

Basic Information

- **Project No. and Title:** WERA72 : Agribusiness Scholarship Emphasizing Competitiveness
- **Period Covered:** 06/02/2022 to 06/07/2023
- **Date of Report:** 08/04/2023
- **Annual Meeting Dates:** 06/05/2023 to 06/07/2023

Participants

Clark, Jennifer (tspartin@ufl.edu) - University of Florida, Ruby Ward (ruby.ward@usu.edu) - Utah State University, Aaron Johnson (ajjohnson@ksu.edu) - Kansas State University, Ryan Larsen (ryan.larsen@usu.edu) - Utah State University, David Ripplinger (david.ripplinger@ndsu.edu) - North Dakota State University, Na Zuo (nazuo@arizona.edu) - University of Arizona, Serhat Asci (sasci@csufresno.edu) - California State University Fresno, Oscar Sarasty (oscar.s.sarasty@ttu.edu) - Texas Tech University, Jiayu Sun (sunjiay5@msu.edu) - Michigan State University, Lijiao Hu - California State University Chico, Tanner McCarty (tanner.mccarty@usu.edu) - Utah State University
Zoom Attendees: Sawssan Boufous (sawssanb@nmsu.edu) - New Mexico State University, Wenfan Su (wenfan.china@gmail.com) - Texas A&M University, Phil Kenkel (phil.kenkel@okstate.edu) - Oklahoma State University, Chinonso Etumnu (chinonso.etumnu@kysu.edu) - Kentucky State University, Dave Harper (david.harper@kirkwood.edu) - Kirkwood Community College

Brief Summary of Minutes of Annual Meeting

- 2022 business meeting minutes were approved unanimously. Communication coordinator was proposed as an official position to help connect the previous years' WERA-72 goals with the current goals, share culture, create opportunities to grow for younger faculty, utilize zoom for monthly summer meetings, connect with the Friends of WERA community, and engage in the website development, internal to the NIMMS system and maybe under one of the universities' domains. The communication coordinator position was approved unanimously. Jennifer Clark (UF) was selected as the communication coordinator, unanimously.
- Annual and the five-year report planning was discussed and the report planned to be prepared by the executive committee through Zoom meetings and email exchange. An alternative listserv mechanism was discussed to replace the current service, Mailchimp. David Ripplinger (NDSU) volunteered to look for a listserv and populate the listserv from the official NIMMS site and last 5-6-year participants from the meeting minutes.
- The structure and the future of WERA-72 was discussed as an information coordinating committee and eligibility of submitting a grant and commentary articles from the group within discipline-related peer-reviewed journals.
- David Ripplinger, Treasurer, reported the current funds at Purdue University with a balance of \$4,500.00 approximately. The committee unanimously approved to host the funds at North Dakota State University. It was also discussed that waiving the annual meeting fee for first time participants and for graduate students was a good practice.

- At the 2002 annual meeting, WERA-72 advisor Ivory Lyles suggested considering a second advisor with an agribusiness background. Associate Dean Al Wysocki (UF) was suggested as a second advisor given his long history and participation with WERA-72. After initial discussion with Dean Wysocki at the 2023 NACTA conference, committee members tabled the discussion as a future New Business item to meet and discuss current committee needs, including the development of Friends of WERA-72 as a means to recruit participation outside of the annual meeting, and to clearly identify what mentorship and guidance might be realistic expectations from a second advisor. The committee wants to invite Dean Wysocki to a future executive, prior to the next annual meeting, to pursue this initiative.
- The committee additionally discussed the meeting registration fee for expanding access to online participants, including the cost of an IT person for managing the hybrid meeting option.
- Tanner McCarty (USU) was elected as the secretary of WERA-72.
- Na Zuo (U Ariz) proposed to host the 2024 annual meeting at the University of Arizona in Tucson, AZ. Tentative dates will be determined after WAEA and NACTA meeting dates are determined to avoid schedule conflicts.
- Jason Bergtold (K State) summarized AETR plans on a Special Issue on AI, a proposed Teaching Academy for summer, the AAFA trust funding to participate in pre-conference activities at the WERA-72 annual meeting, and sponsorship opportunities for some conferences via publishers, such as McGraw Hill. A Special Issue in AETR on agribusiness skills and engaging undergraduate and graduate students was also discussed.

Attached file:

[WERA-72 Business Meeting Minutes 2023.pdf](#)

Accomplishments

We recognize that relevant and key issues facing agribusiness are changing including market structure and access, use and analysis of Big Data, changes in technology used by both companies and producers, food and energy security, and efficiency and productivity of agribusiness firms, among others. The WERA-72 milestones identified in our project include providing forums in teaching, research, and extension scholarship activities related to information exchange between academia, industry, and affiliated external associations serving agribusiness stakeholders. This information exchange committee also has a deep culture to be intentional in their invitational process to invite diversity within our meetings, specifically focusing on outreach for graduate students and new faculty across Land-grant, non-Land grant, and HBCU's to present new research ideas, discuss works in progress, and for professional development experiences, including peer-feedback, prior to attending other national conferences. Professional relationships developed between attendees is evidenced through increased engagement with participants at other national academic and industry-related conferences. Our activity accomplishments are summarized below with plans for the following year briefly summarized.

Short-term Outcomes: To meet new needs in agribusiness teaching research and skill development for students, WERA-72 participants have focused for several years on efforts to engage academic faculty with industry leaders to learn new needs facing hiring managers in agribusiness by supporting educational priorities for future agribusiness leaders. Efforts continue to update the data associated with the AGRI-MASS survey (Liztenberg and Schneider, 1988) and include additional items relevant to changing technologies. Stakeholder

engagement continues to leverage increased involvement through Cooperative Extension with our faculty supporting Case Study methodology as an approach for conducting agribusiness research proposed by Sterns, et.al. (1998) connecting industry professionals' concerns and strategic decisions with agribusiness faculty and their students in the classroom.

Participant collaborators recognize the need to mentor and develop new and diverse agribusiness faculty and engage graduate students to meet academic and non-academic employability skills in a changing industry. These efforts continue needs have been the focus of the last five years (2019-2023) of WERA-72 meetings. We have focused on the role of Extension to identify industry needs that inform research innovations and teaching curricula. These efforts have led to increased efforts nationally to address the Association of Public Land Grant Universities' (APLU) identified gaps in employability skills and workforce preparedness among college graduates. WERA-72 efforts to address critical growth areas for students have led to increased understanding in the discipline of the need for innovation in curriculum and outreach through other academic professional associations in this area. Discussions and collaborative efforts continue to develop among WERA-72 participants in this area and several research groups have been established from these meetings.

Outputs: Faculty from Kansas State University have initiated an updated national AGRI-MASS survey to a broad array of student, faculty, and industry participants and researchers reported more than 800 responses received to date. Researchers shared preliminary findings with participants at the annual meeting and these efforts will continue through the next academic year.

Faculty collaborations from Kansas State University, Western Washington University, University of Arizona, Tuskegee University, North Carolina A&T University, Oklahoma State University, and the University of Florida have continued to develop output to meet teaching and mentoring goals for diverse graduate students and new faculty members through the submission of a Teaching Academy proposal through the AAEA Trust for funding. Outputs would include a regularly-occurring workshop (i.e., academy) for disseminating teaching methodology, theory, and practice specific to agricultural economics that would include agribusiness teaching. (Update July 2023, the AAEA executive board approved branding the AAEA Teaching Academy with publishable output disseminated through the AETR journal with funds dedicated to website development.

Thirty-seven publications, two abstracts, and nine invited presentations are included in the publication list. Efforts will be made to develop and synthesize a more comprehensive list of research project outputs associated with WERA-72 milestones and include them in the 2024 five-year report.

Activities:

- Addressing the talent gap in agribusiness was the central focus of the WERA-72 meetings this year. Matt Swan, CEO of Intermountain Farmers Association (IFA), spoke with the group about how their organization is developing strategies to hire and develop new employees. IFA was established in 1923 as a farmer cooperative and operates in Utah, Idaho, Wyoming, and Nevada. Urbanization, changing consumer demographics, and a struggling agricultural economy are primary factors that they are managing. Mr. Swan discussed their market plan for strategically engaging consumers through commercial and online storefronts and also shared how their management training program is targeted towards new college graduates who are increasingly, not from agricultural backgrounds. Meeting participants discussed with Mr. Swan how universities could work together to help prepare students for careers in agriculture in light of concerns about dropping enrollments in agricultural economics programs and increased demand from employers for industry-ready hiring candidates.
- Dr. Ruby Ward (USU) moderated an industry panel consisting of a cross-section of agriculture. The panel included Mark Rowley, owner of Rowley Fruit Farms, and Brady Blackett from Renaissance Ag, a new ag-tech company based out of Provo, Utah focused on feed efficiency and automated feed systems for livestock production. Brady and Mark provided viewpoints from both the production and

tech sides of agriculture. Participants discussed with the panelists how universities could be engaged in working on Case Study projects that are sensitive to privacy concerns but able to deliver educational content supporting strategic agribusiness management decisions in various sectors of agricultural operations.

- Eight selected papers are presented and discussed at the 2023 WERA-72 annual meeting. Topics range from machine-learning methods, the market for sorghum, Carbon Credits Programs, alternative protein food products, and the private food safety certification market, to thesis structure for Masters of Agribusiness.
- Seven annual meeting participants joined the local Agribusiness Tour and visited Gossner Foods and Whites Ranch.

Milestones:

- WERA-72 participants will continue to facilitate the development of collaboration and scholarly output reflecting quality research, teaching and extension programs in agribusiness and economic development through collaboration in integrated and multi-state work.
- WERA-72 participants will work to coordinate special issues of peer-reviewed journals related to specific themes from the WERA-72 objectives.
- WERA-72 participants will develop new ways to disseminate Case Study related information and research project findings involving agribusiness research, extension projects, and scholarly teaching to interested parties. This will include greater use of the project website that catalogs past and ongoing research, as well as the potential utilization of new tools that may provide for greater discussion of current issues and the dissemination of research results.

Impacts

1. The quantifiable difference that the WERA-72 program makes in agribusiness scholarship emphasizing competitiveness is to continue the long-history of the group in developing a culture of sharing among diverse participants associated with this discipline, recognizing the changing need of the agribusiness sector supporting the global food and fiber supply chains, and communicating these new needs and opportunities for mentorship among industry and academic stakeholders.

Publications

Publications:

Barrowclough, M., B. Messman, D. Lannin, M.A. Boerngen, and M. L. Kibler. 2023. Measuring mental health service preferences amongst Illinois dairy producers. *Journal of Agromedicine*. <https://doi.org/10.1080/1059924X.2023.2229815>

Tibbs, R. and M.A. Boerngen. 2023. Nutrient loss reduction in the Mississippi/Atchafalaya River Basin. *Journal of the American Society of Farm Managers and Rural Appraisers* 2023:106-115.

Rickard, J.W. and M.A. Boerngen. 2022. Resource allocation concerns: Matching teaching and research needs with financial management at university farms. *Journal of Higher Education Management* 37(2):128-135.

Gardner, J.G., J.R.V. Franken, and M.A. Boerngen. 2022. A research agenda for cooperatives. *Journal of Cooperatives* 37:38-66.

- Soltani, S., S.H. Mosavi, **S. Saghaian**, S. Azhdari, H.N. Alamdarlo, and S. Khalilian. (2023). "Climate Change and Energy Use Efficiency in Arid and Semiarid Agricultural Areas: A Case Study of Hamadan-Bahar Plain in Iran." *Energy*. DOI: <https://doi.org/10.1016/j.energy.2022.126553>. Impact Factor: 9.
- Ansarinasab, M. and **S. Saghaian**. (2023). "The Relationship between Environmental Quality, Sustainable Health, and Coronavirus Pandemic in the European Countries." *Sustainability*, 15(12), 9412. <https://doi.org/10.3390/su15129412>. Impact Factor: 3.9.
- Mohammadi, H., **S. Saghaian**, and F. Boccia. (2023). "Antibiotic-Free Poultry Meat Consumption and Its Determinants." *Foods*, 12(9), 1776. DOI: <https://doi.org/10.3390/foods12091776>. Impact Factor: 5.561.
- Ansarinasab, M. and **S. Saghaian**. (2023). "Outbound, Inbound and Domestic Tourism in the Post-COVID-19 Era in OECD Countries." *Sustainability*, 15(12), 9412. <https://doi.org/10.3390/su15129412>. Impact Factor: 3.9.
- [Firoozzare, A., S. Saghaian, S. Esfandiari-Bahraseman, M. Dehghani-Dashtabi](#). (2023). "Identifying the Best Strategies for Improving and Developing Sustainable Rain-Fed Agriculture: An Integrated SWOT-BWM-WASPAS Approach." *Agriculture*, 13(6), 1215; <https://doi.org/10.3390/agriculture13061215>. Impact Factor: 3.6.
- Zhang, W., **S. Saghaian**, and M. Reed. (2023). "Investigation of Export-Driving Forces and Trade Potentials of the U.S. Bourbon Whiskey Industry." *Applied Economics*, DOI: <https://doi.org/10.1080/00036846.2023.2178626>.
- Saghaian, S.**, H. Mohammadi, and M.S. Jafari. (2023). "Factors Affecting Sales of Selected Agricultural Products in Network Marketing." *Journal of Food Distribution Research*, Volume 54, Issue 1, pp. 1–7.
- Mohammadi, H., **S. Saghaian**, and B. ZandiDareGharibi. (2023). "Renewable and Non-Renewable Energy Consumption and its Impact on Economic Growth." *Sustainability*, 15(4), 3822. DOI: <https://doi.org/10.3390/su15043822>. Impact Factor: 3.9.
- Shokoohi, Z. and **S. Saghaian**. (2022). "Nexus of energy and food nutrition prices in oil importing and exporting countries: A Panel VAR model." *Energy*. DOI: [10.1016/j.energy.2022.124416](https://doi.org/10.1016/j.energy.2022.124416). Impact Factor: 9.
- Zhang, W., **S. Saghaian**, and M. Reed. (2022). "Influences of Power Structure Evolution on Coffee Commodity Markets: Insights from Price Discovery and Volatility Spillovers." *Sustainability*, 14, 15268. <https://doi.org/10.3390/su142215268>. Impact Factor: 3.9.
- Saghaian, S.**, H. Mohammadi, and M. Mohammadi. (2022). "The Effects of Agricultural Product Exports on Environmental Quality." *Sustainability*, 14, 13857. <https://doi.org/10.3390/su142113857>. Impact Factor: 3.9.
- Radmehr, R., E. Baba Ali, S. Shayanmehr, **S. Saghaian**, E. Darbandi, E. Agbozo, and S. A. Sarkodie. (2022). "Assessing Global Drivers of Sustained Economic Development: The Role of Trade Openness, Financial Development, and FDI." *Sustainability*, 14, 14023; <https://doi.org/10.3390/su142114023>. Impact Factor: 3.9.
- Mohammadi, H., and **S. Saghaian**. (2022). "Factors Affecting Consumption of Different Forms of Medicinal Plants: The Case of Licorice." *Agriculture*, 12(9), 1453. <https://doi.org/10.3390/agriculture12091453>. Impact Factor: 3.6.
- Codjia, C.O. and **S. Saghaian**. (2022). "Determinants of Food Expenditure Patterns: Evidence from U.S. Consumers in the Context of the COVID-19 Price Shocks." *Sustainability*, 14, 8156. <https://doi.org/10.3390/su14138156>. Impact Factor: 3.9.
- Hosseinzadeh, M., **S. Saghaian**, Z. Nematollahi, and N. Shahnoushi-Foroushani. (2022). "Water Consumption and Economic Growth: Evidence for the Environmental Kuznets Curve." *Water International*. Doi: 10.1080/02508060.2022.2091398. Impact Factor: 3.395

Saghaian, S., H. Mohammadi, and M. Mohammadi. (2022). "Factors Affecting the Success of Entrepreneurship in Agribusinesses: Evidence from Mashhad, Iran." *Sustainability*, 14, 7700. Doi: [10.3390/su14137700](https://doi.org/10.3390/su14137700). Impact Factor: 3.9.

Erol, E. and **S. Saghaian**. (2022). "The COVID-19 Pandemic and Dynamics of Price Adjustment in the U.S. Beef Sector." *Sustainability*, 14, 4391. Doi: [10.3390/su14084391](https://doi.org/10.3390/su14084391). Impact Factor: 3.9.

Xing, X., and **S. Saghaian**. (2022). "Learning Outcomes of a Hybrid Online Virtual Classroom and In-Person Traditional Classroom during the COVID-19 Pandemic." *Sustainability*, 14, 5263. Doi: [10.3390/su14095263](https://doi.org/10.3390/su14095263). Impact Factor: 3.9.

Adhikari, L. and **S. Saghaian**. (2022). "Impact of Remittance on Household Welfare: Evidence from the Western Region of Nepal." *Journal of Food Distribution Research*, 53(1):41-50.

Odiase, S. and **S. Saghaian**. (2022). "Impact of COVID-19 Pandemic on Vertical Price Transmission in the U.S. Fresh Banana Market." *Sustainability*, 14, 6354. Doi: [10.3390/su14106354](https://doi.org/10.3390/su14106354). Impact Factor: 3.9.

Ajibade, A. and **S. Saghaian**. (2022). "U.S. Almond Exports and Retaliatory Trade Tariffs." *Sustainability*, 14, 6409. Doi: [10.3390/su14116409](https://doi.org/10.3390/su14116409). Impact Factor: 3.9.

Wachenheim, C., Parman, B., Idowu, A., and Hanson, E. (2023). "Data: What Farmers Need to Know." *Choices*, 38(1): 1-5.

Wachenheim, C. J., Idowu, A., and Hanson, E. (2023). "Student Feedback on Use of Breakout Rooms." *NACTA Journal*, 67: 117-123.

Jahan, M., Wachenheim, C., Hanson, E., Sun, X., and Parman, B. (2023). "Returns to Zone Management Under Varying Conditions." *Journal of the American Society of Farm Managers and Rural Appraisers*, 129-139.

Hanson, E., Cossette, M., and Roberts, D. (2022). "The Adoption and Usage of Precision Agriculture Technologies in North Dakota." *Technology in Society*, 71. Listed in Social Sciences Citation Index.

Hanson, E., and Wachenheim, C. (2022). "Predicting Performance in an Introductory Agricultural Finance Course." *NACTA Journal*, 66: 71-77.

Stacanelli-Pires-Chagas-Scott, I., Scott, F., McCarty, T., & Penn, C. (accepted) Techno-economic Analysis of Various Phosphorus Removal Structures *Environmental Science and Technology*

Young, J., McCarty, T., Lancaster, S. Bisch, M. (2023) Modeling Soybean Planting Decisions with Network Diffusion: Does Herbicide Drift Affect Farmer Profitability and Seed Selection? *Journal of Agricultural and Applied Economics*

Young, J., & McCarty, T. (2022) Adapting Network Theory to Fit Spatial Network Externalities in Agriculture: A Case Study on Hemp Cross-Pollination. *American Journal of Agricultural Economics*

Lee, W., McCarty, T., Thayer, A., Larsen, R. (2022) Milner Ranch: Is the Grass Greener in Processing?. *Applied Economics Teaching Resources*

McCarty, T.J., Wang, Z., Kim, M., and Evans, J., (2022) The economic contribution of Utah's energy and mining industries: Utah Geological Survey Miscellaneous Publication 176, 12 p., 4 appendices, <https://doi.org/10.34191/MP-176> .

Herchenbach, J., B.C. Briggeman, J.S. Bergtold, A. Shanoyan, S.A. Low and B. Miller. "A Qualitative Assessment of Farmer Director Skills in Agricultural Cooperatives." *International Food and Agribusiness Management Review* (2023): Forthcoming.

Danelon, A.F., H.F.S. Spolador and J.S. Bergtold. "The Role of Productivity and Efficiency Gains in Sugar-Ethanol Industry to Reduce Land Expansion for Sugarcane Fields in Brazil" *Energy Policy* (2023) 172: 113327. <https://doi.org/10.1016/j.enpol.2022.113327>.

Sant'Anna, A.C., J.S. Bergtold, A. Shanoyan, M. Caldas and G. Granco. "Biofuel Feedstock Contract Attributes, Substitutability and Tradeoffs in Sugarcane Production in the Brazilian Cerrado: A Stated Choice Approach." *Renewable Energy* (2022) 185: 665 - 679.

Abstracts:

Boerngen, M.A. and J.W. Rickard. 2023. The relationship between experience and perception in the agricultural classroom. *NACTA Journal* 67, Suppl. 1:113.

Rickard, J.W. and M.A. Boerngen. 2022. Perceived agriculture experience impacts the learning environment. *NACTA Journal* 66, Suppl. 1:8.

Presentations and Invited Talks:

Boerngen, M.A. and J.R. Rickard. The relationship between experience and perception in the agricultural classroom. 69th Annual North American Colleges and Teachers of Agriculture (NACTA) Conference, *Poster presentation*. Las Cruces, NM, June 2023.

Tibbs, R. and M.A. Boerngen. Examining farmers' perceptions of precision agriculture technologies and on-farm precision experimentation. *Oral presentation*. NC-1210 Frontiers in On-Farm Experimentation Annual Meeting. January 2023, Corpus Christi, TX.

Tibbs, R. and M.A. Boerngen. Examining the perceptions of precision agriculture technologies and on-farm precision experimentation. *Poster presentation*. American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America International Annual Meeting. November 2022, Baltimore, MD.

Tibbs, R. and M.A. Boerngen. Farmers' views of on-farm precision experimentation (OFPE). *5-Minute Rapid-Fire Oral presentation*, American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America International Annual Meeting. November 2022, Baltimore, MD.

Rickard, J.W. and M.A. Boerngen. Perceived Agriculture Experience Impacts the Learning Environment. *Oral presentation*, 68th Annual North American Colleges and Teachers of Agriculture (NACTA) Conference. June 2022, virtual.

Boerngen, M.A. 2023. Farm Management and Financial Analysis. McLean County Farm Bureau Landowner 201 Seminar Series. February 16, 2023, Bloomington, IL, hybrid.

Boerngen, M.A., C. Prins, and H. Shear. 2022. Academic and Farm Management Roundtable. American Society of Farm Managers and Rural Appraisers Annual Conference, November 2022, San Antonio, TX.

Boerngen, M.A. and B. Basting. 2022. Grain Marketing and Crop Insurance. McLean County Farm Bureau Landowner 101 Seminar Series. February 24, 2022, Bloomington, IL.

Boerngen, M.A. 2022. Farmland Leasing. McLean County Farm Bureau Landowner 101 Seminar Series. February 10, 2022, Bloomington, IL.