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Perfil: Director y Científico Principal de Programas Internacionales y Nacionales de Investigación para Desarrollo.

- Resultados demostrados en el diseño, implementación y gerenciamiento de programas internacionales de investigación y desarrollo de innovación tecnológica. Especialidad en la interface de Ciencia y Políticas públicas.
- Formación científica y amplia experiencia en sistemas agropecuarios, recursos naturales, evaluación y manejo de riesgos (especialmente asociados a variabilidad y cambio climáticos) y sistemas de información y soporte para la toma de decisiones.

EXPERIENCIA LABORAL:

Senior Research Scientist, Director del Programa de Investigación Sectorial y Regional, y Líder para América Latina y el Caribe (LAC), Instituto Internacional de Investigación en Clima y Sociedad (IRI), Columbia Climate School, Columbia University, New York. Establecer, desarrollar y administrar proyectos de investigación y desarrollo; y actividades de educación en evaluación y gestión de riesgos climáticos en la agricultura/seguridad alimentaria, ecosistemas naturales, salud, recursos hídricos, y desastres. Establecimiento de alianzas estratégicas con institutos nacionales e internacionales (públicos, privados, ONGs, Agencias de Desarrollo, Institutos Multilaterales, etc.). *New York. Agosto 2004 – presente*

Vicepresidente de la Junta Directiva, Instituto Nacional de Investigación Agropecuaria (INIA). Determinar prioridades de investigación agropecuaria a nivel nacional y regional, así como aquellas referentes a la cooperación técnica externa. Aprobar el presupuesto y el plan de actividades. Aprobar los planes y programas. *Montevideo, Uruguay Mayo 2020 - presente*

Faculty Advisory Committee member, Columbia Global Centers of Latin America (Chile and Brazil). Provide strategic advice to the Global Centers in Chile and Brazil. Columbia University, New York, NY. 2013 – presente.

Senior Research Scientist, Director Interino, *Centro para la Agricultura y Seguridad Alimentaria, Earth Institute, Columbia University.* Establecer actividades de investigación y educación para avanzar en intensificación agropecuaria sostenible con especial énfasis en países en desarrollo. Columbia University, New York, NY. *Setiembre 2016 – Noviembre 2017*

Distinguished Lead Scholar, Fulbright Program. Programa NEXUS. El programa estableció una red de expertos para intercambio académico, desarrollo de investigaciones orientadas a informar políticas públicas, y proveer de un foro para compartir buenas prácticas. Los expertos seleccionados trabajaron en análisis, resolución de problemas, e investigación multidisciplinaria en: de Ciencia y Tecnología, Innovación y Energía Sostenible. *Washington, D.C., Dic 2010 – Abr 2012.*

Miembro del Consejo Científico del CGIAR (Portafolio para Movilizar Ciencia). La función principal en el CGIAR es colaborar con el Consejo Científico para: (a) promover y mejorar la calidad, relevancia y el impacto de la ciencia, y (b) movilizar a la comunidad científica global alrededor de la misión y los objetivos del CGIAR. *Roma, Italia, 2006 – 2008.*

Coordinador Regional, División de Investigación y Desarrollo, IFDC (International Fertilizer Development Center). Diseñar, establecer, ejecutar y administrar programas regionales y Nacionales de investigación y desarrollo. Los programas se concentraron en el desarrollo de Sistemas de Información y Soporte para la Toma de Decisiones, Evaluación y Manejo de Riesgos, Impactos de la Variabilidad y Cambio Climáticos, Dinámica y Secuestro de Carbono. *Oficina Regional: Montevideo, Uruguay, Sede Central: M. Shoals, Alabama, EEUU. Noviembre, 1987- Diciembre 2003.*

Investigador Visitante, National Environmental Center for Environmental Prediction (NCEP, NOAA), y International Research Center for Climate Prediction (IRI). *Temperatura superficial del océano Pacífico Tropical y producción agrícola en tres regiones de Estados Unidos.* Camp Springs, MD, EEUU. Febrero 1997 - Abril 1998.

Coordinador para América Latina, IFDC / Programa de las Naciones Unidas para el Desarrollo (PNUD) / Banco Mundial, Proyecto Global *"Estrategias de Uso de Fertilizantes para Sistemas Agropecuarios Sostenibles y Protección Ambiental "*. División de Investigación y Desarrollo del IFDC, Montevideo, Uruguay, Enero 1991 - Diciembre 1993.

Investigador, Environmental Protection Agency/Agency for International Development (EPA/AID). Proyecto: *"Cambio Climático y Disponibilidad Mundial de Alimentos"*. Montevideo, Uruguay, Washington, EEUU. Enero 1990-Noviembre 1992.

Investigador Asistente, *"Suelos y Cultivos"* y *"Fertilidad y Química de Suelos"*, Departamento de Suelos, Cultivos y Medio Ambiente, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, EEUU, Enero 1984 - Enero 1986.

Investigador, *Manejo de Suelos y Cultivos*, CIAAB, MGAP, La Estanzuela, Colonia, Uruguay, Marzo 1979-Diciembre 1982.

Otras Actividades Relacionadas Con Cambio Climático / Variabilidad Climática

- **Autor Principal, IPCC**, Intergovernmental Panel on Climate Change, Working Group II. “*Impactos, Adaptación y Mitigación*”. 2º y 3º Informes (1995 y 2001), **Autor Contribuyente** del 4º Informe (2007 – **Premio Nobel de la Paz**).
- **Editor, IPCC**, Intergovernmental Panel on Climate Change, Pub. Especial sobre “**Transferencia Tecnológica**”, 1999.
- **Investigador Principal**, Proyecto NASA EOS/IDS “*Impactos de la Variabilidad Climática Interanual sobre Ecosistemas Agropecuarios y Marinos*.” Montevideo, Uruguay y New York, EEUU. Abril 1998 – Mayo 2003.
- **Miembro del Consejo Asesor Científico del IAI** (Inter-American Institute for Global Change Research), 2008 – 2013
- **Miembro del Consejo Asesor Científico y de Políticas del IAI**, 2013 - Presente
- **Miembro del Consejo Científico del CIIFEN** (Centro Internacional de Investigación fenómeno de El Niño), 2007
- **Miembro del Consejo Científico de VAMOS**, 2011-presente.
- **Miembro del Grupo Científico, PLATIN, WCRP/CLIVAR/VAMOS**. 2010 - Presente.
- **Dirección Nacional de Medio Ambiente (DINAMA) - GEF/UNDP**. Elaboración del Inventario Nacional de Gases de Efecto Invernadero (metodología IPCC) para los sectores: “*Agropecuario*” y “*Cambio en el uso de la Tierra y Silvicultura*” de Uruguay. Montevideo, 1996, 1998, 2000, 2001.
- **Miembro del Equipo Experto**: “*Cambio climático / variabilidad climática y desastres naturales en el sector agropecuario*”, Organización Mundial Meteorológica (OMM, Naciones Unidas), Open Program Area Group. Presente.
- **Miembro del Equipo Experto**: “*Aplicaciones, Sistemas de Información y Servicios de Predicción Climática*”. Organización Mundial Meteorológica (OMM, Naciones Unidas), Open Program Area Group. 2003.
- **Miembro del Comité Asesor**, International Research Institute for Climate Prediction (IRI), División de Aplicaciones. Lamont – Doherty Observatory. Palisades, New York. EEUU. 1999.
- **Miembro del Comité Asesor, CLIMAG** (Programa Internacional de Investigación en Aplicaciones de Pronósticos Climáticos en el Sector Agropecuario). Organización Mundial Meteorológica (OMM, Naciones Unidas).
- **Miembro del Comité Coordinador**, “*Trace-Gas Exchange: Mid-Latitude Terrestrial Ecosystems and the Atmosphere*” Actividad del proyecto: International Global Atmospheric Chemistry (TRAGEX/IGAC, IGBP). Diciembre 1992 - 2004.
- **Miembro del Comité Asesor**, Instituto Inter-Americano para la Investigación en Cambio Global (IAI). Área: “*Estudios Comparativos en Ecosistemas Terrestres Templados*”. Desarrollo del Plan Científico Regional. Abril 1994 - Julio 1994.

Investigación y Consultorías en el Sector Público

- **BID Invest**. Asesorar al BID como integrante del Blue Ribbon Panel para elaborar recomendaciones a **BID Invest** para convertirse en una institución “climáticamente inteligente” en la próxima década. Washington, DC, 2022-2023
- **BID Oficina de Uruguay** – Consultoría a oficina local en el cumplimiento de la meta del BID de 25% (2015) para que el portafolio total del BID se ejecute en cambio climático, energía renovable y sostenibilidad ambiental. Montevideo, 2012
- **Ministerio de Ganadería, Agricultura y Pesca de Uruguay – Banco Interamericano de Desarrollo**. Estudio de viabilidad de programas de seguros agropecuarios en Uruguay. Montevideo, Marzo-Junio 2000.
- **FAO (Naciones Unidas)**, Proyecto: “*Mejoramiento de la Producción de Cebada en Uruguay*”, FAO/UNDP URU 88/001. Montevideo, Uruguay, Mayo 1989 – Enero 1991.
- **US AID/Gobierno de Guatemala**. *Desarrollo de un Sistema de Información y Soporte para la Toma de Decisiones para el sector agropecuario de Guatemala*. Ciudad de Guatemala, Abril 1997, Agosto 1998, Febrero 2000.
- **Organización de las Naciones Unidas para el Desarrollo Industrial (ONUDI) - Ministerio de Industria del Paraguay**. Establecer proyecciones de demanda nacional y regional de fertilizantes para una nueva planta en base a gas natural a instalarse en Paraguay. Asunción, Noviembre 1996.
- **BID/IICA/CNPAB-EMBRAPA, Brasil**. CNPAB análisis de datos de largo plazo, modelos de simulación para dinámica de carbono, evaluar la sostenibilidad de sistemas basados en pasturas. Río de Janeiro y Bahía, Brasil, Mayo 1996 - Junio 1996.
- **Agencia Internacional de Energía Atómica (IAEA, Naciones Unidas)**. Elaborar plan de trabajo y supervisar actividades de investigación en un proyecto internacional de 5 años (investigación conducida en América Latina, Asia, África y Europa): “*Utilización de técnicas nucleares en trigo irrigado para optimizar la fertilización nitrogenada y reducir la contaminación ambiental*”. Viena, Noviembre 1993 – Noviembre 1998.
- **GEF/Banco Mundial – PNUD**. Proyecto PROBIDES: “*Conservación de la Biodiversidad y Desarrollo Sustentable de los Humedales del Este de Uruguay*”. Asesoramiento técnico al equipo científico en el área de “Desarrollo Sustentable”. Rocha, Uruguay. Setiembre 1994 - Agosto 1995.

Consultorías en el Sector Privado

- **Maltería Oriental S.A.** Asesoramiento técnico a la División Agronómica. Uruguay, Setiembre 1994 - 1999.
- **AgrEvo (Hoescht/Schering)**. Asesoramiento técnico a la División Fertilizantes. Buenos Aires, Argentina. 1996 y 1997.
- **Unidad de Negocios de Fertilizantes, PEQUIVEN**, (Petróleos de Venezuela S.A.). Consultoría a PEQUIVEN para adaptar la Unidad de Negocios a las condiciones de mercado libre (sin subsidios). Venezuela, 1993 –1994.

Editor / Revisor

- **Miembro del Consejo Editor.** *Agricultural Systems*. Elsevier. Amsterdam, Holanda.
- **Miembro del Consejo Editor.** *Aqua*, International Hydrological Programme for Latin America and the Caribbean United Nations Educational, Scientific and Cultural Organization (UNESCO).
- **Evaluador de Propuestas de Investigación**, Instituto Inter-Americano para la Investigación en Cambio Global (IAI), *Programa Científico Inicial (ISP)*, y *Planning and Start-up Research*.
- **Evaluador de Propuestas de Investigación**, National Science Foundation (NSF), Programa de Investigación Internacional: "Cambio Global", Washington, EEUU
- **Evaluador de Propuestas de Investigación**, *Environmental Research and Technology*, DLR, Bonn, Alemania. Julio 2000
- **Miembro del Comité Evaluador Internacional**, Evaluación del Centro Regional de Paraná Research, Instituto Nacional de Tecnología Agropecuaria (INTA). Paraná, Argentina, Abril 1992.
- **Revisor** de artículos publicados en *Agronomy J.*, *Soil Sci. Soc. Am. J.*, *Climatic Change*, *J. Climate Change*, *Int. J. Climatology*, *Nature Climate Change*, *PNAS*, Scientific peer-reviewed journals in Argentina, Brazil, Chile and Uruguay

Instrucción y Docencia

- **Columbia University.** Cursos académicos (MSc y PhD) y programas de entrenamiento en "Gestión de Riesgos Climáticos", y "Sistemas de Soporte para la Toma de Decisiones". EEUU, Asia, África y A. Latina/Caribe. 2004 - presente
- **International Geosphere Biosphere Program (IGBP)** – Global Analysis, Interpretation and Modeling (GAIM). GAIM-LBA Modeling Workshop. Programa de entrenamiento en "Aplicaciones del modelo Century para estudiar dinámica del Carbono en investigaciones de LBA". Cachoeira Paulista, SP, Brasil
- **IFDC - ICASA.** Programas de entrenamiento en *Sistemas de Información y Soporte para la Toma de Decisiones en el Sector Agropecuario* y *Modelos de Simulación de Cultivos y Pasturas*. Argentina, Brasil, EEUU, Paraguay, Uruguay, Chile, Austria.
- **International Research Institute for Climate Prediction (IRI).** Programa de entrenamiento en "Aplicaciones de Pronósticos Climáticos en el Sector Agropecuario", Observatorio Lamont-Doherty, Columbia University. New York.
- **EMBRAPA, Centro Nacional de Pesquisa en Agro-Biología.** Seropédica, Brasil. Programa de entrenamiento en Utilización de Modelos de Simulación en Investigación sobre Sistemas Agropecuarios Sostenibles.
- **Virginia Polytechnic Institute and State University,** Departamento de Suelos, Cultivos y Medio Ambiente, Cursos: "Fertilidad de Suelos y Fertilizantes", "Introducción a Suelos", "Aplicaciones de la Informática en el sector Agropecuario", Blacksburg, Virginia, EEUU. Setiembre 1984, 1985 y 1986.

EDUCACION:

PhD, Crop and Soil Environmental Sciences, Junio 1987.
Virginia Polytechnic Institute and State University, EEUU.
Disertación: "*Optimización del Uso del Nitrógeno del Suelo y de Fertilizantes en Cultivos de Trigo bajo Manejo Intensivo*"

Master of Science, Crop and Soil Environmental Sciences, (Minor: Estadística), Diciembre 1984
Virginia Polytechnic Institute and State University, EEUU.
Tesis: "*Disponibilidad de Nitrógeno para las Plantas en Suelos de Virginia*".

Ingeniero Agrónomo, (Orientación Agrícola-Ganadera). Diciembre 1978
Facultad de Agronomía, Universidad de la República, Uruguay.
Tesis: "*Lixiviación de Nitratos en el Suelo bajo distintas Coberturas Vegetales*".

IDIOMAS:

Dominio de Inglés, Español y Portugués.
Conocimientos de Francés.

SUPERVISIÓN, DIRECCIÓN en EDUCACIÓN

- Earth Institute / Climate School Post Doctoral Fellows: supervisor de 8 postdocs desde 2017
- Co-Director de PhD: 4 candidates a PhD de Columbia University, 2 candidatos de Uruguay, 4 candidatos de Argentina
- Mentor de decenas de estudiantes de Maestría y de grado en Columbia University desde 2004
- Dirección y supervisión de decenas de científicos investigadores y personal de apoyo en Columbia desde 2004.

LISTA de PUBLICACIONES:

- Anderson, W.; W.Baethgen; F.Capitanio; P. Ciais; B.I.Cook; G.R. Cunha; L.Goddard,l; B. Schauburger; K. Sonder; G. Podestá; M. van der Velde; L. You. 2023. Climate variability and simultaneous breadbasket yield shocks as observed in long term yield records. *Agricultural and Forest Meteorology* (vol 331), <https://doi.org/10.1016/j.agrformet.2023.109321>
- Caram, N.; P. Soca, L. E. Sollenberger, W.E. Baethgen, M. O. Wallau, M.E. Mailhos 2022. Studying beef production evolution to plan for ecological intensification of grazing ecosystems, *Ag Sys Volume 205*, <https://doi.org/10.1016/j.agsy.2022.103582>
- Downs, S.M.; M.Thomson, R. J. Deckelbaum, W. Wei, W. E. Baethgen. 2022. The role of climate services in transforming nutrition. *UN-Nutrition Journal Volume 1: Transforming Nutrition*. p44-55
<https://www.fao.org/3/cc2805en/cc2805en.pdf>
- Hansen, J., G. List, S. Downs, E. R. Carr, R. Diro, W. Baethgen, A. Kruczkiewicz, M. Braun, J. Furlow, K. Walsh, N. Magima. 2022. Impact pathways from climate services to SDG2 (“zero hunger”): A synthesis of evidence. *Climate Risk Management* (35). <https://doi.org/10.1016/j.crm.2022.100399>
- Baethgen, W. E.; W. J. Parton; V. Rubio; R. H. Kelly; S. Lutz. 2021. Ecosystem dynamics of crop-pasture rotations in a fifty-year field experiment in Southern South America: Century model and field results. *SSSAJ 85(2):423-437*
<https://doi.org/10.1002/saj2.20204>
- Rizzo, G.; S.R.Mazzilli; O. Ernst, W. E. Baethgen; A. G.Berger. 2021. Season-specific management strategies for rainfed soybean in the South American Pampas based on a seasonal precipitation forecast. *Ag. Sys. Vol 196*.
<https://doi.org/10.1016/j.agsy.2021.103331>
- Läderach P, Laganda G, Bucknall-Williams R, Liebig T, Taylor A, Rose A, Barroso M, Alaskary T, Baethgen W, Webster B, Dumas-Johansen M, Ferdinand T. 2021. Climate Action to transform food systems. Linking the UN Food Systems Summit and COP26 through initiatives that support greater resilience to climate change. Rome, Italy: CGIAR. Available at: <https://cgspace.cgiar.org/handle/10568/115035>
- Baethgen, W. E.; W. J. Parton; V. Rubio; R. H. Kelly; S. Lutz. 2021. Ecosystem dynamics of crop-pasture rotations in a fifty-year field experiment in Southern South America: Century model and field results. *SSSAJ 85(2):423-437*
<https://doi.org/10.1002/saj2.20204>
- Mer, F., Baethgen, W., & Vervoort, R.W. 2020. Building trust in SWAT model scenarios through a multi-institutional approach in Uruguay. *SESMO*, vol. 2, 17892, <https://doi.org/10.18174/sesmo.2020a17892>
- Hernandez-Aguilera, J.N.; A. M. Loboguerrero, A. Herrera, W.E. Baethgen. 2020. *CCAFS Agclim Letters*. Aug 5, 2020.
<https://ccafs.cgiar.org/blog/harnessing-digital-tools-climate-and-agriculture#.X0EQ3i05Q5u>
- Anderson, W.; E. Han; W.E. Baethgen; L. Goddard; A.G. Muñoz; A. W. Robertson. 2020. The Madden-Julian Oscillation affects crop yields around the world. *Geophysical Research Letters*. Published Online, 30 Jan 2020
<https://doi.org/10.1002/essoar.10501965.1>
- Goddard, L., C. González Romero, A.G. Muñoz, N.Acharya, S.Ahmed, W.E.Baethgen, (et al.). 2020. Climate Services Ecosystems in times of COVID-19. *WMO Bull.* 69(2):39-46
- Hansen, J., J. Furlow, L. Goddard, H. Nissan, C. Vaughan, A. Rose, F. Fiondella, M. Braun, A. Steynor, C. Jack, P. Chinowsky, M. Thomson, W. E. Baethgen, T. Dinku, A. Yirgu Senato, D. M. Phuong, S. Huq, O. Ndiaye. 2019. Scaling Climate Services to Enable Effective Adaptation Action. Rotterdam and Washington, DC. Available online at www.gca.org
- Tiscornia, G.; W.E. Baethgen, A. Ruggia, M. Do Carmo and P. Ceccato. 2019. Can we Monitor Height of Native Grasslands in Uruguay with Earth Observation? *Remote Sens.* 11(15) 1801; <https://doi.org/10.3390/rs11151801>

- Anderson, W.B.; R. Seager, W. Baethgen, M. Cane and L. You. 2019. Synchronous crop failures and climate-forced production variability. *Science Advances* Vol. 5 (7), DOI: 10.1126/sciadv.aaw1976
- Baethgen, W.E. 2019. Embedding Adaptation to Climate Variability and Change into Actual Decisions, Policies and Development Plans. *Agrociencia* 23(1):1-3 ISSN 2301-1548
- Tiscornia, G.; M. Jaurena; W.E. Baethgen. 2019. Drivers, Process, and Consequences of Native Grassland Degradation: Insights from a Literature Review and a Survey in Río de la Plata Grasslands. *Agronomy* 9(5) 239-260
<https://doi.org/10.3390/agronomy9050239>
- Nissan, H.; L. Goddard; E. Coughlan de Perez; J. Furlow; W.E. Baethgen; M. C. Thomson; S.J. Mason. 2019. On the use and misuse of climate change projections in international development. *WIREs Clim Change*. 2019; e579. DOI: 10.1002/wcc.579
- Terra, R and W. E. Baethgen. 2019. Lessons Learned in 25 Years of Informing Sectoral Decisions with Probabilistic Climate Forecasts (pp 440-453). IN: *Sub-Seasonal to Seasonal Prediction: The Gap Between Weather and Climate Forecasting*. A. W. Robeertson and F. Vitart (Eds.), Elsevier, Amsterdam, Netherlands.
- Thornton, P K; Whitbread, A M; Baedeker, T; and Cairns, J; Claessens, L; Baethgen, W; Bunn, C; Friedmann, M; Giller, K E; Herrero, M; Howden, M; Kilcline, K; Nangia, V; Ramirez-Villegas, J; Kumar, S; West, P C; Keating, B. 2018. A framework for priority-setting in climate smart agriculture research. *Agricultural Systems* (167):161-175.
- Han, E.; W. E. Baethgen, A.V.M. Ines, F. Mer, J. Soler Souza, M. Berterretche, G. Atunéz, C. Barreira. 2018. SIMAGRI: An agro-climate decision support tool. *Comp & Elect. In Agric.* <https://doi.org/10.1016/j.compag.2018.06.034>
- Lovino, M.A., O. V. Müller, G. V. Müller, L. C. Sgroi, and W. E. Baethgen. 2018. Interannual-to-multidecadal hydroclimate variability and its sectoral impacts in northeastern Argentina *Hydrol. Earth Syst. Sci.*, 22, 3155-3174
<https://doi.org/10.5194/hess-22-3155-2018>
- Adler, P.R.; S. Spatari, F. D’Ottone, D. Vazquez, L. Peterson, S. J. Del Grosso, W. E. Baethgen, W. J. Parton. 2018. Legacy effects of individual crops affect N₂O emissions accounting within crop rotations. *Global Change Biology Bioenergy* 10:123–136, doi: 10.1111/gcbb.12462
- G. Cruz, W. E. Baethgen, Bartaburu, M. Bidegain, A. Giménez, M. Methol, Morales, V. Picasso, G. Podestá, R. Taddei, R. Terra, G. Tiscornia, M. Vinocur. 2018. Thirty Years of Multilevel Processes for Adaptation of Livestock Production to Droughts in Uruguay. *Weather, Climate, and Society* 10(1):59-74. doi:10.1175/WCAS-D-16-0133.1
- Gerlak, A.K; Z. Guido, C. Vaughan, V. Rountree, C. Greene, D. Liverman, A. R. Trotman, R. Mahon, S. Cox, S. J. Mason, K. L. Jacobs, J. L. Buizer, C J. Van Meerbeeck, W.E. Baethgen. 2018. Building a Framework for Process-Oriented Evaluation of Regional Climate Outlook Forums. *Weath. Clim. and Soc. (AMS)*, 10(2):225-239. DOI: 10.1175/WCAS-D-17-0029.1
- Vaughan, C., Dessai, S., Hewitt, C., Baethgen, W., Terra, R. and M. Berterreche. 2017. Creating an enabling environment for investment in agricultural climate services: The case of Uruguay’s National Agricultural Information System. *Climate Services*. 8:62-71.
- Cobon, D.H.; W. E. Baethgen, W. Landman, A. Williams, E. Archer van Garderen, P. Johnston, J. Malherbe, P. Maluleke, I. Ben Kgakatsi and P. Davis. 2017. Agroclimatology in Grasslands. In: J. L. Hatfield, M. V.K. Sivakumar, J. H. Prueger, editors, 2017. *Agroclimatology: Linking Agriculture to Climate*. Agron. Monogr. 60. ASA, CSSA, and SSSA, Madison, WI. doi:10.2134/agronmonogr60.2014.0059
- Han, E; A.V.M. Ines; W.E. Baethgen. 2017. Climate-Agriculture-Modeling and Decision Tool (CAMDT): A software framework for climate risk management in agriculture. *J. Env. Mod. Soft.* 95:102–114
- Pérez Bidegain M., Piaggio, J. M., Baethgen, W.E., García Préchac F. 2017. Actualización del factor erosividad de la lluvia en Uruguay. *Agrociencia* 21(2):91-99 ISSN 1510 0839

- Baethgen, W.E.; W.J. Parton; V. Rubio. 2017. Modeling Soil Carbon in Crop-Pasture Rotations of the South American Pampas. *Soil Science Society of America Journal* (in review)
- Giménez, A.; W.E. Baethgen, A. Cal, P. Ceccato, G. Tiscornia, A. Pisón. 2017. Utilización integrada de teledetección y modelación para la identificación de cultivos y estimación del rendimiento. *INIA* (49):45-49
- Loboguerrero, A.M; J. Hansen, W.E. Baethgen and D. Martinez-Baron. 2017. Climate services and insurance: scaling climate-smart agriculture. *Agric. For Dev.* (30):31-34
- Fernandes, K., L. Verchot, W. Baethgen, V. Gutierrez-Velez, M. Pinedo-Vasquez, C. Martius. 2017. Heightened fire probability in Indonesia in non-drought conditions: the effect of increasing temperatures. *Environ. Res. Lett.*, at press: <https://doi.org/10.1088/1748-9326/aa6884>
- Baethgen, W.E.; M. Berterretche, A. Gimenez. 2016. Informing Decisions and Policy: the national agricultural information system of Uruguay. *Agrometeoros* (24): 97-112
- Capa-Morocho, M; A.V.M. Ines; W. E. Baethgen; B. Rodríguez-Fonseca, E. Han; M. Ruiz-Ramos. 2016. Crop yield outlooks in the Iberian Peninsula: connecting seasonal climate forecasts with crop simulation models. *Agric. Systems* (149):75-87
- David R. Kanter, M.H Schwoob, W. E. Baethgen, J.E. Bervejillo, M. Carriquiry, A. Dobermann, B. Ferraro, B. Lanfranco, M. Mondelli, C. Penengo, R. Saldias, M. E. Silva, J.M. Soares de Lima. 2016. Translating the Sustainable Development Goals into action: A participatory backcasting approach for developing national agricultural transformation pathways. *Global Food Security* (10):71-79
- Lizarralde, C.; V. Ciganda; W. E. Baethgen; A. Quincke. 2016. Pérdida de nutrientes en agua de escurrimiento en sistemas de rotaciones contrastantes. *INIA* 46:43-45
- Magrin, G.; U. Confalonieri; O. Canziani; W. Baethgen; M. I. Travasso. 2016. The quest for sustainable agricultural systems. In: L. A. C. Galvão, J. Finkelman and Samuel Henao (Eds.) *Environmental and Social Determinants of Health*. Pp. 477-504. Washington, DC: PAHO, 2016.
- Fernandes, K.; A. Giannini, L. Verchot, W. Baethgen, M. Pinedo-Vasquez. 2015. Decadal co-variability of Atlantic SSTs and western Amazon dry-season hydroclimate in observations and CMIP5 simulations. *Geophysical Research Letters*. Published online: <http://onlinelibrary.wiley.com/doi/10.1002/2015GL063911/full>
- Muñoz, A., L. Goddard, A. W. Robertson, Y. Kushnir, and W. E. Baethgen, 2015: Cross-time scale interactions and rainfall extreme events in southeastern South America for the austral summer. Part I: Potential predictors. *J. Climate*, 28, 7894-7913, doi:10.1175/JCLI-D-14-00693.1
- Lovino, M.; N. O. García; W.E. Baethgen. 2014. Spatiotemporal analysis of extreme precipitation events in the Northeast region of Argentina (NEA) *J. Hydrol: Regional Studies*. 2:140-158
- Robertson, A.W.; W.E. Baethgen, P. Block, U. Lall, A. Sankarasubramanian, de Assis de Souza Filho, K. M. J. Verbist. 2014. Climate risk management for water in semi-arid regions. *Earth Perspectives* 2014, 1:12
- Goddard, L., W. E. Baethgen, H. Bhojwani, A. W. Robertson. 2014. The International Research Institute for Climate & Society: why, what and how. *Earth Perspectives* 2014, 1:10
- Gutierrez-Velez, V., Uriarte, M., DeFries, R., Pinedo-Vasquez, M., Fernandes, K., Ceccato, P., Baethgen, W., Padoch, C. 2014. Land cover changes interact with climate to change fire regimes in Western Amazonia. *Ecological Applications* 24:1323-1340
- Cruz, G., W.E. Baethgen, V. Picasso, R. Terra. 2014. Análisis de la sequía agronómica en dos regiones ganaderas de Uruguay. *Agrociencia*. 18:1 ISSN 2301-1548
- Vancutsem, C., Pekel, J.-F., Kayitakire, F., Duveiller, G., Baethgen, W., Ceccato, P. 2013. Mapping winter and summer crops in Uruguay using MODIS time series. *Agro-Geoinformatics* 6621924, pp 292-295.

- Baethgen, W.E. and L. Goddard. 2013. Latin American Perspectives on Adaptation of Agricultural Systems to Climate Variability and Change. IN: D. Hillel and C. Rosenzweig (Eds.): Handbook of Climate Change and Agroecosystems: Global and Regional Aspects and Implications. pp 57-72. ICP Series on Climate Change Impacts, Adaptation, and Mitigation Vol. 2. Imperial College Press.
- Chen, C; A. Greene; A. Robertson; W.E. Baethgen; D. Eamus. 2013. Scenario Development for Estimating Potential Climate Change Impacts on Crop Production in the North China Plain. *Int. J. Clim.* Volume 33(15):3124–3140
- Valero, S., Ceccato, P., Baethgen, W., Chanussot, J. 2013. Identification of agricultural crops in early stages using hyperspectral remote sensing images. *International Geoscience and Remote Sensing Symposium (IGARSS)*
- Uriarte, M; M. Pinedo-Vasquez, RS DeFries, K Fernandes, V Gutierrez-Velez, WE Baethgen, C. Padoch. 2012. Depopulation of rural landscapes exacerbates fire activity in the western Amazon. *Proceedings of the National Academy of Sciences* 109 (52):21546-21550
- Baethgen, W.E. 2012. Climate Information for Improving Adaptation to Climate Variability and Change. *CLIVAR Exchanges VAMOS No. 58(17):16-20*
- Chen, C.; W. E. Baethgen; A. Robertson. 2012. Contributions of individual variation in temperature, solar radiation and precipitation to crop yield in the North China Plain, 1961–2003. *J. Climatic Change* 116(3-4):767-788
- Del Ponte, E.; A. de Holanda Nunes Maia; T. Veloso Santos; E. J. Martins; W. E. Baethgen. 2011. Early-season warning of soybean rust regional epidemics using El Niño/Southern Oscillation information. *J. Biometeorology.* 55(4):575-583
- Gutiérrez-Vélez, V.; R. DeFries, M. Pinedo-Vásquez, M. Uriarte, C. Padoch, W.E. Baethgen, K. Fernandes, Y. Lim. 2011. High-yield oil palm expansion spares land at the expense of forests in the Peruvian Amazon. *Environ. Res. Lett.* 6(4):1-5
- Fernandes, F.; W. Baethgen, S. Bernardes, R. DeFries, D. G. DeWitt, L. Goddard, W. Lavado, D. Eun Lee, C. Padoch, M. Pinedo-Vasquez, M Uriarte. 2011. North Tropical Atlantic influence on western Amazon fire season variability. *Geoph. Res. Lett.* 38(12):12701
- Chen, C.; W E Baethgen, E. Wang, Q. Yu. 2011. Characterizing spatial and temporal variability of crop yield caused by climate and irrigation in the North China Plain. *Theoretical and applied climatology* 106(3):365-381
- Seager, R., N. Naik, W.E. Baethgen, A. Robertson, Y. Kushnir, J. Nakamura, S. Jurburg, 2010: Tropical Oceanic Causes of Interannual to Multidecadal Precipitation Variability in Southeast South America over the Past Century. *J. Climate*, 23: 5517–5539.
- Aggarwal, P. K., W. E. Baethgen, P. Cooper, R. Gomme, B. Lee, H. Meinke, L. S. Rathore, and M. V. K. Sivakumar, 2010: Managing Climatic Risks to Combat Land Degradation and Enhance Food security: Key Information Needs. *Procedia Environmental Sciences*, 1:305-312, doi: 10.1016/j.proenv.2010.09.01
- Goddard, L., Y. Aitchellouche, W. Baethgen, M. Dettinger, R. Graham, P. Hayman, M. Kadi, R. Martínez, and H. Meinke, 2010: Providing Seasonal-to-Interannual Climate Information for Risk Management and Decision-making. *Procedia Environmental Sciences*, 1:81-101, doi: 10.1016/j.proenv.2010.09.007.
- Baethgen, W.E. 2010. Climate Risk Management for Adaptation to Climate Variability and Change. *Crop Sci.* 50(2):70–76
- Vaughan, C. and W. E. Baethgen. 2010. Researching Adaptation: An Overview of Climate Change Adaptation Research in the Gulf of Mexico and Caribbean Basin. IN: “Fighting for Survival: The Vulnerability of America’s Gulf Coast and the Caribbean Basin”, invited paper, The Earth Institute, New Orleans, August 2010.
- Baethgen, W.E.; M. Carriquiry and C. Ropelewski. 2009. Tilting the odds in maize yields: how climate information can help manage risks. *Bull. Am. Met. Soc.* 90(2):179-183

- Baethgen, W.E.; Giménez, A. 2009. Seasonal climate forecasts and satellite information: improving decisions in the Uruguayan agricultural sector. pp:92-94. In: J.Dodd, R.Lambert, A.Lawrence, S.Townsend (Eds.), Climate Sense. WMO, Geneva.
- Baethgen, W.E. 2009. Challenges for Incorporating Climate Change in Decision-making and Public Policies for the Agricultural Sector. IICA Coyuntura. (In Spanish) http://www.iica.org.uy/online/coyuntura_58_doc.asp
- Giménez, J.P. Castaño; W. Baethgen; B. Lanfranco. 2009. Climate Change in Uruguay: impacts and adaptive measures in the agricultural sector. (In Spanish). INIA Tech Ser 178, Estanzuela, Uruguay
- Del Ponte, E., J. M. C. Fernandes, W. Pavan and W. E. Baethgen . 2009. A Model-based Assessment of the Impacts of Climate Variability on Fusarium Head Blight Seasonal Risk in Southern Brazil. J Phytopathol 157:675–681.
- Alley, M.A., P. Scharf, D.E. Brann, W.E. Baethgen, and J.L. Hammons. 2009. Nitrogen Management for Winter Wheat: Principles and Recommendations. Ext. Pub. 424- 026. VA Coop. Ext., Virginia Tech, Blacksburg. Available at: <http://pubs.ext.vt.edu/424/424-026/424-026.html>
- Baethgen, W.E. 2008. Climate Risk Management and Adaptation to Climate Change. In: “Uruguay, Climate Change Here and Now”. Supplementary document for the UNDP Report on Human Development. UNDP Uruguay, Montevideo
- Verbist, K.; G. Soto; W.E. Baethgen and D. Gabriels. 2008. Drought mitigation through prediction for an arid zone in Chile. pp:16-22. IN: D. Gabriels et al. (Eds.), Combating desertification: assessment, adaptation and mitigation strategies. UNESCO, Ghent University and Belgian Developkemnt Corporation.
- Hansen, J.W., Baethgen, W., Osgood, D., Ceccato, P. Ngugi, R.K. 2007. Innovations in climate risk management: protecting and building rural livelihoods in a variable and changing climate. Journal of Semi-Arid Tropical Agricultural Research 4(1). (Also published online at: <http://www.icrisat.org/Journal/specialproject.htm>)
- Magrin, G., M. Travasso, W. E. Baethgen and R. Boca. 2007. Improving Applications in Agriculture of ENSO-Based Seasonal Rainfall Forecasts Considering Atlantic Ocean Surface Temperatures. pp. 249-257. In: M. Sivakumar and J. Hansen (eds.) Climate Prediction and Agriculture Advances and Challenges. Springer Berlin Heidelberg.
- Roel, A. and W. E. Baethgen. 2007. Towards the Development of a Spatial Decision Support System (SDSS) for the Application of Climate Forecasts in Uruguayan Rice Production Sector. pp 89-97 In: M. Sivakumar and J. Hansen (eds.) Climate Prediction and Agriculture Advances and Challenges. Springer Berlin Heidelberg.
- Stauffer, M., W. Baethgen, R.L. Berbara, E. Caetano, A. Castellanos, B. Goebel, M. McClain, R. Menezes, A. Sánchez-Azofeita. 2007. Steering research towards policy relevance. pp 9-20. In: Tiessen, H., et al. Eds. Communicating Global Change Sciences to Society. Island Press, Washington.
- Barbosa, H.A., A.R. Huete and W.E. Baethgen. 2007. A 20-year study of NDVI variability over the Northeast Region of Brazil. Journal of Arid Environments, 67, 288-307.
- Baethgen, W. E., M. A. Carriquiry, and A Giménez. 2007. Crop yield variability in Uruguay and estimation of funds to compensate for different levels of yield losses. (In spanish) In: W. Baethgen y A. Giménez eds. Information and Monitoring System for Climate Risk Assessment in Agricultural Production of Uruguay and Paraguay. Serie Técnica 162. INIA.
- Baethgen, W. E.. 2007. Climate Changes in the Agricultural Sector of Developing Countries: Mitigation, Adaptation and Decision Making. Multiciencia Journal (8) 122-136. Also: http://www.multiciencia.unicamp.br/art07_8_i.htm
- Giménez, A., and W.E. Baethgen. 2006. SIMERPA: An Information and Monitoring System for Assessing Climate Risks in Agricultural Production of Paraguay and Uruguay. INIA Tech. Bull. No. 162
- Baethgen, W. E., and M. A. Carriquiry. 2006. Characterization of Yield Variability of Five Rainfed Crops in Uruguay. (in Spanish). Coyuntura Agropecuaria. IICA. http://www.iica.org.uy/online/coyuntura_28doc.asp

- N. Leary, W. Baethgen, V. Barros, I. Burton, O. Canziani, T. E. Downing, R.J.T. Klein, D. Malpede, J.A. Marengo, L.O. Mearns, R.D. Lasco, and S.O. Wandiga. 2006. A Plan of Action to Support Climate Change Adaptation through Scientific Capacity, Knowledge and Research. AIACC Working Paper No. 23
- Meinke, H.; R. Nelson, P.Kokic, R.Stone1, R. Selvaraju, W. E. Baethgen. 2006. Actionable climate knowledge: from analysis to synthesis. *Clim Res* 33: 101–110.
- Travasso, M. I., G. O. Magrin, W. E. Baethgen, J. P. Castaño, G. R. Rodriguez, J. L. Pires, A.Gimenez, G.Cunha, and M. Fernandes. 2006. Adaptation Measures for Maize and Soybean in Southeastern South America. AIACC Working Paper No. 28. http://www.aiaccproject.org/working_papers/Working%20Papers/AIACC_WP28_Travasso.pdf
- Maia, A. H. N., H. Meinke and W. E. Baethgen. 2006. Better Statistics to Assess the Quality of Analogue-Based Forecast Systems. Proceedings of 8 ICSHMO, Foz do Iguaçu, Brazil, April 24-28, 2006, INPE, p. 575-582.
- Roel, A.; W.E. Baethgen and F. Lago. 2005. El Niño effects on rice yields and prices in Uruguay. *ACA*:41
- Andregnette, B. and W. Baethgen, 2004. "Estimación del Potencial de Producción de Carne Vacuna del Uruguay". Serie Técnica No. 36, INAC-FUCREA, Montevideo.
- Baethgen, W. E. and D. L. Martino. 2004. Mainstreaming climate change responses in economic development of Uruguay. In: OECD Global Forum on Sustainable Development. Environment Directorate. Environment Policy Committee. ENV/EPOC/GF/SD/RD(2004)2
- Baethgen, W.E.; H. Meinke, A. Gimenez. 2004. Adaptation of agricultural production systems to climate variability and climate change: lessons learned and proposed research approach IN: *Insights and Tools for Adaptation: Learning from Climate Variability*, NOAA-OGP, Washington, D.C.
- Meinke, H., S. M. Howden, W.E. Baethgen, G. L. Hammer, R. Selvaraju and R. C. Stone. 2004. Can climate knowledge lead to better rural policies and risk management practices? IN: *Insights and Tools for Adaptation: Learning from Climate Variability*, NOAA-OGP, Washington, D.C.
- Meinke, H., L. Donald, P. deVoil1, B. Power, W. Baethgen, M. Howden, R. Allan and B. Bates. 2004. How predictable is the climate and how can we use it in managing cropping risks? Invited Symposia Paper, 4th International Crop Science Congress, Brisbane, September 2004.
- Agrawala, S.; A. Moehner, F. Gagnon-Lebrun, W. E. Baethgen, D.L. Martino, E. Lorenzo, M.Hagenstad, J.Smith and Maarten van Aalst. 2004. Development and Climate Change in Uruguay: Focus On Coastal Zones, Agriculture And Forestry. COM/ENV/EPOC/DCD/DAC(2004)2/FINAL. OECD, Paris. <http://www.oecd.org/dataoecd/42/7/32427988.pdf>
- Meinke, H., Y. Abawi1, R. C. Stone, G. L. Hammer, A. B. Potgieter, R. A. Nelson, S. M. Howden, W.E. Baethgen and R. Selvaraju. 2003. Climate Risk Management and Agriculture in Australia and beyond: Linking Research to Practical Outcomes. IN: *Asian International Conference on Total Disaster Risk Management*, ADRC and UNOCHA, Kobe, Japan.
- Holger Meinke, S.M. Howden, W.E. Baethgen, G.L. Hammer, R. Selvaraju, R.C. Stone. 2003. Can Climate Knowledge Lead to Better Rural Policies and Risk Management Practices? NOAA workshop: *Insights and Tools for Adaptation: Learning from Climate Variability*, November 2003
- Rosenzweig, C, W.E. Baethgen; A. Busalacchi; M.A. Cane; D. Rind and C. J. Tucker. 2003. Using Earth Science Tools to Improve Seasonal Climate Prediction for Agriculture. *EOM* 12:32-35.
- Singh, U; P.W. Wilkens; W.E. Baethgen and T.S. Bontkes. 2002. Decision Support Tools for Improved Resource Management and Agricultural Sustainability. pp 92-117. IN: *Agricultural System Models in Field Research and Technology Transfer*. L.R.Ahuja, L. Ma and T.A. Howell eds.) Lewis Publisher, London, UK.
- Rosenzweig, C., Iglesias, A. and Baethgen, W. (2002): Evaluating climate impacts, adaptation, and vulnerability in agriculture; in Proceedings of Climate Change Vulnerability and Adaptation Assessment Methods, Trieste, Italy, June 3-14, 2002.

- Baethgen, W.E. and A. Giménez. 2002. Seasonal Climate Forecasts and the Agricultural Sector of Uruguay. IN: International Research Institute for Climate Prediction. "ENSO Impacts on Society - Examples of ENSO Impacts". <http://iri.columbia.edu/climate/ENSO/societal/resource/example/Baethgen.html>
- Baethgen, W.E. 2001. Global Warming and Agriculture. Fert. Focus 18:42-48.
- Meinke, H.; W.E. Baethgen, P.S. Carberry, M. Donatelli, G.L. Hammer, R. Selvaraju, and C.O. Stockle. 2001. Increasing profits and reducing risks in crop production using participatory systems simulation approaches. Agric. Systems 70:493-513.
- Baethgen, W.E. and A. Giménez. 2001. Applying seasonal climate forecasts and satellite information for improving decisions in the agricultural sector: the 1999-2000 drought in Uruguay. IN: 2001 Open Meeting of the Human Dimensions of Global Environmental Change Research Community <http://sedac.ciesin.org/openmeeting/downloads/>
- Baethgen, W.E.; R. Faría, A. Giménez, P. Wilkens. 2001. Information and Decision Support Systems for the Agricultural Sector. In Proceedings - Third International Symposium on Systems Approaches for Agricultural Development, Lima, Peru, 8-10 November 1999 [CD-ROM computer file]. International Potato Center (CIP), Lima, Peru.
- Schneider, S.; J. Sarukhan; J. Adejuwon; C. Azar; W.E. Baethgen; C. Hope; R. Moss; N. Leary; R. Richels; J.P. van Ypersele. 2001. Overview of Impacts, Adaptation, and Vulnerability to Climate Change pp 75-103. IN: Climate Change 2001: Impacts, Adaptation and Vulnerability, (McCarthy, J. J., Canziani, O., Leary, N. A., Dokken, D. J. and White, K. S. eds.) Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press.
- Heng, L.K.; P. Moutonnet and W.E. Baethgen. 2001. Optimization of fertilizer application for irrigated wheat systems based on an integration of crop simulation models and nuclear techniques. In: International Consortium for Agricultural Systems Applications (www.icasanet.org/applications/fertilizer.html).
- Baethgen, W.E. 2001. The Experience of Southeastern South America (Mercosur Region). IN: Coping with the Climate: A Way Forward. International workshop, October 16 - 20, 2000, Pretoria, South Africa. IRI Publication IRI-CW/01/1. Palisades, NY.
- Baethgen W. E. y G.O. Magrin. 2000. Applications of Climate Forecasts in the Agricultural Sector of South East South America. (pp. 248-266) In: Climate Prediction and Agriculture, Sivakumar, M.V.K. (Ed.), Proceedings of the START/WMO International Workshop, Geneva. Washington, D.C., USA: International START Secretariat.
- Baethgen, W.E. and A. Morón. 2000. Carbon Sequestration in Agricultural Production Systems of Uruguay: Observed Data and CENTURY Model Simulation Runs. Anales de la V Reunión de la Red Latinoamericana de Agricultura Conservacionista, Florianópolis, Brasil, CD Rom.
- Baethgen, W.E. and D.L. Martino. 2000. Greenhouse gas emissions in the agricultural and forestry sectors of Uruguay and opportunities in the Carbon market. Anales de la V Reunión de la Red Latinoamericana de Agricultura Conservacionista, Florianópolis, Brasil. CD Rom.
- Baethgen, W.E. 2000. Optimizing nitrogen fertilizer use: current approaches and simulation models. In: Optimizing nitrogen fertilizer application to irrigated wheat (pp.201-214). IAEA-TECDOC-1164. Vienna, Austria.
- Heng, L.K.; W.E. Baethgen and P. Moutonnet. 2000. The collection of a minimum dataset and the application of DSSAT (Decision Support System for Agrotechnology Transfer) for optimizing wheat yield in irrigated cropping systems. In: Optimizing nitrogen fertilizer application to irrigated wheat (pp.7-18). IAEA-TECDOC-1164. Vienna, Austria.
- Baethgen, W.E. and D.L. Martino. 2000. Greenhouse gas emissions from the agricultural and forestry sectors of Uruguay and opportunities in the carbon market. (In Spanish) In: Proceedings of the Latin American Animal Science Society Congress. Montevideo, Uruguay.

- Baethgen, W. E. y G.O. Magrin. 2000. Applications of Climate Forecasts in the Agricultural Sector of South America. In: Proceedings of the International Forum on Climate Prediction (pp. 38-44), Agriculture and Development, April 2000, International Research Institute for Climate Prediction (IRI), Palisades, New York.
- Baethgen, W.E. 1999. Application of Climate Forecasts in the agricultural sector (In Spanish). FUCREA, 204:22-24.
- Baethgen, W.E. 1999. Applying scientific results in the agricultural sector: information and decision support systems. Inter-American Institute for Global Change Research (IAI) Science Forum: Global Change in the Americas. Arlington, VA.
- Bowen, W. T. and W. E. Baethgen. 1998. Simulation as a tool for improving nitrogen management. In: Understanding Options for Agricultural Production, G. Y. Tsuji, G. Hoogenboom, and P. K. Thornton (eds.). Kluwer Academic Publishers, Dordrecht, Netherlands. pp. 193–208.
- Rosenzweig, C.; A. Iglesias; G. Fischer; Y. Liu; W.E. Baethgen and J.W.Jones. 1999. Wheat yield functions for analysis of land-use change in China. *Environmental Modelling and Assessment*, 4:115-132.
- Baethgen, W.E. 1998. Using crop simulation models for studying yield limitations. (In Spanish) In: M.M.Kohli and D.L. Martino (eds.) Exploring high wheat yields, 127-148. CIMMYT-INIA, La Estanzuela, Uruguay.
- Baethgen, W.E. 1998. El Niño and La Niña Impacts in Southeastern South America. In: Review on the causes and consequences of cold events: A la Niña Summit. Proceedings. M. Glantz (ed.) NCAR, Boulder, CO (<http://www.dir.ucar.edu/esig/lanina/>).
- Morón, A., and W. E. Baethgen. 1998. Micronutrient Status in Dairy Farms of Uruguay. International Soil Science Society Transcripts, Montpellier, France.
- Baethgen, W.E. 1997. Vulnerability of the agricultural sector of Latin America to climate change. *Climate Res.* 9:1-7
- Baethgen, W.E. 1996. Decision Support Systems for Management of Agricultural Production in Uruguay. IFA-PPI Regional Conference for Latin America and the Caribbean. Proceedings. Mexico City, June 1996.
- Baethgen, W.E. Nitrogen Dynamics in Agricultural Systems. 1996. In: Crop and Pasture Fertilization. CPIA Workshop Proceedings (123-144). Buenos Aires, Argentina.
- M. M. Alley, Peter Scharf, D. E. Brann, W. E. Baethgen, and J. L. Hammons, 1996. Nitrogen Management for Winter Wheat: Principles and Recommendations. Virginia Tech Publication Number 424-026.
- Reilly, J., W.E. Baethgen, F.E. Chege, S.C. van de Geijn, Lin Erda, A. Iglesias, G.Kenny, D.Patterson, J. Rogasik, R. Ritter, C. Rosenzweig, W. Sombroek and J. Westbrook. 1996. Agriculture in a changing climate: impacts and adaptation, IN: Changing Climate: Impacts and Response Strategies, Contribution of Working Group II to the Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press.
- Morón, A.; Baethgen W.E. 1996. Soil fertility status in dairy farms of Uruguay. XIII Congresso Latinoamericano de Ciência do Solo. Águas de Lindóia, SP-Brasil. 04-057 CD Rom.
- Christianson, C.B.; G. Carmona and W.E. Baethgen. 1996. Effect of concentration of four triamide urease inhibitors in urea on nitrogen efficiency in wheat. *Soil Biol. Biochem* 28:1121-1125.
- Baethgen, W.E., and C.B. Christianson. 1996. Nitrogen fertilization of malting barley for optimum grain yield and adequate industrial quality. *Fertilizer Issues* 25:314-318
- Baethgen, W.E. and G.O. Magrin. 1995. Assessing the impacts of climate change on winter crop production in Uruguay and Argentina using crop simulation models. IN: C. Rosenzweig et al. (eds.), *Climate Change and Agriculture: Analysis of Potential International Impacts*. American Society of Agronomy Special Publication 59, Madison WI, pp 207-228.
- Baethgen, W.E., C.B. Christianson, and A. García Lamothe. 1995. Nitrogen fertilizer effects on growth, grain yield, and yield components of malting barley. *Field Crops Res.* 43:87-99.

- Morón, A. and W.E. Baethgen. 1995. Decomposition and nutrient release from crop and pasture residues in contrasting agricultural production systems. IN: *Driven by Nature Proceedings*: 82, Wye College, University of London.
- Baethgen, W.E., A. Morón and R.M. Díaz-Rosello. 1994. Modeling long-term soil organic carbon changes in six cropping systems of SW Uruguay. *International Soil Science Society Transcripts*, Vol 9:300-302. Acapulco, Mexico.
- Morón, A. and W.E. Baethgen. 1994. Soil organic matter mineralization in four cropping systems. *International Soil Science Society Transcripts*, Vol 9:298-299. Acapulco, Mexico.
- Baethgen, W.E. 1994. Impacts of climate change on barley in Uruguay: yield changes and analysis of nitrogen management systems. IN: C. Rosenzweig and A. Iglesias (ed.) *Implications of Climate Change for International Agriculture: Crop Modeling Study*. USEPA 230-B-94-003, Washington, D.C.
- Christianson, C.B. and W.E. Baethgen. 1994. A procedure for sampling the soil microenvironment at the site of fertilizer application. *Comm. Soil Sci. and Plant Anal.*, 25:3413-3419.
- Baethgen, W.E. 1993. Applications of simulation models in Soil Management and Soil Fertility studies INIA Tech. Bull 42. La Estanzuela, Uruguay.
- Christianson, C.B., W.E. Baethgen, G. Carmona, and R.G. Howard. 1993. Microsite reactions of urea-nBTPT fertilizer on the soil surface. *Soil Biol. Biochem.* 25(8):1107-1117.
- Baethgen, W.E. 1992. Nitrogen Fertilization of Malting Barley in Western Uruguay. *Tech. Bull.* 24:1-59. INIA, La Estanzuela, Uruguay.
- Baethgen, W.E. 1992. Nitrogen dynamics in crop-pasture rotations. IN: *Sustainability of Crop-Pasture Rotations in South America*, A. Morón and W.E. Baethgen (eds.), p.3-25. INIA, Montevideo, Uruguay.
- Bationo, A.; W.E. Baethgen, C.B. Christianson and A.U. Mokwunye. 1991. Comparison of five soil testing methods to determine phosphorus sufficiency levels in soil fertilized with water-soluble and sparingly soluble-P sources millet production in Niger. *Fertilizer Research* 28:271-279.
- Bationo, A.; C.B. Christianson, and W.E. Baethgen. 1990. Effect of plant density and nitrogen fertilizer rates on pearl millet production in a sandy soil of Niger. *Agron. J.* 82:290-295.
- Baethgen, W.E. and M.M. Alley. 1989. Optimizing Soil and Fertilizer Nitrogen Use for Intensively Managed Winter Wheat I. Crop Nitrogen Uptake. *Agron. J.*, 81:116-120.
- Baethgen, W.E. and M.M. Alley. 1989. Optimizing Soil and Fertilizer Nitrogen Use for Intensively Managed Winter Wheat. II. Critical Levels and Optimum N Fertilizer Rates. *Agron. J.*, 81:120-125.
- Baethgen, W.E.; D. E. Taylor, and M.M. Alley. 1989. Quadratic programming method for determining optimum nitrogen rates for winter wheat during tillering. *Agron. J.* 81:557-559.
- Baethgen, W.E., and M.M. Alley. 1989. A manual colorimetric procedure for measuring ammonium nitrogen in soil and plant Kjeldahl digests. *Comm. Soil Sci. Plant Anal.* 20:961-969.
- Alley, M.M., P. Scharf, D.E. Brann, W.E. Baethgen, and S.J. Donohue. 1989. Efficient N fertilization of winter wheat: principles and recommendations. Virginia Cooperative Extension Publication 424-026.
- Baethgen, W.E. and M.M. Alley. 1987. Nonexchangeable ammonium contribution to plant available N in Virginia Soils. *Soil Sci. Soc. Amer. J.* 51:110-115.
- Martino, D., M. Caldeyro, A. Bozzano, W.E. Baethgen, and R. Diaz. 1986. Nitrogen residuality left by pastures. 1. Effect of botanic composition. 2. Effect of pasture age. (In Spanish) *Inv. Agron.* 7:48-65.

- Alley, M. M., W. E. Baethgen and D. E. Brann. 1986. Nitrogen management for efficient wheat production in Virginia. Proceedings of the Cerone Small Grain Seminar, Nov. 17-19, Toronto, Canada.
- Alley, M. M., W. E. Baethgen and D. E. Brann. 1986. Determining Nitrogen needs for maximum economic wheat yields in humid region. Proc. of the Maximum Wheat Yield Systems Workshop, March 5-7, Denver, Co, Potash and Phosphate Institute, Atlanta, GA.
- Baethgen, W.E. 1982. The research on tillage for wheat in Uruguay: a review. Abstracts of the International Conference on Wheat Production in Southern South America. (In Spanish) La Estanzuela, Uruguay.
- Capurro, E., W.E. Baethgen, A. Trujillo and A. Bozzano. 1982. Yields and NPK response of barley in SW Uruguay. CIAAB Misc. 43: 1-21.
- García, F. and W. E. Baethgen. 1982. Soil and water conservation in Uruguay. Abstracts of the 1982 National Meeting of the Uruguayan Society of Agronomy. (In Spanish) Montevideo. Uruguay.
- Paullier, J; A. Sobredo and W.E. Baethgen. 1982. Nitrogen fertilization of wheat with undersown white clover and tall fescue. (In Spanish) CIAAB Misc. 45:1-11
- Baethgen, W.E. and A. Bozzano. 1981. Effects of P fertilization on alfalfa and white clover production. (In Sp) CIAAB Misc. 37: 18-33.
- Baethgen, W.E. 1981. Residual effect of phosphate fertilizer on a crop-pasture rotation. (In Spanish) CIAAB Misc. 37:1-7.
- Baethgen, W.E., R. Diaz and A. Bozzano. 1980. Yields & economic results of 7 crop-rotation systems. (In Sp.) CIAAB Misc. 24:26-39