

## **Valentín D. Picasso Risso**

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### **Education**

- Ph.D. in Sustainable Agriculture, Iowa State University. 2008. GPA: 3.95  
Advisors: E. Charles Brummer and Matt Z. Liebman (Agronomy Dept.)  
Dissertation: “Diversity, productivity, and stability in perennial polycultures used for grain, forage, and biomass production”
- Diploma, Preparing Future Faculty Scholar, Iowa State University. 2006
- Ingeniero Agrónomo (undergraduate degree in Agronomy), Univ. of the Republic, Uruguay. 2001

### **Academic experience**

#### **Administration**

2013 – current – Director, Environmental Systems Department, College of Agriculture, Univ. of the Republic, Uruguay

2012-2013 – Coordinator, Environmental Systems Unit, College of Agriculture, Univ. of the Republic, Uruguay

2009-current – Coordinator, Interdisciplinary Center in Response to Climate Change and Variability, Interdisciplinary Space, Univ. of the Republic, Uruguay

2008 – 2012 - Director of Graduate and Continuing Education Programs Office, College of Agriculture, Univ. of the Republic, Uruguay

#### **Research, teaching, and extension**

2012 – current – Assistant Professor, Environmental Systems Department, College of Agriculture, Univ. of the Republic, Uruguay

2008 – current - Assistant Professor, Department of Animal and Pasture Production, College of Agriculture, Univ. of the Republic, Uruguay

2002-2008 - Research Assistant, Agronomy Department, Iowa State Univ., Iowa, USA

2001-2002 - Junior Research Fellow, Animal and Pasture Production Department, College of Agriculture, Univ. of the Republic, Uruguay

1998-2000 - Research Assistant, Plant Biology Department, College of Agriculture, Univ. of the Republic, Uruguay

#### **Visiting scientist**

2012 – Visiting Scientist in Dr. Ermias Kebreab’s Sustainable Agriculture Modeling Lab, Animal Science Dept., Univ. of California, Davis, USA, 3 months

2010 – Visiting Scientist in Dr. Holger Meinke’s Crop Systems Analysis Group in Wageningen University and Research Centre, The Netherlands, 5 months

## **Awards and Fellowships**

- 2011 - Member of the National Researchers System, National Agency for Research and Innovation (ANII), Uruguay (renewed)
- 2011 – Global Research Alliance Borlaug Fellowship, USDA, USA
- 2010 – C.T. de Wit Graduate School for Production Ecology & Resource Conservation Visiting Scientist Grant, Wageningen University, The Netherlands
- 2009 – Member of the National Researchers System, National Agency for Research and Innovation (ANII), Uruguay
- 2007 – Graduate Program in Sustainable Agriculture Outstanding Student Service Award, Iowa State University, USA
- 2006 – Teaching Excellence Award, Iowa State University, USA
- 2005 – College of Agriculture C. J. Jack Fund for Excellence in Graduate Research Award, Iowa State University, USA
- 2003-05 – Natural Systems Agriculture Graduate Fellowship, The Land Institute, Kansas, USA
- 2003-05 – Fulbright Fellowship, IIE and Fulbright Commission

## **Research projects**

- 2013-15 – Switchgrass and native and perennial grasses as bioenergy feedstock in Uruguay, submitted for funding to University Scientific Research Commission (CSIC), co-PI
- 2012-13 – Sensitivity and adaptive capacity of six major agroecosystems in Uruguay to climate variability and change and alternatives to build up resilience, funded by FAO (TCP URU 3302) – Ministry of Agriculture, Uruguay, PI
- 2012-17 – Sustainability of agricultural systems in Uruguay, Long term institutional development grant, CSIC, PI
- 2011-13 – Ecosystem services of forage mixtures including perennial warm season native grasses in Uruguay, ANII graduate student fellowship supervisor, PI
- 2010-2012 – Productivity and weed invasion of forage mixtures including perennial warm season native grasses in Uruguay, ANII Junior fellowship, PI
- 2009-11 – Greenhouse gases balances in livestock production systems in Uruguay, INAC (National Meat Institute), Uruguay, PI
- 2009-2011 – Carbon footprint of meat, dairy and rice production in Uruguay, Ministry of Agriculture, Uruguay (team member)
- 2003-2008 - Perennial polycultures for forage, grain, and biomass: a sustainable alternative, Ph.D. research project, Iowa State University and The Land Institute, USA.
- 2005-2007 - Illinois Bundleflower as a sustainable alternative for Iowa, co-PI, Iowa State University and Practical Farmers of Iowa, USA.
- 2005-2006 - Illinois bundleflower as a third crop for Iowa, Sustainable Agriculture Research and Extension (NCR-SARE, USDA) graduate student grant.
- 2002 – The impact of trees on botanical composition of natural pastures in western Uruguay, student research grant, CSIC, Univ. of the Republic, Uruguay

## Publications

### *Journal Articles*

- Lizarralde, C., V. PICASSO, M. Cadenazzi, A. Rotz, L. Astigarraga. 2014. Milk carbon footprint and production efficiency of grazing dairy farms in southern Uruguay. *Sustainable Agriculture Research* (accepted).
- Llanos, E., L. Astigarraga, R. Jacques, & V. PICASSO. 2013. Eficiencia energética de sistemas lecheros del Uruguay. *Agrociencia Uruguay* 17(2):99-109.
- Modernell, P., L. Astigarraga, & V. PICASSO. 2013. Global versus local environmental impacts of grazing and confined beef production systems. *Env. Res. Lett.* 8:035052
- Connolly, J.; T. Bell, T. Bolger, C. Brophy, T. Carnus, J. A. Finn, L. Kirwan, F. Isbell, J. Levine, A. Lüscher, V. PICASSO, C. Roscher, M. T. Sebastia, M. Suter, A. Weigelt. 2013. An improved model to predict the effects of changing biodiversity levels on ecosystem function. *J. Ecology* 101:344-55
- Dini, Y.; J. Gere; C. Briano; M. Manetti; P. Juliarena; V. PICASSO; R. Gratton; L. Astigarraga. 2012. Methane Emission and Milk Production of Dairy Cows Grazing Pastures Rich in Legumes or Rich in Grasses in Uruguay. *Animals* 2, 288-300.
- PICASSO, V.; E. C. Brummer; M. Liebman; P. M. Dixon; B.J. Wilsey. 2011. Diverse perennial crop mixtures sustain higher productivity over time based on ecological complementarity. *Ren. Agr. and Food Systems*, 26(4); 317–327
- PICASSO, V.; E.C. Brummer; M. Liebman. 2010. Diversity and stability in experimental grassland communities. *Grassland Sci. in Europe*. Vol 15: 827-829.
- PICASSO, V.; E.C. Brummer; M. Liebman; P. M. Dixon; B. J. Wilsey. 2008. Crop Species Diversity Affects Productivity and Weed Suppression in Perennial Polycultures under Two Management Strategies. *Crop Sci.*, v. 48, p. 331-342.

### *Books and Book Chapters*

- PICASSO, V., G. Cruz, L. Astigarraga, R. Terra. 2013. Cambio y Variabilidad Climática: Respuestas interdisciplinarias. *Espacio Interdisciplinario*. Universidad de la República. Montevideo, Uruguay. 132 pp. (ISSN 2301-0835)
- Bartaburu, D., H. Morales, F. Dieguez, C. Lizarralde, A. Quiñones, M. Pereira, C. Molina, E. Montes, P. Modernell, J. Taks, F. De Torres, P. Cobas, M. Mondelli, R. Terra, G. Cruz, L. Astigarraga, V. PICASSO. 2013. Sensibilidad y capacidad adaptativa de la ganadería frente al cambio climático. Volumen III de *Clima de cambios: nuevos desafíos de adaptación en Uruguay*. Resultado del Proyecto FAO TCP URU 3302 (MGAP-FAO), Montevideo.
- Astigarraga, L., G. Cruz, M.L. Caorsi, J. Taks, P. Cobas, M. Mondelli, V. PICASSO. 2013. Sensibilidad y capacidad adaptativa de la lechería frente al cambio climático. Volumen IV de *Clima de cambios: nuevos desafíos de adaptación en Uruguay*. Resultado del Proyecto FAO TCP URU 3302 (MGAP-FAO), Montevideo.
- Mazzilli, S.; C. Bonilla, G. Siri, P. Arbeletche, V. Rubio, P. Bacigaluz, J. Taks, M. García, P. Cobas, M. Mondelli, G. Cruz, L. Astigarraga, V. PICASSO. 2013. Sensibilidad y capacidad adaptativa de la agricultura de secano y el arroz frente al cambio climático. Volumen V de *Clima de cambios: nuevos desafíos de adaptación en Uruguay*. Resultado del Proyecto FAO TCP URU 3302 (JMGAP-FAO), Montevideo.
- Ferrer, M., G. Camussi, M. Fourment, V. Varela, G. Pereyra, J. Taks, S. Contreras, G.

- Cruz, L. Astigarraga, V. PICASSO. 2013. Sensibilidad y capacidad adaptativa de la viticultura y la fruticultura frente al cambio climático. Volumen VI de Clima de cambios: nuevos desafíos de adaptación en Uruguay. Resultado del proyecto FAO TCP URU 3302 (MGAP-FAO), Montevideo.
- Rosas, J. F.; I. Arboleya, M. Carriquiry, H. Licandro, J. Millán, V. PICASSO. 2013. Estudio sobre políticas públicas y medidas de adaptación del sector agropecuario al cambio climático. Volumen VII de Clima de cambios: nuevos desafíos de adaptación en Uruguay. Resultado del proyecto FAO TCP URU 3302 (MGAP-FAO), Montevideo.
- Delaplante, K. and V. PICASSO. 2011. The Biodiversity–Ecosystem Function Debate in Ecology. Handbook of the Philosophy of Science. Volume 11: Philosophy of Ecology. Volume editors: Kevin deLaplante, Bryson Brown, and Kent A. Peacock. General editors: Dov M. Gabbay, Paul Thagard and John Woods. Elsevier.

#### *Theses and Dissertations*

- PICASSO, V. 2008. Diversity, productivity, and stability in perennial polycultures used for grain, forage, and biomass production. PhD Dissertation. Iowa State University. USA
- MONDELLI, M.P. and PICASSO, V. 2001. Trayectorias Tecnológicas en la Ganadería Uruguaya: un Enfoque Evolucionista (Technological Pathways in Uruguayan Livestock Industry: an Evolutionary Approach). Undergraduate Thesis. Univ. of the Republic. Montevideo, Uruguay.

#### *Congress presentations*

- PICASSO, V. 2013. La historia del debate sobre la biodiversidad y el funcionamiento ecosistémico: un diálogo entre ecología y agronomía. EXTENSO. AUGM. Montevideo.
- PICASSO, V., L. Astigarraga, G. Cruz, R. Terra, D. Bartaburu, H. Morales, L. Caorsi, C. Lizarralde, A. Quiñones, F. de Torres, J. Taks, M. Mondelli. 2013. Sensibilidad y capacidad adaptativa de los sistemas ganaderos y lecheros a la variabilidad y el cambio climático en Uruguay. EXTENSO. AUGM. Montevideo.
- Caorsi, ML; G. Cruz, V. PICASSO, L. Astigarraga. 2013. Adaptacion de los sistemas de produccion de leche a la sequía. EXTENSO. AUGM. Montevideo.
- PICASSO, V., C. Lizarralde, C. Molina, D. Bartaburu, H. Morales, L. Astigarraga. 2013. A quantitative assessment of robustness to drought in livestock grazing systems in Uruguay. First International Global Food Security Conference. Noordwijkerhout, The Netherlands
- PICASSO, V., L. Astigarraga, Y. Dini, J. Dijkstra, E. Kebreab. 2013. An evaluation of mechanistic and empirical models of methane emissions in grazing dairy cattle. Greenhouse Gases and Animal Agriculture. Dublin.
- Becoña, G., L. Astigarraga, J. Franco, V. PICASSO. 2013. Greenhouse gas emissions of Uruguayan beef cow-calf systems. Greenhouse Gases and Animal Agriculture Dublin
- Lizarralde, C., V. PICASSO, M. Cadenazzi, P. Modernel, G. Becoña, L. Astigarraga. 2013. Diet and milk yield effect on milk carbon footprint of dairy farms within Uruguay. Greenhouse Gases and Animal Agriculture. Dublin.
- Lopez, A.; Tejera, M.; Speranza, P.; González, P.; Astigarraga, L.; PICASSO, V. 2012. Mezclas forrajeras con Paspalum logran mayor productividad y menor

- enmalezamiento estival que mezclas convencionales. Congreso Nacional de Ingenieros Agrónomos , Montevideo
- Tejera, M.; Lopez, A.; González, P.; Speranza, P.; Astigarraga, L.; PICASSO, V. 2012. Contribución del grupo funcional gramínea perenne estival a la productividad y estabilidad de comunidades vegetales herbáceas sembradas en Uruguay. XIV Jornadas de la Sociedad Uruguaya de Biociencias, Piriápolis.
- Tejera, M.; Lopez, A.; Speranza, P.; Astigarraga, L.; PICASSO, V. 2012. Mezclas forrajeras con gramíneas perennes estivales mejoran producción en verano sin reducir producción invernal. IV Congreso Uruguayo de la Producción Animal AUPA, Montevideo
- Modernel, P.; Astigarraga, L.; PICASSO, V. 2012. Emisiones de gases de efecto invernadero en sistemas de invernada vacuna contrastantes de Uruguay. IV Congreso Uruguayo de la Producción Animal AUPA, Montevideo
- Lizarralde, C.; PICASSO, V.; Astigarraga, L. 2012. El impacto de la carga animal sobre la huella de carbono de la leche. IV Congreso Uruguayo de la Producción Animal AUPA, Montevideo
- Lizarralde, C.; Modernel, P.; Becoña, G.; PICASSO, V.; Astigarraga, L. 2012. Carbon footprint of grain production in Uruguay. 19th International Soil Tillage Research Organization Conference, Montevideo.
- Lizarralde, C.; PICASSO, V.; Astigarraga, L. 2012. The effect of milk productivity per cow on carbon footprint of dairy farms in Uruguay. Livestock Research Group Meeting of the Global Research Alliance for Agricultural Greenhouse Gases, Punta del Este, Uruguay.
- Becoña, G.; Astigarraga, L.; Franco, J.; PICASSO, V. 2012. Greenhouse Gas emissions of Uruguayan beef cow-calf systems. Livestock Research Group Meeting of the Global Research Alliance for Agricultural Greenhouse Gases, Punta del Este, Uruguay.
- Modernel, P.; PICASSO, V.; Astigarraga, L. 2012. Greenhouse gas emissions in contrasting beef finishing systems of Uruguay. 15th Asian Australasian of Animal Production Societies (AAAP) Animal Science Congress, Bangkok.
- PICASSO, V., Astigarraga L., Buffa I., Sotelo D., Américo G., Terra R., van Oort P., Meinke H. 2011. Robustness of livestock farmers to climate variability: a case study in Uruguay. 5th World Congress of Conservation Agriculture incorporating 3rd Farming Systems Design Conference, Brisbane, Australia.
- Modernel, P., Becoña G., PICASSO V. and Astigarraga L. 2011. Impact of technological changes on greenhouse gas emissions on finishing beef systems. Congreso Latinoamericano de Producción Animal (ALPA). Montevideo, Uruguay.
- Becoña G., Modernel P., PICASSO V., Astigarraga L. 2011. Impact of productive efficiency of cow-calf systems on Uruguay's beef carbon footprint. Congreso Latinoamericano de Producción Animal (ALPA). Montevideo, Uruguay.
- Tejera, M.; Lopez, A.; Speranza, P.; PICASSO, V. 2011. Efectos de la incorporación de *Paspalum notatum* y *P. dilatatum* sobre el enmalezamiento y la producción estival de mezclas forrajeras. Congreso Latinoamericano de Producción Animal (ALPA). Montevideo, Uruguay.
- Modernel, P., PICASSO, V., Astigarraga, L. 2011. Greenhouse gas emissions in beef production systems of Uruguay 3er. Congreso Internacional y 12do. Congreso Nacional de Investigación Socioeconómica y Ambiental de la Producción Pecuaria. Chapingo, México.
- Quiñones, A.; PICASSO, V. 2011. A proposal of sustainability indicators for the

Uruguayan Campos production systems. IX International Rangelands Congress, Rosario, Argentina  
Chiappe, M.; PICASSO, V.; Gazzano, I. 2010. Agroecología en la Facultad de Agronomía, Universidad de la República (Uruguay). Desafíos y posibilidades de la Incorporación de la Agroecología en las Instituciones de Educación Agropecuaria , La Plata, Argentina

*Before 2010: 18 congress presentations (oral or posters)*

### **Reviewer of Refereed Journals**

Agriculture, Ecosystems, and Environment; BioEnergy Research; Agronomy Journal; Regional Environmental Change; Grass and Forage Science; Agrociencia (Uruguay); Archivos de ALPA

### **Students supervised**

Eduardo Llanos. Ph.D. Univ. de la República (advisor, current)  
Pablo Modernel. PhD. Wageningen University (member of committee, current)  
Guadalupe Tiscornia. PhD. Univ. de la República (member of committee, current)  
Adriana Bussoni. Phd. Univ. de la República (member of committee, current)  
Mauricio Tejera. MSc. Univ. de la República (advisor, current)  
Jaime Gutierrez. MSc. Univ. de la República (co-advisor, current)  
Carolina Lizarralde. MSc. Univ. de la República (co-advisor). Graduated 2013.  
Gonzalo Becoña. MSc. Univ. de la República (advisor). Graduated 2012.  
Alfredo López. Undergraduate (advisor). Graduated 2012.  
Pablo Modernel. MSc. Univ. de la República (advisor). Graduated 2011.  
Eduardo Llanos. MSc. Univ. de la República (advisor). Graduated 2011  
Clara Villalba. Diploma. Univ. de la República (advisor). Graduated 2011.  
Mauricio Tejera. Undergraduate. Univ. de la República (advisor). Graduated 2011.  
Amparo Quiñones. Undergraduate. Univ. de la República (advisor). Graduated 2010.

### **Courses taught**

#### At Universidad de la República, Uruguay:

Agroecology applied to Farming Systems, graduate level (academic), 2009 & 2011.  
Environmental Impacts of Farming Systems, graduate level (professional), 2011& 2013.  
Environment, Society, and Farming Systems, graduate level (academic), 2011  
Scientific Communication using Posters, graduate level (academic), 2009, 2010, 2011  
Scientific Communication in English, graduate level (academic), 2011  
Meat Production Systems, graduate level (professional), 2013  
Forage Production, undergraduate level (Agronomy Major), 2009 through 2013, team member  
Forage Utilization, undergraduate level (agronomy Major), 2011&2013, team member  
Agroecology, undergraduate level (Agronomy Major), 2013

#### At Iowa State University:

Sustainable Agriculture in Uruguay (Study abroad course), 2004 & 2006 with C. Brummer and G. Zdorkowski

Honors Program Seminar – Making difficult decisions, 2006  
Honors Program Seminar – Wisdom for a Livable Planet, 2005 with G. Zdorkowski  
Agrotourism (study abroad course), 2005, with C. Flora and M. Chiappe  
Agroecosystems analysis (field course), 2004, team member with R. Salvador and L. Butler  
World Food Issues, undergraduate level (Agronomy), 2004 team member with R. Salvador.  
Issues in Sustainable Agriculture, undergraduate level (Agronomy), 2003, team member with R. Salvador.

### **Leadership and other activities**

Student delegate at the Graduate College Council at Iowa State University (2004-06)  
Student delegate at the Graduate Program in Sustainable Agriculture Coordinating Committee (2005-06) at Iowa State University  
Student Senator in the Graduate and Professional Student Senate (2003-05) at Iowa State University  
Vice- President of Agronomy and GPSA Graduate Student Clubs (2003-04)  
Educational Programs Coordinator at Junior Achievement, Uruguay (2000-01)  
Student delegate at the Council of the College of Agriculture (1997-99) at Univ. de la República, Uruguay.  
Volunteer and Coordinator of volunteers in various high school activities in Jesuit School in Montevideo, 1991 - 2001