

## **Bibliography, Feed the Future Innovation Lab for Collaborative Research on Grain Legumes (Legume Innovation Lab), 2013 to Present**

### **I. Strategic Objective One: Advancing the Productivity Frontier for Grain Legumes**

#### **A. Refereed Journal Articles**

**Agunbiade, T., Steele, L., Coates, B. S., Gassmann, A., Margam, V. M., Ba, M., Dabirí, C., Baoua, I., Bello-Bravo, J., Seufferheld, F., Sun, W., Tamò, M., Pittendrigh, B.R.** IPM-omics: from genomics to extension for integrated pest management of cowpea. In: **Boukar, O., Coulibaly, O., Fatokun, C., Lopez, K., Tamò M.** (eds.). 2013. Enhancing Cowpea Value Chains through Research Advances. Proceedings of the 5th World Cowpea Research Conference, 26 September–1 October 2010 Saly, Senegal, pp. 231–248.

**Agunbiade, T.A., B.S. Coates, B.** Datinon, R. Djouaka, M.-R. Tsai, W. Sun, **M. Tamò, and B. R. Pittendrigh.** 2014. Genetic differentiation among *Maruca vitrata* F. (Lepidoptera: Crambidae) populations on cultivated cowpea and wild host plants: Implications for insect resistance management and biological control strategies. *PLoS ONE* 9(3): e92072.

**Agunbiade, T.A., B.S. Coates, W. Sun, M.-R. Tsai, M.C. Valero, and B.R. Pittendrigh.** Defining the species complex of the legume pod borer, *Maruca vitrata* (Lepidoptera: Crambidae), by comparative mitochondrial phylogenomics. Submitted.

**Agunbiade, T.A., W. Sun, B. S. Coates, R. Djouaka, M. Tamo, M. N. Ba, C. Binso-Dabire, I. Baoua, B. P. Olds, and B.R. Pittendrigh.** 2013. Development of reference transcriptomes for the major insect pests of cowpea: A toolbox for insect pest management approaches in West Africa. *PLoS ONE*, 8(11): e79929.

**Beaver, J.S., E.H. Prophete, J.C. Rosas, G. Godoy Lutz, J.R. Steadman and T.G. Porch.** 2014. Release of "XRAV-40-4" black bean (*Phaseolus vulgaris* L.) cultivar. *J. Agric. of the Univ. of Puerto Rico* 98:83–87.

**Beaver, J.S., E.H. Prophete, J.C. Rosas, G. Godoy Lutz, J.R. Steadman and T.G. Porch.** 2014. Release of 'XRAV-40-4' black bean (*Phaseolus vulgaris* L.) cultivar. *J. Agric. of the Univ. of Puerto Rico* 98:83–87.

**Beaver, J.S., J.C. Rosas, T.G. Porch, M. Pastor-Corrales, G. Godoy-Lutz and E. Prophete.** 2014. Desarrollo de líneas de frijol blanco con resistencia a los virus BGYMV, BCMV, BCMNV y a la roya. Poster presented at the 2014 meeting of the PCCMCA held in Nicaragua from 28 April to 3 May 2014.

**Beaver, J.S., J.C. Rosas, T.G. Porch, M.A. Pastor-Corrales, G. Godoy-Lutz and E.H. Prophete.** 2015. Registration of PR0806-80 and PR0806-81 white bean germplasm with resistance to BGYMV, BCMV, BCMNV and rust. *J. Plant Reg.* 9:208–211.

**Beaver, J.S., Prophete, E., Demóstenes, G. and T.G. Porch.** 2015. Desarrollo de la Línea de Frijol Amarillo PR1146-138. Paper presented at the 2015 meeting of the PCCMCA held in Guatemala City from 4 to 7 May 2015.

Belko, N., **Cisse, N.**, Diop, N.N., Zombre, G., Thiaw, S., Satoru Muranaka, S., Ehlers, J.D. 2014. Selection for postflowering drought resistance in short- and medium- duration cowpeas using stress tolerance indices. *Crop Science* 54:1–9.

**Bello, J.**, Seufferheld, F., **Steele, L. D.**, **Agunbiade, T.**, Guillot, D., Cutz, G., **Pittendrigh, B.R.** Scientific Animations without Borders: an international collaborative approach for building applicable scientific educational materials for use on cell phones, and the Internet in developing nations. 2013. In: **Boukar, O.**, Coulibaly, O., Fatokun, C., Lopez, K., **Tamò, M.** (eds.). Enhancing cowpea value chains through research advances. *Proceedings of the 5th World Cowpea Research Conference*, 26 September–1 October 2010 Saly, Senegal, pp. 369–380.

**Bello, M. H.**, S. M. Moghaddam, M. Massoudi, **P. E. McClean**, P. B. Cregan, and P. N. Miklas. 2014. Application of in silico bulked segregant analysis for rapid development of markers linked to *Bean common mosaic virus* resistance in common bean. *BMC Genomics* 15:903.

**Bello-Bravo, J.** 2015. Scientific Animations Without Borders: LX PCCMCA (*Generación de tecnología para la innovación de la agricultura intensiva sostenible*), Ciudad de Guatemala, Guatemala, May 4–8, 2015.

**Bello Bravo, Julia, and Barry Pittendrigh**, Invited presentation “Scientific Animations Without Borders” an INIA in Las Brujas, Uruguay (trip paid for by INIA). November 2013.

**Bello Bravo, Julia, and Barry Pittendrigh**, Invited presentation “Scientific Animations Without Borders” at the Ministry of Agriculture, Montevideo, Uruguay. November 2013.

**Bello Bravo, Julia, and Barry Pittendrigh**, Invited presentation “Scientific Animations Without Borders” at the Ministry of Education, Montevideo, Uruguay. November 2013.

**Bello Bravo, Julia, and Barry Pittendrigh**, Invited presentation “Scientific Animations Without Borders” at the Dirección de Innovación, Ciencia y Tecnología para el Desarrollo. November 2013.

**Bello-Bravo, J.** and B. Pittendrigh. 2014. Scientific Animations Without Borders: Working with the Crowd for International Development. *Center for Culturally Responsive Evaluation and Assessment Conference*, Chicago, Illinois, September 18, 2014.

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- Bello-Bravo, J., and B.R. Pittendrigh.** 2014. Scientific Animations Without Borders: Entomological origins and cross-discipline impact. *Entomology Society of Canada Bulletin*, 46(1): 31–36.
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- Bello-Bravo, J., T. Agunbiade, E. Dannon, M. Tamo, and B.R. Pittendrigh.** 2013. The prospect of animated videos in agriculture and health: A case study in Benin. *International Journal of Education and Development using ICT*, 9(3): 4–16.
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- Burt, A.J., H. M. William, G. Perry, R. Khanal, K. P. Pauls, **J. D. Kelly**, A. Navabi. 2015. Candidate gene identification with SNP marker-based fine mapping of anthracnose resistance gene *Co-4* in common bean. *PLoS ONE* 10(10): e0139450. doi:10.1371/journal.pone.0139450.
- Buruchara, R., **Estévez de Jensen, C.**, Godoy G., Abawi G., Pasche J., Lobo J. and Mukankusi, C. 2015. A review of the root rot diseases of common bean with emphasis in Latin America and Africa. Presentation at the Common Bean Disease Workshop on Angular Leaf Spot and Root Rot held in Skukuza, South Africa from 20 to 23 July 2015.
- Chilagane, L.A, S.N. Msolla, **T. Porch** & L.M. Serrato-Diaz. 2015. Towards genetic characterization of *Pseudocercospora griseola*, the causative agent of angular leaf spot of common bean in Tanzania. Presentation at the Common Bean Disease Workshop on Angular Leaf Spot and Root Rot held in Skukuza, South Africa from 20 to 23 July 2015.
- Cichy, K.A., A. Fernandez, A. Kilian, J.D. Kelly, C.H. Galeano, S. Shaw, M. Brick, D. Hodkinson, and E. Troxell.** 2014. QTL analysis of canning quality and color retention in black beans (*Phaseolus vulgaris* L.). *Molecular Breeding* 33:139–154. doi: 10.1007/s11032-013-9940-y.
- Cichy, K.A., T.G. Porch, J.S. Beaver, P. Cregan, D. Fourie, R. Glahn, M.A. Grusak, K. Kamfwa, D.N. Katuuramu, P. McClean, E. Mndolwa, S. Nchimbi-Msolla, M.A. Pastor-Corrales and P.N. Miklas.** 2015. A *Phaseolus vulgaris* diversity panel for Andean bean improvement. *Crop Sci.* 55:2149–2160.
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Ferreira, J.J., A. Campa, and **J.D. Kelly**. 2013. Organization of genes conferring resistance to anthracnose in common bean, pp. 151–181. In R. K. Varshney and R. Tuberrosa (eds.) *Translational Genomics for Crop Breeding, Volume I: Biotic Stresses*. John Wiley & Sons, Inc.

González, A. and **J.S. Beaver**. 2014. Desarrollo de líneas de frijol que combinan resistencia a los gorgojos y los virus BGYMV y BCMNV. Presentation made at the 2014 meeting of the PCCMCA held in Nicaragua from 28 April to 3 May 2014.

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**Huynh, B.L., Close, T.J., Roberts, P.A., Cisse, N., Drabo, I., Boukar, O., Lucas, M.R., Wanamaker, S., Pottorff, M., Ehlers, J.D.** 2013. Gene pools and the genetic architecture of domesticated cowpea. *The Plant Genome* 6:1–8.

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**Huynh, B.L., Matthews, W.C., Ehlers, J.D., Lucas, M.R., Santos, J.R.P., Ndeve, A., Close, T.J., Roberts, P.A.** 2015. A major QTL corresponding to the *Rk* locus for resistance to root-knot nematodes in cowpea (*Vigna unguiculata* L. Walp.). *Theoretical and Applied Genetics*.

- Ihm, J., M. Pena-Y-Lillo, K. Cooper, Y. Atouba, M. Shumate, **J. Bello-Bravo, M. Ba, C. Dabire-Binso**, and **B. Pittendrigh**. 2015. The case for a two-step approach to agricultural campaign design. *Journal of Agricultural & Food Information*, 16: 203–220.
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- Isaacs, K.B., S.S. Snapp, L. Butare, and **J.D. Kelly**. 2015. Genotype by cropping system interactions in climbing bean and maize associations in Northern Province, Rwanda. *Euphytica* (submitted).
- Kamfwa, K., K.A. Cichy** and **J.D. Kelly**. 2015. Genome-wide association study of agronomic traits in common bean. *The Plant Genome* 8: doi:10.3835/plantgenome2014.09.0059.
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- Kelly, J.D., G.V. Varner, S. Hooper, K.A. Cichy**, and E.M. Wright. 2015. Registration of ‘Samurai’ otebo bean. *J. Plant Registrations* (in press).
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- Khankhum S., Valverde R., Pastor-Corrales M., **Osorno J.M.**, and Sabanadzovic S. 2014. Two endornaviruses show differential infection patterns between gene pools of *Phaseolus vulgaris*. *Arch. Virol.* 160:1131–1137.
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- Kusolwa, P.M., **M.W. Mwatawala**, S.N. Msolla, G. Kananji, G.M. Tryphone, J.R. Myers & **J.S. Beaver**. 2015. Breeding for bruchid resistance into farmers' preferred common bean (*P. vulgaris*) varieties: Developments and Challenges. Presentation at the Common Bean Disease Workshop on Angular Leaf Spot and Root Rot held in Skukuza, South Africa from 20 to 23 July 2015
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- Lucas, M.R., **Huynh, B.L.**, Vinholes, P., **Cisse, N.**, **Drabo, I.**, Ehlers, J.D., **Roberts, P.A.**, **Close, T.J.** 2013. Association studies and legume synteny reveal haplotypes determining seed size in *Vigna unguiculata*. *Front. Plant Sci.* 4:95. Pages 1–9. doi: 10.3389/fpls.2013.00095.
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- Mendoza, F.A, K. A. Cichy, R. Lu, and **J. D. Kelly**. 2015. Evaluation of canning quality traits in black beans (*Phaseolus vulgaris* L.) by visible/near-infrared spectroscopy. *Food Research International Journal* (in review).
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- Moghaddam, S.M., S. Mamidi, Q. Song, **J.M. Osorno**, R. Lee, P. Cregan, and **P.E. McClean**. 2013. Developing marker-class specific indel markers from next generation sequence data in *Phaseolus vulgaris*. *Frontiers in Plant Genetics and Genomics* 5:185.
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- Mukeshimana, G., A.L. Lasley, W.H. Loescher and J.D. Kelly**. 2014. Identification of shoot traits related to drought tolerance in common bean seedlings. *J. Amer. Soc. Hort. Sci.* 139:299–309.

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- Musoni, A., J. Kayumba, **L. Butare**, F. Mukamuhirwa, E. Murwanashyaka, D. Mukankubana, **J.D. Kelly**, J. Ininda, and D. Gahakwa. 2014. Innovations to overcome staking challenges to growing climbing beans by smallholders in Rwanda. p. 129–136. In: B. Vanlauwe et al. (eds.), *Challenges and Opportunities for Agricultural Intensification of the Humid Highland Systems of Sub-Saharan Africa*. Springer International Publishing Switzerland doi 10.1007/978-3-319-07662-1\_11.
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- Osorno, J.M., and P.E. McClean**. 2014. Common bean genomics and its applications in breeding programs. In S. Gupta, N. Nadarajan, and D.S. Gupta. *Legumes in the Omic Era* (pp. 185–206). Springer, New York, NY.

## B. Other Publications (reports, conference papers, working papers, manuals, etc.)

- Porch, T.G., Beaver, J.S.**, Abawi, G.A., **Estevez de Jensen, C.E.**, Smith, J.R. 2014. Registration of a small red dry bean germplasm, TARS-LFR1, with multiple disease resistance and superior performance in low nitrogen soils. *J. Plant Reg.* 8:177–182.
- Porch, T.**, Hart, J., **Estévez de Jensen, C.** 2015. Response of the Andean Diversity Panel to Root Rot in a Root Rot Nursery. Common Bean Disease Workshop on Angular Leaf Spot and Root Rot. Protea Kruger Gate. Skukuza, South Africa, July 20–23, USDA/ARS, Proceedings, p 58.
- Porch, T.G.**, Hart, J., Vargas, A., Brick, M and **J.S. Beaver**. 2015. Caracterización de un panel de frijol tépari (*Phaseolus acutifolius*) y su aplicación en mejoramiento de este cultivo huérfano. Paper presented at the 2015 meeting of the PCCMCA held in Guatemala City from 4 to 7 May 2015.
- Porch, T.G., Beaver, J.S.**, Abawi, G.A., **Estevez de Jensen, C.E.**, Smith, J.R. 2014. Registration of a small-red dry bean germplasm, TARS-LFR1, with multiple disease resistance and superior performance in low nitrogen soils. *J. Plant Reg.* 8:177–182.
- Porch, T.G., J.S. Beaver**, S. Colom, A. Vargas, Y. Trukhina, and **C. Estevez de Jensen**. 2014. Development of tools for *Macrophomina phaseolina* evaluation and for genetic improvement of common bean. *Ann. Rep. Bean Improv. Coop.* 57:189–190.
- Porch, T.G., K. Cichy**, M. Alameda and **J.S. Beaver**. 2014. Association mapping analysis of the response to *Macrophomina phaseolina* in the Andean Diversity Panel. Poster presented at the 2014 joint conference of the 6th International Food Legumes Research Conference (IFLRC VI) and 7th

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**Prophete, E., G. Demosthenes, G. Godoy-Lutz, T.G. Porch, and J.S. Beaver.** 2014. Registration of PR0633-10 and PR0737-1 red mottled dry bean germplasm lines with resistance to BGYMV, BCMV, BCMNV, and common bacterial blight. *J. Plant Reg.* 8:49–52.

**Prophete, E., G. Demosthenes, G. Godoy-Lutz, T.G. Porch, and J.S. Beaver.** 2014. Registration of PR0633-10 and PR0737-1 red mottled dry bean germplasm lines with resistance to BGYMV, BCMV, BCMNV, and common bacterial blight. *J. Plant Reg.* 8:49–52.

Racancoj, A.J., A.G. Vargas, **J.C. Rosas, C. Estevez de Jensen, J.S. Beaver and T.G. Porch.** 2014. Response of Andean and Mesoamerican common bean genotypes to inoculation with Rhizobium strains. *Ann. Rep. Bean Improv. Coop.* 57: 245–246.

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Rodriguez, **J.C. Rosas, J.S. Beaver, T. Porch**, S. Beebe and J.P. Lynch. 2015. Evaluación de germoplasma de frijol común para la tolerancia a las altas temperaturas. Paper presented at the 2015 meeting of the PCCMCA held in Guatemala City from 4 to 7 May 2015.

**Rosas, J.C., I. Rodriguez, A. Llano, A. Clará, J.C. Hernandez and S. Beebe.** 2015. Resultados del SISTEVER de frijol de grano negro. Paper presented at the 2015 meeting of the PCCMCA held in Guatemala City from 4 to 7 May 2015.

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**Rosas, J.C., I. Rodriguez, and J. S. Beaver.** 2014. Progress on genetic improvement of the resistance to angular leaf spot in common beans. Presentation made at the 2014 meeting of the PCCMCA held in Nicaragua from 28 April to 3 May 2014.

**Rosas, J.C.**, I. Rodriguez, C. Esteves de Jensen and **J. S. Beaver**. 2014. Progress on the genetic improvement of nodulation in common beans. Presentation made at the 2014 meeting of the PCCMCA held in Nicaragua from 28 April to 3 May 2014.

**Rosas, J.C., J. S. Beaver**, S. Beebe, A. Llano, A. Clará y J. C. Hernández. 2014. Results from the SISTEVER small red bean Trials of 2013. Presentation made at the 2014 meeting of the PCCMCA held in Nicaragua from 28 April to 3 May 2014.

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Sousa, L.L., A. O. Gonçalves, M. C. Gonçalves-Vidigal, G. F. Lacanollo, A. C. Fernandez, H. Awale and **J. D. Kelly**. 2015. Genetic characterization and mapping of anthracnose resistance of Corinthiano common bean landrace cultivar. *Crop Sci.* 55:1900–1910. doi:10.2135/cropsci2014.09.0604.

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**Tamò, M.** 2015. Biological control, a pillar of sustainable agriculture in Africa. International workshop “Visions for a Sustainable Agriculture” May 4–7, 2015 Neuchatel, Switzerland.

**Tamò, M.** 2015. Climate change challenges for insect science in Africa. Plenary inaugural keynote presentation. 21th conference of the African Association of Insect Scientists Oct 19–23, 2015 Cotonou, Benin.

**Tamò, M.**, Datinon B., Dannon E., Srinivasan R., **Pittendrigh B.**, **Dabire C.**, **Baoua, I.**, Braimah H. and Asante S. 2015. Challenges and opportunities for biological control of cowpea pests in Africa. XVIII International Plant Protection Congress, Oct 24–27, Berlin, Germany.

**Tamò, M.**, Onstad D., **Pittendrigh B.** and **Agunbiade T.** 2015. Resistance management prospects for the control of legume pod borer. Cowpea Project Annual Review and Planning Meeting. Jan 29 – Feb 4, 2015, Kampala, Uganda.

**Tobar-Piñon M.G.**, Illescas O.V., and **Villatoro J.C.** 2015 Evaluación sensorial y de aceptación de productos alimenticios a partir de variedades de frijol (*Phaseolus vulgaris*) biofortificado. Annual Meetings PCCMCA. Guatemala City, Guatemala. May 1–5. Oral presentation.

Toffa Mehinto, J., Atachi, P. , Douro, K., Dannon, E., **Tamò, M.** 2014 Mortality of *Maruca vitrata* (Lepidoptera: Crambidae) larval stages induced by different doses of the entomopathogenic fungi *Metarhizium anisopliae* and *Beauveria bassiana*. *International Journal of Advanced Research*, 2: 273–285.

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**Traub J.** , Naeem M, Austic G, **Kelly, J.**, **Kramer, D.**, **Loescher L.** Assessing and comparing relationships between heat and drought tolerance: analytical approaches. Poster presentation at American Society for Horticultural Science Conference 2015, August 4–7. New Orleans, LA.

**Traub J.** , Naeem M, **Kelly, J.**, Austic G, **Kramer, D.**, **Loescher W.** Phenotyping (screening) for heat (and drought) tolerance in bean (*Phaseolus* spp.) using new and conventional fluorescence and gas exchange parameters. Poster presentation at American Society of Plant Biologists Conference 2015, July 26–30. Minneapolis, MN.

**Traub, J., Kelly, J., Loescher W.** 2013. Varietal differences in physiology of drought stressed Phaseolus. Poster session presented at the American Society for Horticultural Science Annual Conference; July 22–25; Palm Desert, California.

**Traub, J., Kelly, J., Loescher W.** 2014. Enhancing drought tolerance in common bean, the most widely consumed legume: shoot and root components of Tolerance. Poster presented at American Society for Horticultural Science Conference, July 28–August 1, 2014 in Orlando, Florida.

van Etten J., **J. C. Rosas** and I. Rodriguez. 2014 First experiences with participatory massive evaluation of common beans in Honduras. Presentation made at the 2014 meeting of the PCCMCA held in Nicaragua from 28 April to 3 May 2014.

Vandemark, G.J., M.A. Brick, **J.M. Osorno, J.D. Kelly**, and **C.A. Urrea**. 2014. Yield gains in edible grain legumes. In J. Specht, B. Diers, B. Carver, and S. Smith (eds.) *Genetic Gains of Major U.S. Field Crops*. CSSA Press, Madison, WI.

Vandemark, G.J., M.A. Brick, **J.M. Osorno, J.D. Kelly**, and **C.A. Urrea**. 2014. Edible Grain Legumes. p. 87–123. In: S. Smith, B. Diers, J. Specht, & B. Carver (eds.). *Yield Gains in Major U.S. Field crops*. CSSA Special Pub. 33, Madison, WI.

Vargas, A., **T.G. Porch** and **J.S. Beaver**. 2014. Evaluation of the tepary bean (*Phaseolus acutifolius*) CIAT germplasm collection for response to common bacterial blight and bean common mosaic necrosis virus. *Ann. Rep. Bean Improv. Coop.* 57:181–182.

**Vásquez J., Estévez de Jensen C.**, Ghising, K., VanderWal, M., Kloberdanz M. and **Osorno J.M.**, 2015. Screening field resistance to the root rot complex within the Andean Diversity Panel (ADP). Presentation at the Common Bean Disease Workshop on Angular Leaf Spot and Root Rot held in Skukuza, South Africa from 20 to 23 July 2015.

Viteri, D. M., H. Terán, M. C. Asensio-S.-Manzanera, C. Asensio, **T. G. Porch, P. N. Miklas**, and S. P. Singh. 2014. Progress in breeding Andean common bean for resistance to common bacterial blight. *Crop Sci.* 54: 2084–2092.

Wetro, E., A. K. Tounou, C. Agboton, B. Datinon, R. Srinivasan, **B.R. Pittendrigh** and **M. Tamo**. 2014. Bionomics of the parasitoid *Apanteles taragamae* as influenced by different diets fed to its host, *Maruca vitrata*. *BioControl*, 59: 55–65.

### **C. Other Types of Output (presentations, webpages, videos, equipment designs, etc.)**

**Bello-Bravo, J.** 2014. Scientific Animations Without Borders. *Expert Consultation on Facilitating the Convergence of ICT*, Rhenen, The Netherlands, October 29–31, 2014.

**Maredia, M., B. Reyes**, M. Niango, B. Pittendrigh, and J. Bello-Bravo. 2014. Can Animated Educational Materials Induce Learning and Adoption Among Low-Literate Farmers? A Field Experiment on the Dissemination of Cowpea Grain Storage Technologies in Burkina Faso. Sokoine University of Agriculture, Tanzania, June 25, 2014.

**Tamò, M.** 2015. Free-air CO<sub>2</sub> enrichment (FACE) for research on sustainable pest management in Africa. RIPE/FACE workshop, July 10–13, 2015, Urbana–Champaign, USA.

#### D. Dissertations and Theses

**Agli, C. A. & AGO. D,** 2014. *Effectiveness of parasitism of Apanteles taragamae and Therophilus javanus on Maruca vitrata pest of cowpea*, BSc thesis, Polytechnic School of Abomey-Calavi/ University of Abomey–Calavi, EPAC/UAC, Cotonou, Benin.

**Agunbiade, T.** 2014. *A Genomic Analysis of the Insect Pest Populations of Cowpea in West Africa*. PhD Thesis, University of Illinois at Urbana–Champaign.

**Agunbiade, T.** 2014. *A Genomic Analysis of the Insect Pest Populations of Cowpea in West Africa*. PhD Thesis, University of Illinois at Urbana–Champaign.

**Akogninou, L.,** 2014. *Behavior of Therophilus javanus Bhat & Gupta on larvae from eggs of Maruca vitrata (Fabricius) parasited by Phanerotoma syleptae Zettel*, BSc thesis, Agronomy Faculty/ University of Parakou, FA/UPA, Parakou, Benin.

**Akpoffo, M. A.,** 2014. *Evaluation de quelques paramètres biologiques et de l'efficacité de Therophilus javanus Bhat et Gupta (Hymenoptera: Braconidae), parasitoïde larvaire de Maruca vitrata Fabricius (Lepidoptera: Crambidae), foreuse des fleurs et des goussets du niébé (Vigna unguiculata (L.) Walp)*. MSc thesis, Université Africaine de technologie et de management UATM/GASA, Cotonou, Benin.

**Boni fofana, R. & Ahouantchede, H. S.,** 2014: *Effectiveness of Apanteles taragamae and Therophilus javanus to control Maruca vitrata pest of cowpea*, BSc thesis, Polytechnic School of Abomey–Calavi/ University of Abomey–Calavi, EPAC/UAC, Cotonou, Benin.

**Dandjinou, G. V.,** 2014. *Testing biopesticides: Neem oil dosage and combinations of MaviMNPV: 1st planting season 2014*, BSc thesis, Agronomy Faculty/ University of Parakou, FA/UPA, Parakou, Benin.

**Fuseini Abdulai,** 2015. *Field evaluation of neem seed extracts from different ecological zones of Ghana in the control of cowpea pests*. BSc Thesis, University for Development Studies, Tamale, Ghana.

**Hounsa, P. M. G.,** 2014. *Etude des interactions entre Trichogrammatoides eldanae Viggiani (Hymenoptera: Trichogrammatidae), et Phanerotoma syleptae Zettel (Hymenoptera: Braconidae); deux parasitoïdes de Maruca vitrata Fabricius (Lépidoptera: Crambidae), ravageur du niébé (Vigna unguiculata (L.) Walp)*. MSc thesis, Université Africaine de technologie et de management UATM/GASA, Cotonou, Benin.

**Laleye, F.,** 2014. *Determining the host range for the exotic parasitoids Therophilus javanus (Hymenoptera: Braconidae)*, BSc thesis, Agronomy Faculty/ University of Parakou, FA/UPA, Parakou, Benin.

**Menhinto Toffa, J.,** 2015. *Contribution to sustainable management strategies of Maruca vitrata Fabricius (Lepidoptera: Crambidae) of Vigna unguiculata L. Walp by using entomopathogenic*

*products in Benin*, PhD Thesis, Faculty of Letters, Arts and Humanities Sciences /University of Abomey–Calavi, FLASH/UAC, Cotonou, Benin.

**Mukeshimana, G.** 2013. *Dissecting the genetic complexity of drought tolerance mechanisms in common bean (*Phaseolus vulgaris L.*)*. Doctoral Dissertation, Michigan State University, East Lansing MI. 210pp.

**Sagbo, R.,** 2015. *Evaluation of continuous multiplication of its host Trichogrammatoidea eldanae substitution of Corcyra Cephalonica in a release device*, MSc thesis, Faculty of Agronomic Sciences / University of Abomey–Calavi, EPAC/UAC, Cotonou, Benin.

**Zanzana, K.,** 2015. *Evaluation of the colonization of the various organs of the cowpea by endophytic B. bassiana (Ascomycota: Hypocreales)*, MSc thesis, Faculty of Technic Sciences/University of Abomey–Calavi, FAST/UAC, Cotonou, Benin.

## **E. Scholarly Activities and Accomplishments**

**Cisse, N.** et al. 2015. Formal release of five new cowpea varieties in Senegal with large white seed-type and disease resistance. Variety name registrations Lisard, Thieye, Leona, Kelle and Sam.

## **F. Professional Recognition, Awards, and Accomplishments**

**Estevez de Jensen, Consuelo** received an USDA/ARS Certificate of Appreciation for outstanding efforts to characterization of bean germplasm for enhanced BNF and root rot response for Feed the Future countries in support of the Feed the Future Grain Legumes Project, South Africa, July 1 2015.

**Estévez de Jensen, Consuelo.** The College of Agriculture of the University of Puerto Rico– Mayaguez presented a **Certificate of Recognition for Excellence in Research, Creativity and therefore, enrichment of the campus research**. Presented on the 9<sup>th</sup> day of May of 2014 in Mayaguez, Puerto Rico.

**Estévez de Jensen, Consuelo.** The Puerto Rican Scientific Society Annual Meeting (SOPCA) awarded the 1<sup>st</sup> Place **Professional Oral Presentation Award Winner**. Presented at the 38<sup>th</sup> Annual Meeting SOPCA on the 2<sup>nd</sup> day of November of 2013. Guayanilla, Puerto Rico. Title of the Presentation “Inoculant Production in Haiti.”

**Kelly, J.D.,** received Meritorious Achievement Award from the Legume Innovation Lab, Michigan State University, 2014, and the Ralph H. Smuckler Award for Advancing International Studies and Programs,Michigan State University, 2014.

**Rosas, Juan Carlos** received the 2014 Gamma Sigma Delta Distinguished Achievement in Agriculture Award.

**Rosas, Juan Carlos** received the 2015 AGEAP (Zamorano Alumni Association) recognition for his contributions to Pan-American agriculture and Zamorano University.

The University of Puerto Rico Bean Research Team (**Consuelo Estevez, Mildred Zapata, and James Beaver**) received a recognition for “Outstanding Dedication and Contribution to Research and Innovation Endeavors during 2014–2015” at the Research and Innovation as Accelerators of New Opportunities in Puerto Rico symposium held in Mayaguez Puerto Rico Campus on 15 May 2015.

## **II. Strategic Objective Two: Transforming Legume Systems and Value Chains**

### **A. Refereed Journal Articles**

**Mfikwa, A.** In press. Bean Production and Marketing in Tanzania. *Tanzania Journal of Agricultural Science*.

### **B. Other Publications (reports, conference papers, working papers, manuals, etc.)**

**Mazur, R.**, N.Bwambale & V. Salegua. 2015. Land Rights and Integrated Soil Fertility Management in Uganda & Mozambique. Paper presented at LANDac Conference 2015—Land Governance for Equitable and Sustainable Development. Utrecht, Netherlands.

**Ross, K.L., V. Amanor-Boadu**, and L. Mapemba. *Understanding Consumer Choice for Grain Legumes: Recent Evidence from Malawi*. Paper prepared for presentation at the 90th Annual Conference, Western Economics Association International, June 28–July 2, 2015, Honolulu, Hawaii.

Chishimba, E., **G. Tembo, V. Amanor-Boadu** and M. Mwiinga. Factors Affecting Bean Profitability among Bean Traders in Zambia. Department of Agricultural Economics and Extension Education, the University of Zambia, Lusaka, Zambia. 2014.

**Ross, K.L.**, A. Shanoyan, **V. Amanor-Boadu**, Y. A. Zereyesus, and **G. Tembo**. From Subsistence to Commercial Production: Factors Affecting Smallholder Bean and Cowpea Producers Market Participation in Zambia. Selected paper prepared for presentation at the Annual World Symposium of the International Food and Agribusiness Association, Cape Town, South Africa, June 16–17, 2014.

### **C. Other Types of Output (presentations, webpages, videos, equipment designs, etc.)**

**Mazur, R.**, et. al. (**Farmer Decision Making Project Team**). 2014. *Farmer Focus Group Discussions—Masaka and Rakai Districts, Uganda*. January (unpublished report).

**Mazur, R.**, et. al. (**Farmer Decision Making Project Team**). 2014. *Farmer Focus Group Discussions — Gurué District, Mozambique*. June (Unpublished report).

**Mazur, R.**, et. al. (**Farmer Decision Making Project Team**). 2014. *Farmer Interviews — Gurué District, Mozambique*. June (Unpublished report).

**Mazur, R., et. al. (Farmer Decision Making Project Team).** 2014. *Farmer Interviews — Masaka and Rakai Districts, Uganda*. January (Unpublished report).

#### **D. Dissertations and Theses**

Bwambale, N. 2015. Farmers' Knowledge, Perceptions, and Socioeconomic Factors Influencing Decision Making for Integrated Soil Fertility Management Practices in Uganda. (M.S. thesis).

Five M.S. student research proposals at Makerere University and Iowa State University.

Pele, W. K. 2015. Consumption Patterns of Beans in Zambia. Masters of Agribusiness Thesis.

#### **E. Scholarly Activities and Accomplishments**

**Goettsch, L. & A. Lenssen.** 2014. U.S. Borlaug Fellows in Global Food Security graduate research grant. "Practical methods to alleviate constraints to common bean (*Phaseolus vulgaris* L.) production in Masaka, Uganda." Funded \$14,996. Professional Recognition, Awards, and Accomplishments.

**Goettsch, L. & A. Lenssen.** 2014–2015. U.S. Borlaug Fellows in Global Food Security graduate research grant. Practical methods to alleviate constraints to common bean (*Phaseolus vulgaris* L.) production in Masaka, Uganda.

**Goettsch, L.** 2013–2015. Louis Thompson Endowment Graduate Fellowship. Agronomy Department (its premier fellowship). Iowa State University.

**Goettsch, L.** 2013–2016. Louis Thompson Endowment Graduate Fellowship. Agronomy Department (its premium assistantship). Iowa State University.

**Goettsch, L.** 2014. Global Programs Travel Grant. Iowa State University. \$2,000 support for travel to Uganda for M.S. research.

#### **F. Professional Recognition, Awards, and Accomplishments**

### **III. Strategic Objective Three: Enhancing Nutrition**

#### **A. Refereed Journal Articles**

The first manuscript from this project, entitled "Legumes as Complementary Foods to Reduce Environmental Enteric Dysfunction and Stunting in Malawian Children: Study Protocol for Two Randomized Controlled Trials" has been submitted for publication and is currently undergoing peer review.

#### **B. Other Publications (reports, conference papers, working papers, manuals, etc.)**

**C. Other Types of Output (presentations, webpages, videos, equipment designs, etc.)**

**D. Dissertations and Theses**

Chrissie Thakwalakwa, Malawi College of Medicine, completed her thesis and received her PhD.

**E. Scholarly Activities and Accomplishments**

**IV. Strategic Objective Four: Improving Outcomes of Research and Capacity Building**

**A. Refereed Journal Articles**

**Maredia, Mywish, Shankar, Bhavani, Kelley, Timothy, Stevenson, James.** 2014. Impact Assessment of Agricultural Research, Institutional Innovation, and Technology Adoption: Introduction to the Special Section. *Food Policy* 44 214–217.

**Maredia, M. K., Reyes, B. A., Ba, M., C. Dabire, Pittendrigh, B., & Bello-Bravo, J.** Effectiveness of animation videos in inducing technology adoption: A field experiment in Burkina Faso. (Revise and resubmit to *Journal of Agricultural Economics*).

**Reyes, Byron A., Maredia, Mywish, Bernsten, Richard H., Rosas, Juan Carlos.** 2014. Have investments in bean breeding research generated economic benefits to farmers? The case of five Latin American countries. *Agricultural Economics* (Submitted).

**B. Impact Briefs**

**Magen, Benjamin, Crawford, Eric W., Maredia, Mywish.** 2013. "Impact Economique des investissements du CRSP sur le développement et la diffusion des variétés améliorées de niébé: Nouvelle évidence du Sénégal" *Impact Assessment Research Brief 4*. Michigan State University: Dry Grain Pulses CRSP (French translation).

**C. Other Publications (reports, conference papers, working papers, manuals, etc.)**

**Magen, Benjamin, Crawford, Eric W., Maredia, Mywish.** 2013. Economic Impact of Research Investment in the Development and Dissemination of Improved Cowpea Varietal Technology. Poster paper presented at the Agricultural and Applied Economics Association Annual Meeting, Washington, D.C., August.

**Maredia, M. and Donovan, C.** 2014. Scaling Up in Agriculture and Nutrition: Concepts and Models. Legume Innovation Lab Global Meeting, Athens, Greece, May 16.

**Reyes, B. A. and Maredia, M.** 2014. Characteristics of a sustainable seed system: Application of the principles of sustainability to two models used in Central America. Innovations in Sustainable Seed Systems for Grain Legumes, May 14.

#### D. Other Types of Output (presentations, webpages, videos, equipment designs, etc.)

**Maredia, M.**, Bernsten, R. H. 2014. Monitoring, Evaluation and Impact Assessment of Agricultural Research for Development: Overview, Challenges and Best Practices. Presentation to the Research Management Team of the Indonesian Agency for Agricultural Research and Development (AARD), MSU, East Lansing, MI, August 18.

**Maredia, M., Reyes, B. A., Ba, M., Dabire, C., Pittendrigh, B., Bello-Bravo, J.** 2014. Are Animation Videos Effective in Inducing Technology Adoption? A Field Experiment in Burkina Faso. presented at Department of Economics Research Seminar, Western Michigan University, Kalamazoo, Michigan (November).

**Maredia, M., Reyes, B. A., Ba, M., Pittendrigh, B., Bello-Bravo, J.** 2014. Can Animated Educational Materials Induce Learning And Adoption Among Low-Literate Farmers? A Field Experiment on the Dissemination of Cowpea Grain Storage Technologies in Burkina Faso. Seminar Presentation Given to the Faculty and Students at Sokoine University of Agriculture, Tanzania, June 25.

**Maredia, M., Reyes, B. A., D. DeYoung.** 2014. Farmer perspective on the use of and demand for seeds of improved bean varieties: Results of beneficiary surveys in Guatemala, Honduras and Nicaragua. Staff Paper 2014-04. Department of Agricultural, Food and Resource Economics, Michigan State University, East Lansing.

[http://ageconsearch.umn.edu/bitstream/196540/2/MSU%20AFRE%20Staff%20Paper%202014-04%20BTD%20Report%20Beneficiary%20Survey\\_final.pdf](http://ageconsearch.umn.edu/bitstream/196540/2/MSU%20AFRE%20Staff%20Paper%202014-04%20BTD%20Report%20Beneficiary%20Survey_final.pdf)

**Maredia, M., Reyes, B. A., DeYoung, D.** 2014. "An assessment of the Bean Seed Distribution Models Implemented under the Bean Technology Dissemination Project: Results of key informant interviews and surveys conducted in Guatemala, Honduras and Nicaragua." Final Regional Project Workshop of the BTD Project, Guatemala City, March 20.

**Reyes, B. A., D. DeYoung and M. Maredia.** 2014. Effectiveness of the bean seed dissemination models implemented under the Bean Technology Dissemination (BTD) Project: Results of key informant interviews in Guatemala, Honduras and Nicaragua. Staff Paper 2014-03. Department of Agricultural, Food and Resource Economics, Michigan State University, East Lansing.

[http://ageconsearch.umn.edu/bitstream/196539/2/MSU%20AFRE%20Staff%20Paper%202014-03%20BTD%20Report%20KII\\_final.pdf](http://ageconsearch.umn.edu/bitstream/196539/2/MSU%20AFRE%20Staff%20Paper%202014-03%20BTD%20Report%20KII_final.pdf)

**Reyes, Byron A., Maredia, Mywish, Ba, Malick, Clementine, Dabire, Pittendrigh, Barry.** 2013. Economic Impacts of Biocontrol Research to Manage Field Insect Pests of Cowpea in Burkina Faso: Baseline Survey Report. Department of Agricultural, Food and Resource Economics Staff Paper 13-04. East Lansing, Michigan: December.

#### **E. Dissertations and Theses**

**DeYoung, David. 2015.** Determinants of sustainability of community seed banks in Nicaragua: A duration analysis approach. Thesis for partial fulfillment of MS degree in Agricultural, Food and Resource Economics, Michigan State University.

#### **F. Scholarly Activities and Accomplishments**

#### **G. Professional Recognition, Awards, and Accomplishments**