

# Curriculum Vitae

## Carlos A. Campabadal, Ph.D.

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Web: <http://www.grains.ksu.edu/IGP>

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### Education

- **Ph.D., Agricultural and Biological Engineering** 12/2013  
Purdue University, West Lafayette, IN  
*Dissertation:* Ozonation Systems as Non-Chemical Alternative for Pest Control in Grain Storage;  
GPA 3.32/4.00
- **MSc. Agricultural Engineering** 05/2005  
University of Illinois, Urbana-Champaign, IL  
*Dissertation:* Recovery of Water-Soluble Proteins from Dry Milled Corn Germ; GPA 3.8/4.0
- **B.S. Mechanical Engineer** 05/2000  
Universidad de Costa Rica, San José, Costa Rica; GPA 2.8/4.0

### Professional Experience

- **Grain, Feed and Food Technical Solutions LLC and Campabadal and Associates Consulting (Private owned consulting companies)**  
Manhattan, Kansas 8/2003 – Present
- **Technical Consultant and Project Management in Feed Manufacturing and Grain Storage:**
  1. Technical consultant and presenter for the U.S. Soybean Export Council, U.S. Wheat Associates, World Initiative in Soy for Human Health, and U.S. Grains Council in more than 87 short courses, trainings, and technical visits in Spanish and English languages to feed mills, flour mills, and grain storage facilities in more than 24 different countries in Latin America, Southeast Asia and North Africa.
  2. Technical consultant and project management in feed manufacturing and commodity storage for major integrated Latin America poultry and swine companies, ingredient suppliers (Cargill, DSM, Novus, etc) and other organizations (Desarrolladora La Ceiba, Decision Innovation Solutions and Stragos Dominican Republic).
  3. Technical translator for English to Spanish languages in agricultural related topics (mainly in grain processing and storage topics).
- **Campabadal y Asociados S.A. (Family own agricultural production company)**  
San José, Costa Rica 05/1995 – Present
- **Board Member:**
  1. Technical and management support for feed manufacturing, swine, dairy, and beef cattle operations.
  2. Provide technical expertise in agricultural engineering and maintenance.

- **International Grains Program Institute & Department of Grain Science and Industry – Kansas State University (Industry training institution)**  
 Manhattan, KS 02/2010 - Present  
**Appointment: Official:** 95% outreach & 5% service. **Actual:** 60% outreach, 35% applied research (including international development) & 5% service
- **Outreach Specialist in Grain Storage and Feed Manufacturing at the International Grains Program Institute (IGP Institute):**
  1. Coordination, development, implementation and facilitation of educational programs (short courses, workshops, trade teams' visits, and distance education courses) to enhance the market promotion, consumption and utilization of U.S. cereal grains, oilseeds and their value-added products for the global grain and feed industry both in international and domestic locations.
  2. Provide continuing education programming and technical assistance to IGP Institute's stakeholders in the areas of feed manufacturing, animal nutrition, grain and ingredient quality, grain-based food and feed safety, and grain handling.
  3. Development and management of the Spanish-speaking outreach program of IGP Institute for all curricula areas.
  4. Serve as a liaison with the strategic partners such as the Kansas Soybean Commission, U.S. Grains Council, U.S. Soybean Export Council, American Feed Industry Association, Kansas Grain & Feed Association, and Grain and Elevator Processing Society including attending national and international conferences and stakeholder meetings.
- **Extension Leader in Grain Quality Management and Feed Manufacturing for the Department of Grain Science and Industry (GSI):**
  1. Responsibilities in extension/outreach assistance and collaboration in research for stored product protection, grain quality management and feed manufacturing for the Department of Grain Science and Industry.
  2. Liaison between GSI faculty and Kansas State Research and Extension (KSRE) staff and faculty.
- **Faculty and Instructor of Feed Technology and Grain Storage and Quality Management Research Group at the Department of Grain Science and Industry:**
  1. Leader of the Grain Storage and Quality Management Research Group with research activities related to postharvest storage and quality management of grain and oilseeds.
  2. Member of the Feed Technology group with undergraduate teaching as needed.
  3. Support when needed related programmatic efforts such as student recruitment, curriculum development, and service on GSI departmental committees.
- **Faculty member of the USAID Reduction of Postharvest Loss Innovation Lab (PHLI Lab):**
  1. Serve as a team member of the Drying & Storage Team for all the countries involved in the USAID PHLI Lab projects with the duties to perform research work on the choosing, optimization and building of crop dryers.
  2. Serve as an active member for the improvement of the self-sustainability of USAID PHLI Lab by continuing looking for extra funding opportunities within the USAID framework and PHLI mission.
  3. Served as in-country leader in Guatemala for the development & management of the PHLI Lab projects (until 2020).
  4. Served as Co-PI for mycotoxin assessment projects in Honduras (until 2019).

- **Dept. of Agricultural and Biological Engineering - Purdue University**  
West Lafayette, IN 01/2006 – 12/2009

**Research Associate:**

1. Performed main research project in postharvest technology for non-chemical alternatives for pest control.
2. Development of research projects and extension work in grain quality, storage and drying.
3. Collaborated in extension work in grain quality as part of the Postharvest Research and Education Center (PHERC).

- **Dept. of Agricultural Engineering – University of Illinois**  
Urbana, IL 08/2002 – 12/2005

**Research Assistant:**

1. Performed main research project in the recovery of proteins from co-products from corn milling processing.
2. Collaborated in several research projects of value-added co-products from corn milling and masa production.
3. Teaching assistant in several undergraduate and graduate level courses.

- **Proveedora de Concentrados (Commercial feed mill)**  
Alajuela, Costa Rica 02/1999 – 08/2002

**Process and Maintenance Engineer:**

1. Performed tasks of operation, quality control, and sales focusing on swine and dairy mash feed and aquaculture extruded feed.
2. Developed proactive maintenance program for entire feed mill (mash and extrusion production lines).
3. Designed new boiler system, in-house construction of rotary dryer and extrusion line.

**Research Experience (Last 5 years, previous years on request):**

- **International Grains Program Institute, Manhattan, KS** 02/2010 – Present

Research areas: grain quality management, feed manufacturing & international development work for postharvest reduction

- Work on international development by developing scale-up mechanization of agriculture equipment focusing on the postharvest of grains mainly in Ethiopia (in-country leader) and other Sub-Saharan African countries as part of the Appropriate Scale Mechanization Consortium (ASMC lead by the University of Illinois) of the Sustainable Intensification Innovation Lab (SIIL) of Kansas State University with the goal of reducing malnutrition in the local population. Completed in September 2020.
- Worked on international development by studying and development reduction techniques of postharvest losses through grain quality management (grain drying and storage) as member and in-country leader (Guatemala) and Co-PI since 2017 of the USAID Reduction Postharvest of Losses Innovation Lab of Kansas State University with the goal of reducing malnutrition in the local population. Completed work in May 2020 but continue to serve in PHLIL.
- Studied and implemented different grain quality management strategies for storing U.S. corn in tropical weather locations (Malaysia) and its effect on usage as feed on poultry performance. Also,

perform analysis on the quality and nutritional composition of Broken Corn and Foreign Material from U.S. corn at destination. Project funded by the U.S. Grains Council. Completed in September 2019.

- Worked on international development by assisting in the re-development of the Ghanaian poultry industry by developing their feed manufacturing techniques and improving their postharvest practices with the goal of increasing protein availability as food source and developing a bigger market for U.S. soybeans and its co-products as ingredients for the poultry feed in partnership with the World Initiative of Soy in Human Health (WISHH) and the American Soybean Association (ASA) funded by USDA. Completed in August 2019.
- Worked on international development by developing a mycotoxin assessment in Honduras as Co-PI as part of the USAID Reduction Postharvest of Losses Innovation Lab of Kansas State University with the goal of quantifying the current level of mycotoxins on local crops and developing potential mitigation strategies. Completed in August 2018.
- Study the usage of grain chilling technology to cool down wheat during storage in Kansas weather conditions and its effect on grain quality, mold reduction, and insect mortality. Project funded by the Kansas Crop Improvement Agency (KCIA). Completed in October 2017.
- FEEDing Pakistan USDA funded project that focus on developing the aquaculture production industry in Pakistan with the goal of finding another protein availability as food source for the Pakistani population and develop a market for U.S. soybean and its co-products for its usage in the aquaculture feed. First phase completed in April 2014. Second phase completed in January 2016.

#### **Teaching Experience (Last 10 years, previous years on request):**

- **Kansas State University, Manhattan, KS** 10/2012 – present  
Department of Grain Science and Industry
  - Co-Instructor of course GRSC 510 Feed Technology I (Fall 2012)
  - Co-Instructor of course GRSC 512 Feed Technology II (Spring 2013)
  - Laboratory Instructor of course GRSC 513 Laboratory of Feed Technology II (Spring 2013)
  - Guest lecturer in several courses (On request)

#### **Outreach Experience:**

- Participated as technical presenter in more than 87 international short courses (professional development) in more than 24 different countries since 2008 focusing on different topics of the areas of grain quality management, U.S. grain export system & standards, and feed manufacturing for the U.S. Export Council (USSEC), U.S. Grains Council (USGC), U.S. Wheat Associates (USW), World Initiative in Soy for Humana Health (WISHH), DSM, Novus International, Neogen, and Fecocrop (Paraguay) (Specific topics and dates available on request).
- Participated as technical presenter and course manager in more than 144 short courses (professional development) at the International Grains Program Institute (IGP) of Kansas State University since 2010 with participants domestic and international (from more than 48 different countries) focusing on different topics of the areas of grain quality management, U.S. grain export system & standards, and feed manufacturing. Among the organizations involved are: IGP – Kansas State University, USSEC, USGC, American Feed Industry Association (AFIA), National Grain & Feed Association (NGFA), Grain Elevator and Processing Society (GEAPS) and USDA Cochran Training Programs (Specific topics and dates available on request).
- Developed distance education lectures for professional development (List on request)

## List of Publications

- **Peer Reviewed Scientific Articles (Published):**

1. Morales-Quiros, A., D. E. Maier, Lazzari, F., Lazzari, S., Phillips, T.W., and **Campabadal, C.A.** 2019. Chilled Aeration to Control Pests and Maintain Grain Quality during the Summer Storage of Wheat in North Central Region of Kansas. *Applied Engineering in Agriculture*. 35(4): 657-668.
2. Mendoza, J.R., Rodas, A., Oliva, A., Sabillo, L., Colmenares, A., Clarke, J., Hallen-Adams, H.E., **Campabadal, C.A.**, and Bianchini, A. 2018, Safety and Quality Assessment of Smallholder Farmers' Maize in the Western Highlands of Guatemala. *Journal of Food Protection*, (81), 776-784.
3. Akowuah, J. O., Maier, D., Opit, G., McNeil, S., Arsmtrong, P., **Campabadal, C.**, Ambrose, K., and Obeng-Akrofi, G. 2018. Drying Temperature Effect on Kernel Damage and Viability of Maize Dried in a Solar Biomass Hybrid Dryer. *Open Journal of Applied Science*. (8) 506-5117.
4. Mendoza, R., Sabillón, L., Martinez, W., **Campabadal, C.A.**, Hallen-Adams, H., and Bianchini, A. 2017. Traditional Maize Post-Harvest Management Practices Amongst Smallholder Farmers In The Western Highlands Of Guatemala. *Journal of Stored Product Protection Research* 71(1) 14-21.
5. Corradi, P. C., Channaiah, L. H., **Campabadal, C.A.**, and Maier, D. E. 2015. Distribution of aflatoxins and fumonisins levels in corn fractions and in the feed processing. *Journal of Food Processing Engineering*. doi: 10.1111/jfpe.12212
6. **Campabadal, C. A.**, D. E. Maier, and L. J. Mason. 2013. Efficacy of fixed bed ozonation to control insects in stored bulk grain. *Applied Engineering in Agriculture*. 29(5): 1- 12.
7. McDonough, M.X. **Campabadal, C.A.**, Mason, L.J., Maier, D.E., Denvir, A., and Woloshuk, C. 2011. Ozone application in a modified screw conveyor to treat grain for insects' pests, fungal contaminants, and mycotoxins. *Journal of Stored Product Protection Research*. 47(3): 249-254.

- **Peer Reviewed Scientific Articles (In Preparation):**

1. Morales-Quiros, A., Martinez, W., Mendoza, R., Bianchini, A., and **Campabadal, C. A.** 2020. Improved Maize Drying and Storage Technologies for Smallholder Farmers of the Western Highlands of Guatemala. (In Preparation)
2. **Campabadal, C.A.** (co-author), and Bianchini, A. 2020. Evaluating Maize Storage Technologies for the Control of Fungi and Mycotoxins in the Western Highlands of Guatemala. (In preparation)

- **Book Chapters:**

1. **Campabadal, C. A.** and Maier, D. E. 2014. Section 2: Steam Generation, Control, and Quality for Feed Manufacturing. In Chapter 8: Conditioning of Feed Pelleting Reference Guide. Watt Publishing, 1 – 9. Available at: [www.wattnet.com](http://www.wattnet.com).
2. **Campabadal, C. A.** and O'Keefe, T. 2015. Storage and Handling of Feeds for Fish and Shrimp. In: Feed and Feeding Practices in Aquaculture. Ed. Allen Davis. Woodhead Publishing Limited, Cambridge, UK.
3. **Campabadal, C. A.** and Lissolo, J. 2020. Chapter 40 Sampling on Feed Manufacturing Technology VI. American Feed Industry Association (under revision).

- **Technical Articles:**

1. **Campabadal, C.A.** and Morales-Quiros, A. 2020. U.S. Corn: Storage in Tropical Climates. [www.grains.org](http://www.grains.org). U.S. Grains Council (peer reviewed by USGC).
2. **Campabadal, C.A.** and Morales-Quiros, A. 2020. Technical Bulletin: Storage and Handling of U.S. Soybeans and Soybean Meal. [www.ussec.org](http://www.ussec.org). U.S. Soybean Export Council (peer-reviewed by Kim Koch, Ph.D of NCI of North Dakota State University).
3. **Campabadal, C.A.** and Morales-Quiros, A. Buenas Prácticas de Manufactura, Aplicadas para un Óptimo Almacenamiento de Frijol y Pasta de Soya de los Estados Unidos en las Fábricas de Alimentos para Animales. USSEC. 2017.

<http://agronegociosinternacionales.com.mx/ussec/index.php/en/home-es-es/referencias-sobre-ventajas-de-la-soya-de-eua>

4. **Campabadal, C. A.** and Morales-Quiros, A. Quality control in feed manufacturing. Pending publication as online article at: [www.ussec.org](http://www.ussec.org)
  5. **Campabadal, C.A.** Using Ozone to Treat Grain. Milling Journal. Third Quarter. 2012.
- **Editor Reviewed Manuscripts and Conference Proceedings, and Non-Peer Reviewed Articles Total: 16 (Last 3 years, previous years on request):**
    1. Morales-Quiros, A., **Campabadal, C. A.**, Lawrence, J., Plumier, B, and Maier, D. Technical and Economic Evaluation of Ambient and Chilled Aeration Strategies to Maintain the Quality of Paddy Rice During Storage in a Tropical Climate. In Proceedings of the 12th International Working Conference on Stored Product Protection 2018. Berlin, Germany.
    2. Morales-Quiros, A., **Campabadal, C. A.**, Lazzari, S., Lazzari, F., Maier, D., and Phillips, T. Chilled Aeration to Control Pests and Maintain Grain Quality During the Summer Storage of Wheat in North Central Region of Kansas. In Proceedings of the 12th International Working Conference on Stored Product Protection 2018. Berlin, Germany.
  - **Scientific and Technical Conference Presentations Total: 75 (Last 3 years, previous years on request):**
    1. Technical presentation at the KGFA 2020 7B/4 1A Recertification Program in Salina, KS on Understanding Grain Quality Management (November 2020).
    2. Technical presentation on Safety and Hygiene in Feed Manufacturing Facilities during the Pandemic. FIGAP. Guadalajara, Mexico (October 2020).
    3. Technical presentation on. Safety and Hygiene in Feed Manufacturing Facilities during the Pandemic. 22nd Semana Previtep. Tepatitlan, Mexico. (September 2020).
    4. Technical presentation on the Importance of Quality Assurance and Control in Feed Manufacturing for Swine Production. International Conference on Swine Nutrition and Production. Universidad Nacional de San Cristobal de Huamanga, Peru. (June 2020).
    5. Technical presentation as speaker in the KSRE On-Farm Grain Storage Management Seminar for Walnut Creek District, KS (April 2020).
    6. Campabadal, C. A. Feed Manufacturing Best Management Practices. Latin American Poultry Summit. IPPE, Atlanta, GA. (January 2020).
    7. Technical presentations at the KGFA 2019 7B/4 1A Recertification Program in Wichita, KS on Management of Pests in Stored Grain using Non-Chemical Alternatives and on Pest Control Management in Grain Facilities (November 2019).
    8. Technical presentations (total of 5) at the Feed Manufacturing Seminar in India, October 2019.
    9. Technical presentation on: “U.S. Corn Storage in Tropical Weather Location” at the S.E. Asia U.S. Agricultural Cooperators Conference in Singapore, August 2019.
    10. Technical presentations (total of 5) at the Technical Training on Animal Feed Production in Cambodia, March 2019 and February 2020.
    11. Technical presentations (total of 8) at the USSEC Implementation of Good Manufacturing Practices in Feed Mills Technical Seminar in the Dominican Republic on several topics (June, August and October 2019).
    12. Technical presentation at the Engineering Session of the 12th International Working Conference on Stored Product Protection 2018. Berlin, Germany on: Technical and Economic Evaluation of

Ambient and Chilled Aeration Strategies to Maintain the Quality of Paddy Rice During Storage in a Tropical Climate (October 2018).

13. Technical presentation at the 12th International Working Conference on Stored Product Protection 2018. Berlin, Germany on: Chilled Aeration to Control Pests and Maintain Grain Quality During the Summer Storage of Wheat in North Central Region of Kansas (October 2018).
14. Technical presentations at the USSEC Implementation of Good Manufacturing Practices in Feed Mills Technical Seminar in the Dominican Republic on several topics (October 2018).
15. Technical presentations at the USGC Export Exchange for the Mexican Trade Team in Minneapolis, MN on the U.S. Grain Production and Export System and on Grain Quality Management (October 2018).
16. Technical presentation at the Appropriate Scale Mechanization Technical Session of the American Society of Agricultural and Biological Engineers Annual Meeting in Detroit on: Appropriate Scale Postharvest Storage Systems (July 2018).
17. Technical presentation at the Alabama Grain and Feed Association Nutrition Seminar on: Controlling Mycotoxins in Feed Mills (April 2018).
18. Technical presentations as main speaker in the K-State Grain Storage Management, Safety and Economics Seminar in Leoti, KS (April 2018).

- **Reviewer of Scientific Journal Articles (Names of the journal articles on request: Total: 22)**

- **Reviewer of Scientific and Technical Book Chapters:**

1. Reviewer on Chapter on: Steam Treatment of Cellulosic Biomass for Hydrolyzation and Pelletization on book: biomass Preprocessing for Biofuels Production: Mechanical, Chemical, and Thermal Methods. Editors: Jaya Shankar and Richard Hess. CRC Press, 2019.
2. Manager for Technical Book: Practical Baking with U.S. Soybean Oil. U.S. Soybean Export Council. (English and Spanish versions). USSEC Americas. Guadalajara, Jalisco, Mexico, 2018
3. Editor for Chapter 3: Handling on book: Grain Drying, Handling and Storage Handbook (MWPS-13) 3<sup>rd</sup> Edition. Midwest Planning Services, Iowa State University, Ames, IA, 2017.
4. Editor for Chapter V on: Feeding Practices and Chapter VII on Feed Technology on book: Aquaculture Handbook Fish Farming and Nutrition in Pakistan. SoyPak (ASA/WISHH), Karachi, Pakistan, 2015.

## **Grants**

- **Research Grants (Last 3 years, previous years on request):**

1. **Campabadal, Carlos (PI)** and Schwab, Ben (Co-PI), University of Illinois at Urbana-Champaign (from USAID SIIIL), \$53,006, “Appropriate-Scale Mechanization Consortium for Sustainable Intensification.” (PI for Kansas State University, postharvest expert for the project, No Cost Extension for 2019 to 2020).
2. Li, Yonhui (PI) and **Campabadal, Carlos (Co-PI)**, O’Brien, Dan. USDA (Research Education and Economics National Institute of Food) (AFRI Foundational and Applied Science Program), \$299,966. “Development of an Innovative Technology for Value-added Production of Antioxidants from Corn Distillers’ Grains” (extension and outreach work). KSU Award #: A20-0535-001
3. **Campabadal, Carlos (PI)**, U.S. Grains Council, \$20,000, “U.S. Corn Storage in Tropical Weather Location.” (Lead researcher and project manager, 2018-2019).

4. Harvey, Jagger, (PI), **Campabadal, Carlos (Co-PI)**, Ulmer, Jonathan (Co-PI), Ellis, Jason (Co-PI), Subramanyam, Bhadriraju (Co-PI), Lilja, Nina (Co-PI), Leslie, John (Co-PI), and Lindshield, Brian. USAID Feed the Future Innovation Lab for the Reduction of Postharvest Loss. \$1,999,999.00. (In-country operations and budget manager for Guatemala from 2019 to 2021 for a total of \$500,000).
  5. **Campabadal, Carlos (PI)**, U.S. Grains Council, \$20,000, "U.S. Corn Storage in Tropical Weather Location." (Lead researcher and project manager, 2018-2019).
  6. Bianchini, Andrea, (PI) Harvey, Jagger, **Campabadal, Carlos (Co-PI)**, and Leslie, John. USAID Reduction of Postharvest Loss Innovation Lab (from USAID Honduras Mission), \$650,000, "Mycotoxin Assessment on the Dry Corridor of Honduras" (Co-PI, postharvest expert for the project 2016-2017).
  7. Maier, Dirk (PI), **Campabadal, Carlos (Co-PI)**, McNeil, Samuel, Armstrong, Paul, Ambrose, Kingsly, and Opit, George, US Department of Agriculture – Foreign Agricultural Service, \$40,000, "SCRIP Research Associate Award Ghana Solar Biomass Hybrid Dryer." (Postharvest researcher, 2016-2018).
  8. **Campabadal, Carlos (PI)** and Phillips, Thomas, Kansas Crop Improvement Association, \$10,000, "Demonstrating a New Stored Wheat Cooling Technology for Improved Pest Control during On-Farm Storage." Kansas Crop Improvement Association. (Lead researcher and project manager, 2016-2017).
  9. **Campabadal, Carlos (PI)** and Schwab, B., University of Illinois at Urbana-Champaign (from USAID SIIL), \$319,812, "Appropriate-Scale Mechanization Consortium for Sustainable Intensification." (PI for Kansas State University, postharvest expert for the project, 2016 to 2019).
  10. Stark, Charles (PI), **Campabadal, Carlos (Co-PI)**, and Jones, Cassandra, American Soybean Association (from USDA FAS Food for Progress, 10.606), \$1,993,000, "AMPLIFIES Ghana: Assisting Management in the Poultry and Layer Industries by Feed Improvement and Efficiency Strategies in Ghana." (C-Lead PI for Kansas State University, lead on postharvest work and collaborator for feed manufacturing work, 2015 to 2019).
  11. Maier, Dirk, Phillips, Thomas, **Campabadal, Carlos (Co-PI)**, and Ambrose, Kingsly, Kansas Crop Improvement Association, \$5,000, "Demonstrating a New Stored Wheat Cooling Technology for Improved Pest Control during On-Farm Storage." Kansas Crop Improvement Association. (Lead researcher and project manager, 2015).
  12. Harvey, Jagger, (PI), **Campabadal, Carlos (Co-PI)**, Ulmer, Jonathan, Subramanyam, Bhadriraju, Lilja, Nina, Leslie, John, and Lindshield, Brian. USAID Feed the Future Innovation Lab for the Reduction of Postharvest Loss. **\$4,068,796** with cost share to \$8,215,516 (In-country operations and budget manager for Guatemala from 2014 to 2018 for a total of **\$821,174**).
- **Extension and Outreach (Last 1-year, previous years on request):**
    1. Smith, Gordon (PI), **Campabadal, Carlos (Co-PI)**, Allen, Guy (Co-PI), and Thiele, Shawn (Co-PI), Kansas Soybean Commission, \$120,000, "Market Development Grant - International Grains Program 2020."
    2. **Campabadal, Carlos (PI)**, Thiele, Shawn (Co-PI), and Allen, Guy (Co-PI), USSEC Diploma Course: NIR Use and Application For Optimizing U.S. Soy Value. USSEC, \$63,731.00, "Service Agreement 2020." (Lead Principal Investigator and Manager).
    3. Smith, Gordon (PI), **Campabadal, Carlos (Co-PI)**, Allen, Guy (Co-PI), and Thiele, Shawn (Co-PI), Kansas Corn Commission, \$75,000, "Market Development Grant - International Grains Program Support Project 2019".



4. Smith, Gordon (PI), **Campabadal, Carlos (Co-PI)**, Allen, Guy (Co-PI), and Thiele, Shawn (Co-PI), Kansas Wheat Commission, \$100,000, "Market Development Grant - International Grains Program Support Project 2019".
5. **Campabadal, Carlos (PI)**, Allen, Guy (Co-PI), and Thiele, Shawn (Co-PI), Animal Production Educational Assistance (RAPCO Aquaculture). USSEC, \$44,970, "Service Agreement 2019." (Lead Principal Investigator and manager).
6. Smith, Gordon (PI), **Campabadal, Carlos (Co-PI)**, Allen, Guy (Co-PI), and Thiele, Shawn (Co-PI). Kansas Grain Sorghum Commission, \$30,000, "Market Development Grant - International Grains Program 2019".
7. Thiele, Shawn (PI), **Campabadal, Carlos (Co-PI)**, Allen, Guy, and Subramanyam, Bhadriraju. USDA Cochran Program on U.S. Grain Inspection for Egypt and Jordan, \$84,007.99, "Service Agreement 2019". (Principal Investigator)
8. Thiele, Shawn (PI), **Campabadal, Carlos (Co-PI)**, and Allen, Guy. USDA Cochran Program on US Wheat Classification and Standards for Brazil, \$39,571.40, "Service Agreement 2019". (Principal Investigator)
9. Thiele, Shawn (PI), **Campabadal, Carlos (Co-PI)**, and Miller, Rebecca. USDA Cochran Program on U.S. Grain Inspection for Egypt and Jordan, \$84,310.60, "Service Agreement 2019". (Principal Investigator)
10. **Campabadal, Carlos (PI)** and Thiele, Shawn (Co-PI). USDA Cochran Program on Tunisia Market Reform within the Wheat Value Chain, \$53,712.14, "Service Agreement 2019". (Mentioned as Lead PI since Shawn Thiele was not authorized to do it during the application time. However, he served as the Lead PI. Main role as Principal Investigator).
11. Smith, Gordon (PI), **Campabadal, Carlos (Co-PI)**, and Thiele, Shawn (Co-PI). Kansas Grain Sorghum Commission, \$20,000, "Market Development Grant - International Grains Program 2019." (Principal Investigator)
12. Smith, Gordon (PI), **Campabadal, Carlos (Co-PI)**, and Thiele, Shawn (Co-PI), Kansas Corn Commission, \$80,000, "Market Development Grant - International Grains Program Support Project 2019". (Principal Investigator)
13. Smith, Gordon (PI), **Campabadal, Carlos (Co-PI)**, and Thiele, Shawn (CO-PI), Kansas Soybean Commission, \$120,000, "Market Development Grant - International Grains Program 2019." (Principal Investigator)
14. Smith, Gordon (PI), **Campabadal, Carlos (Co-PI)**, and Thiele, Shawn (Co-PI), Kansas Wheat Commission, \$100,000, "Market Development Grant - International Grains Program Support Project 2019". (Principal Investigator)
15. **Campabadal, Carlos (PI)** and Thiele, Shawn (Co-PI), Middle East and North Africa Feed Manufacturing Training. USSEC, \$24,000, "Service Agreement 2019." (Lead Principal Investigator and Manager).
16. **Campabadal, Carlos (PI)** and Thiele, Shawn (Co-PI), Animal Production Educational Assistance (RAPCO Feed Manufacturing Training). USSEC, \$68,000, "Service Agreement 2019." (Lead Principal Investigator and manager).
17. **Campabadal, Carlos (PI)** and Thiele, Shawn (Co-PI), Addendum to Animal Production Educational Assistance (RAPCO Feed Manufacturing Training). USSEC, \$11,333.45, "Service Agreement 2019." (Lead Principal Investigator and Manager).

18. **Campabadal, Carlos (PI)** and Thiele, Shawn (Co-PI). Latin America Animal Production Training Program (RAPCO Poultry Nutrition Training). USSEC, \$47,500, "Service Agreement 2019." (Lead Principal Investigator and Manager).
19. **Campabadal, Carlos (PI)** and Thiele, Shawn (Co-PI). Oilseed Purchasing Tools – Latin America. USSEC, \$28,600, "Service Agreement 2019." (Lead Principal Investigator and Manager).

Since 2012, received a total of **\$ \$14,329,869.6** in competitive grants and contracts to support research (66.3%) and outreach (extension) programs (33.7%). Total funds as **PI: \$ \$4,081,337.18** (29%) and as **Co-PI: \$10,248,532.4** (71%). Funding sources include: As **PI:** Farmer State Commissions' (0.4%), federal sources (99.6%) and industry (0%) and as **Co-PI:** Farmer State Commissions' (25%), federal sources (73.8%) and industry (1.2%) for research, outreach (extension) programs. Also, generated since 2011 in service agreements for IGP for outreach training programs for the domestic and international grain industry, a total of **\$876,022.57**.

### Academic Advisor & Supervisor

- Graduate Students:
  - Alejandro Morales, (Main Advisor) Master's Degree at Department of Grain Science and Industry, Kansas State University. Research topic: The Effect of Grain Chilling on Stored Grain at Different Weather Conditions. May 2015 – December 2017 (graduated).
  - Mercedes Nana Frempong (Advising Committee), Master's Degree at Department of Grain Science and Industry, Kansas State University. Research topic: NIR Analysis and Quantification of Feed Ingredients for the Poultry Industry in Ghana. August 2016 – August 2018 (graduated).
  - Frank Idan (Advising Committee), Doctoral Degree at the Department of Grain Science and Industry, Kansas State University. Research Topic: Poultry Nutrition for Ghanaian Farmers. August 2016- December 2019 (graduated).
- Undergraduate Students (On request)

### Honors and Awards

- **Honors:**
  - Member of *Alpha Epsilon* Agricultural Engineering Honor Society, Chapter University of Illinois since 2003 and Purdue University since 2006.
  - Member of *Gamma Sigma Delta* Agricultural Honor Society, Chapter University of Illinois since 2004.
  - Member of the Academic Excellence Committee in the Department of Mechanical Engineering in the Universidad de Costa Rica 1998-1999.
- **Awards**
  - Superior Paper Award from the American Society of Agricultural and Biological Engineers (ASABE) in recognition of exceptional contribution to agricultural and biological engineering literature for manuscript published in their journal: Applied Engineering in Agriculture in 2019: Morales-Quiros, A., D. E. Maier, Lazzari, F., Lazzari, S., Phillips, T.W., and Campabadal, C.A. (corresponding author) 2019. Chilled Aeration to Control Pests and Maintain Grain Quality during the Summer Storage of Wheat in North Central Region of Kansas. Applied Engineering in Agriculture. 35(4): 657-668.
  - North Central National Extension Leadership Development Program (NELD) Kansas State University Delegate 2017.
  - American Association of Cereal Chemists AACC Student Travel Award 2004 to 2010.
  - Purdue University Latin Scholar Forum Travel Scholarship 2008.

## **Professional, Technical and Scientific Affiliations**

- Member of American Society of Agricultural and Biological Engineers (ASABE).
- Member of the ASABE's PRS-702: Crop & Feed Processing & Storage Committee (review of scientific procedures and standards).
- Member of the Grain Elevator and Processing Society (GEAPS) and the Great Plains District.
- Member of GEAPS Continuing Education Program Oversight Committee (CEPOC).
- Member of American Feed Industry Association (AFIA) Equipment Manufacturers' Committee and Production Compliance Committee.
- Member of GEAPS Hands-On Training Committee.
- Member of the ISO TC293 U.S. Tag Team and member of their Ad-Hoc Feed Machinery group and Working Group 2: Feed Terminology for Feed Pelletting, Drying and Cooling, and Cleaning and Grading.
- Member of the Station Representation of Kansas State University at the NC-213: Marketing and Delivery of Quality Grains and Bioprocess Coproducts.
- Member of USSEC's Soybean Excellence Center Steering Committee and Leader of the Accreditation Subcommittee.

## **Service**

- Advisor of Kansas State University Costa Rican Student Association (2016 – present).
- Department of Grain Science and Industry Parking Committee (2013 – present).
- Organizer for visit of the Costa Rican President and delegation to Kansas State University in May 2016.
- Organizing Committee Member of the 2015 International Grain Quality and Food Security Conference.
- Department of Grain Science and Industry Annual Evaluation Review Committee (2015-2016).
- Purdue University Latino Graduate Student Organization Chair (2007 – 2008).
- American Association of Cereal Chemists – Student Protein Division Chair (2003-2004), Silent Auction Chair (2003-2004), Treasurer (2005-2006), Chair (2006-2007), Young Cereal Chemist Meeting Chair (2008-2009) and (2009-2010), and Young Cereal Chemist Collaborator (2010-2011).
- Moderator for Industrial/Applied Science Track - Engineering and Processing' technical session on AACC International Annual Meeting on Monday, September 22, 2008 in Honolulu, Hawaii.
- Alpha Epsilon Honors Society Chapter University of Illinois – Vice-Chair (Spring 2004), Engineering Council Rep (Fall 2003).
- Vice-Chair of the Mechanical Engineering Student Association at Universidad de Costa Rica in (1997 -1998).

## **Continuing Education/Professional Training**

- International Feed Ingredient Course in Bangkok, Thailand in October 2019.
- PCQI Feed Safety Training at the IGP Institute in Manhattan, KS in 2017.
- Buhler Expert Milling Short Course at the IGP Conference Center in Manhattan, KS in 2012.
- Methyl Bromide and Alternatives Workshop at Kansas State University in Manhattan, KS in 2010.
- Grain Marketing Distance Education Courses from the Agriculture Sciences Program at Parkland Community College in Champaign, IL in 2005 (Incomplete).
- Participant in the IAOM Milling Maintenance Course II in Wichita, KS in 2004.

- Participant in Short Course: Wet Milling Processing for Recovery of Starch and Value Added Co-products by the Department of Agricultural and Biological Engineering, University of Illinois, Urbana, IL, USA in 2003.
- Participant in the Rapco Feed Manufacturing Short Course sponsored by ASA-IM in San José, Costa Rica in 1999, 2000, and 2002.
- Participant in short course: Proactive Maintenance by Reliability. (MBC) by Balances Dinámicos S.R.L San Antonio de Belen. Heredia, Costa Rica in 2000.
- Participant in Short Course: Extrusion Processing for Human and Animal Products by Center for Protein Research and Development, Texas A&M, College Station, TX, USA in 2000.
- Participant in several practical courses (Boiler Design and Maintenance, Motor Installation and Maintenance, Pump Selection and Maintenance) in the Certificate Program in Maintenance Technician in Electro-Mechanics by Instituto Tecnológico de Costa Rica (TEC) in Cartago, Costa Rica in 1999-2000.

### **Skills**

- Computer software: Microsoft Office, SAS, and AutoCad.
- Fluent in Spanish (native language) and English. Reading ability in Portuguese, French and Catalan.
- Laboratory analysis for 10-kg and 1-kg Wet Milling and Dry Milling Processes.
- Design and management of field experimental trials in farm, grain storage, handling and processing facilities for drying and pest control.