

**JOSE CAMILO BEDANO - CURRICULUM VITAE****Research overview**

I am interested the impact of agricultural managements on the functioning of terrestrial ecosystems. In my research group we study soil meso and macrofauna and some key ecosystem processes such as litter decomposition, or the formation of soil structure. We are also interested in the relationships between soil fauna biodiversity and ecosystem functioning in natural environments and agroecosystems.

**1. EDUCATION**

B.Sc. (Biology) 1993-1998 – National University of Río Cuarto (UNRC), Argentina.- Ph.D. (Biological Sciences) 1999-2004, UNRC, Argentina.- Posdoctoral: UFT Centre, University of Bremen, Germany (2004-2005).

**2. CURRENT POSITIONS:**

- 1- Professor of Soil Science, Department of Geology, UNRC.
- 2- Professor of Entomology, Department of Natural Sciences, UNRC.
- 3- Independent Researcher at the National Scientific and Technical Research Council (CONICET).

**3. RESEARCH EXPERIENCE****3.1. SCIENTIFIC PUBLICATIONS (LAST 5 YEARS)**

- 3.1.1. BEDANO, J.C. & DOMÍNGUEZ, A. 2016. Large-Scale Agricultural Management and Soil Meso- and Macrofauna Conservation in the Argentine Pampas. *Sustainability* 8(7):653.
- 3.1.2. DOMÍNGUEZ, A., BROWN, G., SAUTTER, K, RIBAS DE OLIVEIRA, C., DE VASCONCELOS, E., NIVA, C., BARTZ, M, & BEDANO, J.C. 2016. Toxicity of AMPA to the earthworm *Eisenia andrei* Bouché, 1972 in tropical artificial soil. *Scientific Reports* 6, 19731.
- 3.1.3. BEDANO, J.C., DOMÍNGUEZ, A., AROLFO, R., WALL, LG. 2016. Effect of Good Agricultural Practices under no-till on litter and soil invertebrates in areas with different soil types. *Soil & Tillage Research* 158: 100-109.
- 3.1.4. DOMÍNGUEZ, A. & J.C BEDANO. 2016. Earthworm and Enchytraeid Co-occurrence Pattern in Organic and Conventional Farming: Consequences for Ecosystem Engineering. *Soil Science* 181: 148-156.
- 3.1.5. CASTILHO, S; COOPER, M.; DOMINGUEZ, A. & J.C. BEDANO. 2016. Effect of land use changes in eastern Amazonia on soil chemical, physical and biological attributes. *Soil Science* 181: 133-147.
- 3.1.6. DOMÍNGUEZ, A. & J.C BEDANO. 2016. The adoption of no-till instead of reduced tillage does not improve some soil quality parameters in Argentinean Pampas. *Applied Soil Ecology* 98: 166–176.
- 3.1.7. TIONE, ML, BEDANO, J.C., & M. BLARASIN. 2016. Land use and hydrogeological characteristics influence the groundwater invertebrate communities. *Water Environment Research* 88:756-767.
- 3.1.8. TIONE, ML, BEDANO, J.C., & M. BLARASIN. 2016. Relationships among invertebrate communities and groundwater properties in an unconfined aquifer in Argentine. *International J of Environmental Studies* 2016: 1-18.
- 3.1.9. GUZMÁN L. A., CASTRO R., BECKER A., BEDANO J.C, FURLAN M. L., RODRIGUEZ J. M., TUNINETTI L.E., MORAN I. 2016. Caracterización ambiental de la zona periurbana de Villa María, Córdoba para la conformación de indicadores ambientales. *Mapping* 25, 177: 40-47.
- 3.1.10. DOMÍNGUEZ, A., J.C. BEDANO; A. BECKER & AROLFO, R. 2014. Organic farming fosters agroecosystem functioning in Argentinian temperate soils: evidence from litter decomposition and soil fauna. *Applied Soil Ecology* 83: 170–176.
- 3.1.11. BEDANO, J.C., L. SACCHI, E. NATALE, & H. REINOSO. 2014. Saltcedar (*Tamarix ramosissima*) Invasion Alters Decomposer Fauna and Plant Litter Decomposition in a Temperate Xerophytic Deciduous Forest. *Advances in Ecology* 2014: 519297.
- 3.1.12. FIGUEROLA, E., GUERRERO, L., ROSA, S., SIMONETTI, L., DUVAL, M., GALANTINI, J., BEDANO, J.C., WALL, LG & L. ERIJMAN. 2012. Bacterial indicator of agricultural management for soil under no-till crop production. *PLoS ONE* 7(11): e51075.
- 3.1.13. BEDANO, J.C., DOMÍNGUEZ, A. & AROLFO, R. 2011. Assessment of soil biological degradation using mesofauna. *Soil & Tillage Research* 117: 55–60.

**4. FUNDING (LAST 10 YEARS)**

- 4.1. ANPCyT. PICT-2006. Soil quality biological indicators in agroecosystems. Director. 2008-2010.
- 4.2. ANPCyT. PICT-2008. Soil fauna and ecosystem processes in sustainable production systems: a contribution to the PAE-BIOSPAS. Director. 2010-2013.

- 4.3. MINCyT-Cba.-PID 2010- Evaluation of soil degradation in agroecosystems of the center-south of Córdoba through indicators and indices. Co-director. 2012-2015.
- 4.4. MINCyT-CAPES- International cooperation. "Comparative study on the contribution of earthworms to ecosystem functioning in soils of Argentina and Brazil under different agricultural management systems". Director. 2012-2013.
- 4.5. SECYT-UNRC. Program "Evaluation of soil degradation through indicators and indices in agricultural systems of the center-south of Córdoba" Co-director. 2012-2015.
- 4.6. SECYT-UNRC. Edaphic meso and macrofauna as bioindicators of soil degradation in Pampean agroecosystems. Director. 2012-2015.
- 4.7. CONICET- PIP. Effect of land use on aquatic and terrestrial invertebrate diversity, and the functioning of ecosystems. Director. 2015-2018.
- 4.8. SECYT-UNRC. Physical, chemical and biological aspects of soils in the evaluation of organic agriculture as an environmentally sustainable production alternative. Director. 2016-2019.
- 4.9. International Cooperation Project NEIES (Argentina, Brazil and Ecuador): Research Network for the strengthening and integration of higher education undergraduate and graduate in issues of sustainability of agricultural systems. Director node Rio Cuarto. 2017-2018
- 4.10. ANPCyT. PICT-2016. Intensification and diversification of crop rotations in no-tillage: fauna and soil processes as indicators. Director. 2017-2020.
- 4.11. FULBRIGHT Specialist Program. Earthworm ecology and taxonomy in natural areas and fields under sustainable agricultural management. 2017-2018.

## 5. RESEARCH GROUP

### Doctoral Thesis: Advisor (7) and co-advisor (4)

- 5.1. PhD. Biological Sciences, UNRC. "Efecto de los sistemas de manejo sobre la macrofauna del suelo y el proceso de descomposición de la materia orgánica" Anahí Domínguez. 2008-2012. Advisor.
- 5.2. PhD. Biological Sciences, UNRC. "Efecto de diferentes manejos agrícolas sobre la mesofauna edáfica y la descomposición de la materia orgánica: implicancias en la calidad del suelo". Lic. Romina Arolfo. 2009-2014. Advisor.
- 5.3. PhD. Biological Sciences, UNRC.. "Evaluación de comunidades de invertebrados en el acuífero freático fluvio-eólico de Río Cuarto y su relación con variables ambientales". Lic. Laura Tione. 2009-2014. Advisor.
- 5.4. PhD. Applied Sciences, UN Luján. Evaluación de impacto y recuperación de los servicios de los ecosistemas que sustentan la productividad del monocultivo soja. Tesista: Ing. Agr. Pablo de Falco. 2009-2016. Advisor.
- 5.5. PhD. Biological Sciences, UNRC. "Impacto de los usos del suelo sobre la variabilidad genética de la fauna edáfica". Mgt. Mónica Díaz Porrez. 2012-2016. Co- advisor.
- 5.6. PhD. Soil and Plant Nutrition, ESALQ, University of an Pablo, Brasil. "Influência da mudança do uso da terra nos atributos físicos e biológicos do solo em áreas de agricultura familiar". Selene de Pierri Castilho. 2011-2014. Co-advisor.
- 5.7. PhD. Geological Sciences, UNRC. "Evaluación de la Calidad Ambiental en la región de Villa María, Provincia de Córdoba". Ing. Leticia Guzmán. 2013-2018. Co- advisor.
- 5.8. PhD. Biological Sciences, UNRC. "Respuesta de las comunidades de microartrópodos edáficos a impactos antrópicos que afectan los bosques nativos del norte de Misiones". Lic. Gomez Pamies, Diego. 2016 -2020. Advisor.
- 5.9. PhD. Biological Sciences, UNRC. "La macrofauna del suelo y su contribución a la formación de estructura edáfica en sistemas agrícolas convencionales y orgánicos". Lic. María Pía Rodríguez. 2016 -2021. Advisor.
- 5.10. PhD. Biological Sciences, UNRC. "Efecto de diferentes sistemas agrícolas convencionales y orgánicos sobre la mesofauna edáfica y su rol en el proceso de descomposición". Lic. Carolina Elizabeth Ortiz. 2016 -2021. Advisor.
- 5.11. PhD. Biology, National University of Comahue, Bariloche. "Efectos del manejo forestal sobre la interacción planta-mesofauna y el ciclaje de carbono". Ing. Forestal Margarita Fernández. 2016-2021. Co- advisor.

### Postdoctoral fellows. Adviser

- 5.12. Assistant Researcher CONICET, Dr. Anahí Domínguez.
- 5.13. Posdoc Fellow CONICET, Dr. Javier Márquez.

## 2.6. TEACHING

Courses: Pedology and Natural Resources Management, for the career B.Sc. Geology, UNRC, and Entomology and Earth Sciences for the career B.Sc. Biology, UNRC.