 30. **Cabrera, V. E.**, and B. W. Gould. (Co-PDs). 2009-2011. Assessment of gross margin insurance versus traditional price risk management strategies under alternative bioufuels and predicted climatic conditions: implications for Wisconsin dairy farms. USDA Hatch Multistate Multiple Investigator. **\$58,000**.
- 31. **Cabrera, V. E.** (PD), and J. Vanderlin. 2009-2010. Success for small beginning dairy farmers. USDA North Central Risk Management Education Center. \$39,000.
- 32. **Cabrera**, **V. E.** 2008-2010. Development of a dairy economic decision support system for Wisconsin. USDA Hatch Single Investigator. **\$54,000**.

## Language skills (2)

- 1. Spanish, fluent, native
- 2. English, fluent

## **Mentoring Research Professionals and Students (19)**

Con 10 Jun 10	Claudia Hardie
Sep 10 – Jun 13	
	M.S.
	Feed supplementation on organic dairy farms
	Current Position: Coursing a second M.S.
Jul 08 – Aug 10	Mayuri Valvekar
	M.S.
	Price risk analyses
	Current Position: Data analyst at Harker Research, a market
	research company in North Carolina
Oct 17	Catherine Couture
	Ph.D. intern from Canada
	Economics of dairy cattle reproduction management
Mar 17 – Present	Ramon Mur
	Ph.D. intern from Spain
	Economics of dairy cattle reproduction management
Mar – Aug 17	Veronique Ouellet
· ·	Ph.D. intern from Canada
	Heat stress in dairy cattle
Jan – Jun 13	Lenka Krpálková
	Ph.D. intern from Czech University of Life Sciences
	Statistical models of heifer raising production systems
Mar – Aug 11	Mónica Piccardi
J	Ph.D. intern from National University of Cordoba, Argentina
	Dairy cattle reproductive efficiency
Nov – Dec 10	Emiliano Demarchi
	Intern from Regional Consortium of Agricultural Experimentation,
	Argentina
	Adjustment and translation of decision support tools for dairy farm
	management
Jan 11 – Dec 15	Connie Cordoba
ou 200.0	Outreach Specialist
	ReproMoney Extension program
Sep 11 – Jul 17	Francisco Contreras-Govea
Cop ii dui ii	Outreach Specialist
	Feed Efficiency project
	r eed Emolericy project

## **Mentoring Project Assistant Students (10; 4 since 2014)**

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Jan 2009 –	MS and PhD students from UW-Madison Computer Science
Present	and Electrical and Computer Engineering
	Development and maintenance of <a href="http://DairyMGT.info">http://DairyMGT.info</a> web-portal

# **Society Memberships (3)**

2006 – Present American Dairy Science Association		
	2006 – Present	American Dairy Science Association

1999 – Present	The Fraternity of Alpha Zeta
1999 – Present	The Honor Society of Agriculture Gamma, Sigma, Delta

### Service since 2014

Service since	e 2014	
Dairy Science Department	2016-present, Chair	Dairy Science International Committee
Boparinoni	2014	American Dairy Science and Midwest Young scholars' nomination
	2014	Chair's evaluation
	2013-2014, Chair	Search and Screening Committee Marshfield Dairy Management Specialist
	2014-present	Participated in 7 PhD Committees and 3 MS Committees
	2015-present	Akins Mentor Committee
	2017-present	Arriola Mentor Committee
	2014-2015	Fricke Post-Tenure Review
	2013-present	Dairy Science Graduate Curriculum Committee
	2014-2015	Ad-hoc Dairy Herd Data Management Committee
CALS	2017	Search and Screening Committee Associate Dean Outreach and Extension
	2016- present	Animal Care and Use Committee
	2013-2014, 2016	Research Advisory Committee
	2016- present	Animal Care and Use Committee
UW-Madison	2010-2015	Wisconsin School for Beginning Dairy and Livestock Farmers Steering Committee
	2011-2017	Dairy Science Senator
Outside	2017-present	American Dairy Science Association Audit Committee

2016	USDA-ARS Scientist Evaluation
2016-present	American Dairy Science Association Production, Management, and Environment Committee
2015	University of Minnesota Promotion and Tenure External Evaluator
2015	McGill University External PhD Thesis Examiner
2014-present	American Dairy Science Association Editorial Board Journal of Dairy Science
2014-present	Virginia Tech Promotion and Tenure External Mentor
2014	Judge at American Society of Agricultural and Biological Engineering for Outstanding Educational Publications
2011-2014	American Dairy Science Association Awards Committee