Diane L. Rowland, Ph.D.
Dean of the College of Earth, Life, and Health Sciences
Director of the Maine Agricultural and Forest Experiment Station
105 Winslow Hall
University of Maine
Orono, ME 04469
229-869-2952; rowlandd1331@gmail.com

Dear Search Committee,

I enthusiastically submit my application materials for consideration for the position of Dean of the College of Agriculture and Director of the Alabama Agricultural Experiment Station at Auburn University. I am currently the Dean of the College of Earth, Life, and Health Sciences (ELH) and Director of the Maine Agricultural and Forest Experiment Station (MAFES) at the University of Maine. At the core of my interest in this opportunity is the remarkable reputation of excellence in research, instruction, and Extension that Auburn holds nationally and globally – something I experienced directly through my various roles as a crop scientist at both at the U.S. Department of Agriculture's Agricultural Research Service (USDA ARS) and the University of Florida. I experienced Auburn's leadership in the peanut breeding program with USDA ARS, its strength in soil science, and its excellence in education as I worked with Auburn graduates. As an administrator, I am excited about this opportunity to lead critical units in Auburn as the university works to refine its role, relevance, value, and purpose for the state of Alabama and nationally. The University of Maine is facing a similar process as we undergo a strategic re-envisioning of the institution. As Dean, I am actively involved and engaged in this process and will be responsible for the implementation of new directions for faculty, staff, and students. The goals of Auburn's strategic plan related to delivering an exceptional student experience, innovation, "catalytic" connection to stakeholders, and defining what is inherently distinctive about the institution represent an exciting opportunity to serve as Dean and Director, especially during a very dynamic time in higher education.

As a way of background and illustrating my qualifications for this position, as Dean of ELH, I oversee eleven academic units (named as schools and departments) ranging from the heritage disciplines of forestry and agriculture to marine science, earth and climate science, biology and ecology, wildlife and fisheries, economics, molecular and biomedical science, social work, communication sciences, and nursing. The college has approximately 2,300 undergraduates, 450 MSc, and 200 PhD graduate students, 185 faculty, and over 100 full-time staff. The college oversees over $49M in sponsored research (~third of the UMaine research portfolio), and partners with over 500 public, private, and industry organizations. I also manage 14,000 forested acres and 1,000 farmed acres as part of the Experiment Station, an off-campus marine research and education facility, and nearly 200,000 sq ft of off-campus and 300,000 sq ft of on-campus facilities.

My leadership positions at two land grant institutions (UMaine and the University of Florida) and the USDA ARS have uniquely prepared me for the Auburn Dean and Director position. Apart from my current position as Dean, I also maintained a twenty-year active and productive research career as a crop stress physiologist. My previous administrative positions included serving as: lead scientist in the USDA ARS; program developer and director of the Agroecology academic program at the University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS); founder and director of UF/IFAS Center for Stress Resilient Agriculture; and both associate chair and chair of the UF Agronomy Department (equivalent to a Unit Head permanent position).

Experience in strategic leadership and vision: UMaine is currently in the process of strategically re-envisioning its structure, relevance, and strengths for the next decade. Coming into my position as Dean, I was engrossed in a comparable process for the college itself when, upon hire, the UMaine Provost tasked me with re-naming the college (formerly the College of Natural Sciences, Forestry, and Agriculture) to better reflect the inclusion of our health units. I led the college through an inclusive, community building process to achieve this task, including utilizing an external consulting team, stakeholder listening sessions, a college-wide taskforce, and the

implementation of effective communication strategies throughout the process, both internally and externally. We concluded the process in 2023, renaming the college to Earth, Life, and Health Sciences. Since that time, both internal and external constituents have expressed excitement about this change, students have felt more included within our broad community, and we have heard nationally from other institutions that the name is innovative and modernized in comparison. In addition, it allowed us to elevate and highlight the distinct position of the Experiment Station to stakeholders. I believe this was a successful process because it was transparent, inclusive, data driven, and community led.

Lastly, I am involved in the campaign for a new Health Science complex, currently championed as one of UMaine's top strategic priorities by the University of Maine System Chancellor. I developed the initial concept and justification for the complex, composed of transdisciplinary spaces focused on critical research and teaching areas in a design that can provide agility and transition as research and teaching needs evolve over time.

A track record in budge development and long-range planning: As an administrator, I have experience with Responsibility Center Management (RCM – UF), Incremental (UMaine), and Zero-based budgeting (ZBB - UMaine) financial models. Under the UF RCM model, I was responsible for developing a five-year revenue generating model for an academic program and a university research center. In my current position, we have migrated from an Incremental to a hybrid ZBB model. Our current base budget (~$30M) includes Education and General (E&G), MEIF (Maine Economic Improvement Fund), and federal capacity funding with state E&G match. Having diverse and multiple funding sources is a unique situation from the other colleges on campus.

Like many higher education institutions, UMaine has experienced budget reductions since my time as Dean, so my knowledge and experience with these diverse funding sources has certainly expanded my experience in financial sustainability. I have navigated these reductions through various approaches: utilizing combinations of fund sources for both short- and long-term solutions in partnership with unit leaders; expanding revenue generating opportunities in partnership with the Vice President for Finance and Administration (VPFA); developing sustainable scholarship programs and budget models in partnership with the Vice President for Enrollment Management (VPEM); and determining how to maintain the college and unit core programs while finding opportunities for partnerships across units to maintain other program elements. I am currently developing, in partnership with the VPFA, a hybrid finance and human resources shared services structure to enhance sustainability in these areas for the institution. In this effort, I have relied on my experience operating within a shared service center from my administrative position at UF where I helped with the implementation and modification of this model as a unit leader. We are also utilizing Artificial Intelligence to model structures that deliver optimal operations.

Ensuring exceptional student experience: Core to any college is the support and success of students and I have extensive experience in this arena, from developing and leading the Agroecology program at UF to my current efforts within ELH at UMaine that enhance positive learning, support and expand research and other experiential learning opportunities, enhance options for a variety of learning styles, improve affordability, and meet the increasing need for student mental health support. Some of the best work in this area that the college conducts are in support of our two living-learning community options – S^3 Support for Science Students and the School of Nursing first-year evidence-based mindfulness stress reduction community. Most recently, I have led the development of the School of Forest Resources scholars' program in partnership with the VPEM that will provide qualified students full and half tuition support and guaranteed job placement at the end of their degree program.

Stakeholder engagement and inspiring deep partnerships: My role in fostering, enhancing, and building partnerships for ELH within local and regional communities crosses many disciplines and takes many different forms because of the broad nature of the college. One key role as Director of MAFES is my service as secretary of the Board of Agriculture, a group that has members representing most of the agricultural stakeholders in the state.

My collaboration with Extension in this role is pivotal to the group's success. I have responsibility in the state's marine communities through our Darling Marine Center that delivers K-12 programming and significant coastal semester experiences for our UMaine students. Similarly, through our Lobster Institute, we serve critical roles for the fishery, including hosting an annual international meeting where policy and regulation implementation can be extremely complicated. I oversee an on-campus speech and audiology clinic that serves both the campus and regional community, delivering essential services that are being phased out by many of our healthcare partners. All these efforts involve forming and supporting partnerships with community and campus organizations – from K-12 schools, expanding articulation agreements with community colleges, dovetailing with state agencies, collaborating with our regional campuses, and colleges and Extension within UMaine.

Fostering research and scholarship: One of my core values throughout my career is the integration of all three land grant mission areas – embedding research and instruction and ensuring effective communication of outcomes to stakeholders. The position of Dean and Director truly embodies this integration. By directing MAFES, I support research in agriculture, aquaculture, and forestry that drive direct benefits to the state and have impacts nationally and globally. I actively collaborate with a majority of the sixteen university level centers and institutes to enhance opportunities for faculty and students. An example of my facilitation approach to research, education, and outreach was my establishment of the Wyman's Wild Blueberry Research and Innovation Center and fellows program – a stakeholder partnered program and facility that supports teams of faculty and students who address industry needs. A large portion of my efforts in support of research and scholarly impact has been leading or co-leading over $11M in facilities renovations or program expansion through federal or state support of projects ranging from a robotic milker for our dairy herd to establishing a PhD program in the School of Nursing.

Support and champion a dedicated faculty and staff: My core value of supporting faculty and staff is interwoven in the building of a college community, supporting student success, maintaining and fostering innovation in research and education, and stewarding stakeholder partnerships. Most closely representative are my efforts to recruit, retain, and develop talented faculty and staff, through effective onboarding, mentorship, professional development, and career advancement. I have benefitted from these opportunities in my own career and actively support programs, such as LEAD 21 where I serve on the Board of Directors. Based on these experiences in my own career, I have focused on providing and developing broad support opportunities for faculty and staff. I established an inaugural Associate Dean position for faculty development and our work is focused on developing new faculty and staff onboarding programs, developing workload guidelines, and tenure and promotion preparation workshops. I established a staff council and annual award, helping to improve staff community and encouraging staff to communicate openly about needs and opportunities. Currently, I am serving as chair of the Provost's Advisory Council and am co-leading an effort to establish a search advocacy program at UMaine.

I hope this overview and my use of specific examples strongly communicate my preparation, experience, expertise and passion for excellence in the land grant mission of research, teaching, and Extension. I believe my strengths align well with the characteristics and skills you are seeking for the Dean and Director position in the College of Agriculture at Auburn University. I appreciate your consideration of my application materials and am excited to have an opportunity to advance in the search process.

Best wishes,

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Education:

1998 Ph.D. (Dec 1998), Biology, University of New Mexico, Albuquerque, NM; Physiological and genetic differentiation among Rio Grande cottonwood populations.

1992 B.S. (May 1992), Biology, University of New Mexico, Albuquerque, NM; Major: biology, minor: mathematics.

Relevant Professional History:

Administrative Positions

Dean of the College of Earth, Life, and Health Sciences (*formerly the College of Natural Sciences, Forestry, and Agriculture*), Director of the Maine Agricultural and Forest Experiment Station (August 2021-present), University of Maine, 105 Winslow Hall, Orono, ME 04469.

Department Chair (August 2019-2021), University of Florida, Agronomy Department, 3105 McCarty Hall B, Gainesville, FL 32611.

Interim Department Chair (January-August 2019), University of Florida, Agronomy Department, 3105 McCarty Hall B, Gainesville, FL 32611.

Director, Center for Stress Resilient Agriculture (2018-2021), University of Florida, Agronomy Department, G062 McCarty Hall D, Gainesville, FL 32611.

Program Director, Agroecology (2016-2019), University of Florida, Agronomy Department, G062 McCarty Hall D, Gainesville, FL 32611.

Associate Department Chair (July 2017–January 2019), University of Florida, Agronomy Department, 3105 McCarty Hall B, Gainesville, FL 32611.

Faculty/Research Positions

Professor (2014-2021), (formerly Associate Professor/Crop Physiologist, 8/2010 – 2014), University of Florida, Agronomy Department, G066D McCarty Hall, Gainesville, FL 32611.

Associate Professor/Crop Physiologist (February 2009–July 2010), Texas Agrilife Research/Texas A&M University, 1619 Garner Field Rd., Uvalde, TX 78801.

Plant Physiologist and Lead Scientist (March 2001–February 2009), USDA-ARS, NPRL, 1011 Forrester Dr. SE, Dawson, GA 39842.

Postdoctoral Research Scientist (part time; August 1997–February 2001), Northern Arizona University, Center for Environmental Sciences and Education, PO Box 5694, Flagstaff, AZ 86011-5694.

Relevant Administrative Experience:

Prior to my current position as dean and director, my administrative experience has included serving as: a lead scientist in the U.S. Department of Agriculture's Agricultural Research Service; program developer and director of the Agroecology academic program at the University of Florida (UF); developer and director of UF's Center for Stress Resilient Agriculture; and associate chair and chair of the UF Agronomy Department.

College Administration

I am currently the dean of the College of Earth, Life, and Health Sciences (ELH) at the University of Maine. The college is composed of more than 170 faculty and150 staff, and approximately 2500 undergraduate and 650 graduate students. The college base budget is approximately $32M and produces $27M in annual external funding (~38% of UMaine's research portfolio). The college consists of 11 academic units (named as schools and departments) and one cross-unit academic program, ranging from the heritage disciplines of forestry and agriculture, as well as marine science, earth and climate science, biology and ecology, wildlife and fisheries, economics, molecular and biomedical science, social work, communication sciences, and nursing. I also lead the Maine Agricultural and Forest Experiment Station (MAFES) as director. The Experiment Station encompasses the on-campus Clapp Greenhouses, Littlefield Ornamental Gardens and the Analytical Lab and Maine Soil Testing Service; five off-campus farms located throughout the state of Maine; over 14,000 acres of forest; the Darling Marine Center (https://dmc.umaine.edu/), and the Lobster Institute (https://umaine.edu/lobsterinstitute/). The college also runs the on-campus Conley Speech, Language and Hearing Center and is a major component of the Northeastern Regional Association of Coastal Observing Systems for ocean observing. These components total more than 300,000 square feet of building space on campus and another 300,000 square feet off-campus managed by ELH.

As Dean and Director, I serve and interact with: outside stakeholders including major corporations such as the J.D. Irving Corporation (leading lumber and forest products company in Maine and Canada), Wyman's Wild Blueberry Corporation (the U.S. leader in frozen fruit), Northern Light Health (leading healthcare provider in Maine), and Ready Seafood (worldwide lobster product provider); major state agencies including the Maine Department of Agriculture, Conservation and Forestry (DACF) and the Department of Marine Resources; and federal agencies including USDA NIFA, US Forest Service, and the national Integrated Ocean Observing System. Further, I interact with a number of non-profit organizations and foundations including the Maine TREE Foundation, Forest Society of Maine, Maine Organic Farmers and Gardeners Association, and the Maine Farmland Trust. One of the most critical roles I have as director of the Experiment Station (MAFES) is serving as the secretary for the Board of Agriculture, a board included in state statute for the purpose of advising the University of Maine System Chancellor and University of Maine President in agricultural industry needs for research and extension.

Highlights:

Infrastructure

- Leading $3M modernization renovation of MAFES Aroostook Farm through Maine Jobs and Recovery Program, and Congressional Directed Spending for MAFES Blueberry Hill Farm
- Leading $2.5M modernization of soil and plant analytical lab, serving all of New England
- Co-leading $750K modernization of teaching sawmill
- Developed and now implementing complete renovation of MAFES Witter Farm and dairy ($2.8M)
- Co-leading $2M modernization for irrigation and fresh pack production, UMaine Blueberry Hill Farm
- Co-managing cross-disciplinary faculty research funding (annual funding, ~$3M FY 2025) associated with new USDA-ARS Environmental Contamination monitoring Center of Excellence at UMaine

Service
- Chaired search for inaugural Dean of the Maine College of Engineering, Computing, and Information Science
- Chaired reappointment review team for the UMaine College of Liberal Arts and Sciences Dean Haddad
- Facilitator for the 2022 University of Florida (UF) Women Lead mentoring program for women grad students and postdoctoral associates (a program I initiated at UF)
- Serve on the Wageningen University International Advisory Board, Netherlands
- Serve on the LEAD21 Advisory Board
- Serve on the state of Maine PFAS Fund advisory group; co-lead of research subcommittee

Community building and operational efficiency
- Initiated, conducted inclusive process for re-naming the college to better represent health units
- Re-structured the Maine Agricultural and Forest Experiment Station (MAFES) positions to allow for better service to faculty and support for MAFES farms
- Implementing shared service model for finance and HR across schools and departments in the college
- Established college level diversity, equity, and inclusion officer
- Established new staff council and staff college award program to allow for better inclusion of staff within the college community
- Hold weekly "Winslow Wind-downs" – regular opportunity for faculty, staff, and students to informally connect together

Development and funding
- $14.4M in fundraising (August 2021 through part of December 2023)
- Co-led $20M Economic Development Administration proposal focused on Nursing and K-12 Education (not funded)
- Developed $500K estate gift for college soils testing lab facility
- Established new Wyman's Wild Blueberry Research and Innovation Center at MAFES Witter Farm
- Obtained $500K from the American Farmland Trust in support of faculty team research focused on PFAS

Stakeholder and legislative engagement
- Established inaugural college advisory board
- Serve as secretary of the state's Board of Agriculture as mandated by legislation
- Established first ELH Association of Public and Land-Grant Universities (APLU), Council for Agricultural Research, Extension and Teaching (CARET) delegate

Student support
- Established undergraduate and graduate student industry and organizational fellows program – inaugural positions through Wyman's Corporation
- Established fund in support of the ELH Academic Support Center focused on providing students with assistance for learning, navigating the university system, positive mental health, and economic emergencies
- Piloted the ELH Peer Mentoring program through the Department of Molecular and Biomedical Sciences to assist student success in core science courses
- Established inaugural student college advisory board

Career Research, Teaching, Extension, and Service:

Research

Highlights:
- Career total for grants awarded as PI or Co-PI: over $7M; included U Penn (lead) $26M NSF-ERC
- 138 Career Publications

- 2017-2021 developed, established, and directed Center for Stress Resilient Agriculture
- UF Graduate students trained from 2010: Chair or Co-Chair (8 PhD, 16 MSc)
- ARS Lead Scientist (2001-2009)

Peer-reviewed Journal Articles:

**** = graduate student advisees; ** = postdoctoral or research associate advisees***

1. de Camargo Santos, A.*, B. Schaffer, D. Rowland, M. Bremgartner, P. Moon, B. Tillman, and E. Bassil. 2024. Cultivating resilience: use of water deficit to prime peanut production and improve water stress tolerance. Plant Stress. 14:100637.
2. de Camargo Santos, A.*, B. Schaffer, D. Rowland, M. Bremgartner, P. Moon, B. Tillman, E. Rodrigues de Souza, and E. Bassil. 2024. Cross-generational effect of water deficit priming on physiology of peanut plants under water stress. J. Agronomy and Crop Science. https://doi.org/10.1111/jac.12736.
3. de Camargo Santos, A.*, B. Schaffer, A.G. Ioannou, P. Moon, M. Shahid, D. Rowland, B. Tillman, M. Bremgartner, V. Fotopoulos, and E. Bassil. 2024. Melatonin seed priming improves early establishment and water stress tolerance of peanut. Plant Physiology and Biochemistry. 211:108664.
4. Schattman, R.E., D.L. Rowland, and S.C. Keleman. 2023. Sustainable and regenerative agriculture: tools to address food insecurity and climate change. J. Soil and Water Conservation 78:33A-38A.
5. Song, Y.*, B.A. Zurweller*, M.D. Goyzueta Altamirano, B.L. Tillman, and D.L. Rowland. 2023. Genotypic stability in root system architecture and aboveground biomass revealed diverse adaptability of peanut (*Arachis hypogaea* L.) to moderate water deficit. J. Agronomy and Crop Science 209:816-826.
6. Song, Y.*, D.L. Rowland, B.L. Tillman, C.H. Wilson, P.J. Sarnoski, and B.A. Zurweller*. 2022. Impact of seed maturity on season-long physiological performance and offspring seed quality in peanut (*Arachis hypogaea* L.). Field Crops Research 288:108674, https://doi.org/10.1016/j.fcr.2022.108674
7. Peeples, J., Xu, W., Gloaguen, R.*, Rowland, D., Zare, A. and Brym, Z. 2021. Spatial and Texture Analysis of Root System Architecture with Earth Mover's Distance. *bioRxiv*.
8. Song, Y.*, Y.C. Tseng**, D.L. Rowland, B.L. Tillman, C.H. Wilson, P.J. Sarnoski, and B.A. Zurweller*. 2021. Multiple-generation seed maturity effects on seedling vigour in a production environment. J. Agronomy and Crop Science 207:1024-1040.
9. Zurweller, B.A.*, D.L. Rowland, B.L. Tillman, P. Payton, J. Erickson, K. Racette, and E. Carter*. 2021. Soil water depletion of peanut subspecies as influenced by water-use traits and soil water availability. J. Agronomy and Crop Science, https://doi.org/10.1111/jac.12554
10. Gloaguen, R.M.*, Z.T. Brym, J. Peeples, W. Xu, H.C. Chun, and D.L. Rowland. 2022. The plasticity of early root development in *Sesamum indicum* L. as influenced by genotype, water, and nutrient availability. Rhizosphere 21:100457.
11. Keeley M*, Rowland D, Vincent C*. Citrus photosynthesis and morphology acclimate to phloem-affecting huanglongbing disease at the leaf and shoot levels. Physiol Plant. 2022 Mar;174(2):e13662. doi: 10.1111/ppl.13662. PMID: 35253914.
12. Libby R. Rens, Lincoln Zotarelli, Andre Luiz Biscaia Ribeiro da Silva, Camila J.B. Ferreira, Cássio A. Tormena, Diane L. Rowland, Kelly T. Morgan. 2022. Managing water table depth thresholds for potato subirrigation, Agricultural Water Management, Volume 259, 107236, https://doi.org/10.1016/j.agwat.2021.107236.
13. Yoon, B.K., H. Tai, J.A. Jackman, S. Guha, C.R. Kagan, A.J. Margenot, D.L. Rowland, P.S. Weiss, N.-J. Cho. 2021. Entrepreneurial talent building for 21st century agricultural innovation. ACS Nano 15: 10748-10758, https://doi.org/10.1021/acsnano.1c05980.
14. Lee, W.-C., L. Zotarelli, D.L. Rowland, G. Liu. 2021. Evaluation of potato varieties grown in hydroponics for phosphorus use efficiency. Agriculture 11: 668, https://doi.org/10.3390/agriculture11070668.
15. Laza, H.E., J.T. Baker, C. Yates, J.R. Mahan, M.D. Burow, N. Puppala, D.C. Gitz III, Y.Y. Emendack, N. Layland, G.L. Ritchie, J. Chen, D. Rowland, D.T. Tissue, P.R. Payton. 2021. Effect of elevated CO2 on peanut performance in a semi-arid production region. Agricultural and Forest Meteorology 308-309, https://doi.org/10.1016/j.agrformet.2021.108599.
16. Gloaguen, R.M.*, D.L. Rowland, Z.T. Brym, C.H. Wilson, H.C. Chun, and R. Langham. 2021. A method for developing irrigation decision support systems de novo: example of sesame (*Sesamum indicum* L.) a known drought tolerant species. Agricultural Water Management 243:106435, https://doi.org/10.1016/j.agwat.2020.106435.
17. Jani, A.D. M.J. Mulvaney, J.E. Erickson, R.G. Leon, C.W. Wood, D.L. Rowland, and H.A. Enloe. 2020. Peanut nitrogen credits to winter wheat are negligible under conservation tillage management in the southeastern USA. Field Crops Research 249: 107739, https://doi.org/10.1016/j.fcr.2020.107739.
18. Aryal, P., L. Sollenberger, M. Kohmann, L. Severino da Silva, E. Shepard, K. Cooley, D. Rowland, J. Dubeux Jr. 2020. Rhizoma peanut genotype and planting date affect biomass allocation patterns and establishment performance. Crop Science 60: 1690-1701. http://dx.doi.org/10.1002/csc2.20142.
19. Xu, W., G. Yu, A. Zare, B. Zurweller*, D.L. Rowland, J. Reyes-Cabrera, F.B. Fritschi, R. Matamala, and T.E. Juenger. 2020. Overcoming small minirhiztron datasets using transfer learning. Computers and Electronics in Agriculture 175: 105466. https://doi.org/10.1016/j.compag.2020.105466 .

20. Vincent, C.*, D. Rowland, B. Schaffer, E. Bassil, K. Racette, and B. Zurweller. 2020. Primed acclimation: A physiological process offers a strategy for more resilient and irrigation-efficient crop production. Plant Science, https://doi.org/10.1016/j.plantsci.2019.110240.
21. Sconiers, W.B.*, D.L. Rowland, and M.D. Eubanks. 2020. Pulsed drought: The effects of varying water stress on plant physiology and predicting herbivore response. Crop Science 60: 2543-2561; https://doi.org/10.1002/csc2.20235.
22. Zamora-Re, M.I.*, M.D. Dukes, D. Hensley, D. Rowland, and W. Graham. 2020. The effect of irrigation strategies and nitrogen fertilizer rates on maize growth and grain yield. Irrigation Science, https://doi.org/10.1007/s00271-020-00687-y
23. Racette, K.*, B. Zurweller*, B. Tillman, and D. Rowland. 2020. Transgenerational stress memory of water deficit in peanut production. Field Crops Research 248: 107712, doi.org/10.1016/j.fcr.2019.107712.
24. Carter, E.T.*, D.L. Rowland, B.L. Tillman, J.E. Erickson, T.L. Grey, J.L. Gillett-Kaufman, M.W. Clark, and Y. Tseng. 2019. An analysis of the physiological impacts on life history traits of peanut (*Arachis hypogaea* L.) related to seed maturity. Peanut Science 46: 148-161.
25. Gloaguen, R.M.*, A. Couch, D.L. Rowland, J. Bennett, G. Hochmuth, D.R. Langham, and Z.T. Brym. 2019. Root life history of non-dehiscent sesame (*Sesamum indicum* L.) cultivars and the relationship with canopy development. Field Crops Research 241: 10.1016/j.fcr.2019.107560.
26. Guarin, J.R., Emberson, L., Simpson, D., Hernandez-Ochoa, I.M., Rowland, D. and Asseng, S. 2019. Impacts of tropospheric ozone and climate change on Mexico wheat production. Climatic change 155: 157-174; DOI: 10.1007/s10584-019-02451-4.
27. Hernandez-Ochoa, I.M., D.N.L. Pequeno, M. Reynolds, M.A. Babar, K. Sonder, A.M. Milan, G. Hoogenboom, R. Robertson, S. Gerber, D.L. Rowland, C.W. Fraisse, and S. Asseng. 2019. Adapting irrigated and rainfed wheat to climate change in semi-arid environments: Management, breeding options and land use change. European Journal of Agronomy 109: article 125915. https://doi.org/10.1016/j.eja.2019.125915.
28. Liang, X., J.E. Erickson, M.L. Silveira, L.E. Sollenberger, D.L. Rowland, and W. Vermerris. 2019. Quantifying shoot and root biomass production and soil carbon under perennial bioenergy grasses in a subtropical environment. Biomass and Bioenergy 128: https://doi.org/10.1016/j.biombioe.2019.105323.
29. Monsef, H.A., S.E. Smith, D.L. Rowland, and N.A. El Rasol. 2019. Using multispectral imagery to extract a pure spectral canopy signature for predicting peanut maturity. Computers and Electronics in Agric. 162: 561-572.
30. Pierre, A.K., M.J. Mulvaney, D.L. Rowland, B. Tillman, T.L. Grey, J.E. Iboyi, R.G. Leon, D. Perondi, and C.W. Wood. 2019. Foliar Fertilization as a Strategy to Increase the Proportion of Mature Pods in Peanut (*Arachis hypogaea* L.). Peanut Science 46: 140-147. doi:10.3146/PS17-20.1.
31. Racette, K.*, D. Rowland, B. Tillman, J. Erickson, P. Munoz, and W. Vermerris. 2019. Transgenerational stress memory in seed and seedling vigor of peanut (*Arachis hypogaea* L.) varies by genotype. Env. Exp. Botany 162: 541-549.
32. Zhang, J., B. Poudel*, K. Kenworthy, J.B. Unruh, D. Rowland, J.E. Erickson, and J. Kruse. 2019. Drought responses of above-ground and below-ground characteristics in warm-season turfgrass. J. of Agronomy and Crop Science 205: 1-12.
33. Zou, S., Y. Tseng**, A. Zare, D.L. Rowland, B.L. Tillman, and S. Yoon. 2019. Peanut maturity classification using hyperspectral imagery. Biosystems Engineering 188: 165-177, https://doi.org/10.1016/j.biosystemseng.2019.10.019.
34. Zurweller, B.A.*, D.L. Rowland, M.J. Mulvaney, B.L. Tillman, K. Migliaccio, D. Wright, J. Erickson, P. Payton, G. Vellidis. 2019. Optimizing cotton irrigation and nitrogen management using a soil water balance model and in-season nitrogen applications. Agric. Water Management 216: 306-314.
35. Colvin, B.C.*, Y. Tseng**, B.L. Tillman, D.L. Rowland, J.E. Erickson, A.K. Culbreath, and J.A. Ferrell. 2018. Consideration of peg strength and disease severity in the decision to harvest peanut in southeastern USA. J. Crop Improvement 32: 287-304.
36. Gloaguen, R.M.*, S. Byrd*, D.L. Rowland, D.R. Langham, and A. Couch. 2018. Planting date and row spacing effects on the agronomic potential of sesame in the southeastern USA. J. Crop Improvement 32: 387-417.
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Center for Stress Resilient Agriculture:

- Developed, established, and directed the CSRA in 2017-2021
- Transdisciplinary research approaches involving faculty across 15 UF/IFAS departments focused on complex issues associated with stress effects in agriculture

- Served as a keystone for research and academic programs in stress science – integrating both closely
- Tackled complex problems and issues in agriculture through integrated teams, expanding funding opportunities
- Programs under the CSRA included ExcelAGator – focused on providing training for graduate students and post-doctoral associates regarding professional development and interfacing with industry and other stakeholder groups
- Conducted Project Teams – courses revolved around bringing small teams of graduate students under mentorship from stakeholders and faculty and providing hands-on experience in solving actual problems encountered by agencies and companies. Examples included: an algal company from Israel, Syngenta and the Mars Corporation, a coffee cooperative in Costa Rica, and an emerging agroforestry company offering alternative tree crops for Florida citrus producers

CENTER FOR STRESS RESILIENT AGRICULTURE
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ExcelAGator

Extension

Highlights:

- Co-Developed (Rowland, Faircloth, Bennett, Drew) and implemented an online tool suite to deliver irrigation and harvest recommendations, as well as record keeping capabilities for peanut growers.
  - In collaboration with GA and AL, developed web-app platform for tools (Figure 1)
  - Added PeanutPROFILE tool to allow growers to have automated analysis of pod color for digging date determination (Figure 1)
  - Over 200 multi-state registered users
  - six state (FL, GA, AL, TX, NC, and SC) collaboration
  - Licensed by AgRenaissance
- Developed irrigation and agronomic systems for two new agronomic crops in FL and GA: sesame and castor
- 13 peer-reviewed UF Electronic Data Information Source (EDIS) publications

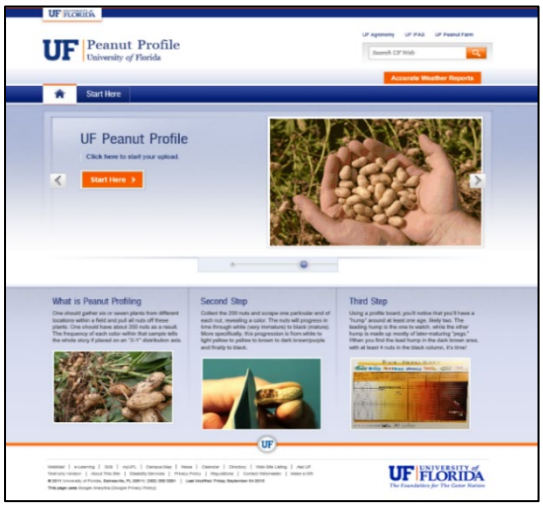

Figure 1: PeanutFARM (peanutfarm.org) web app and PeanutPROFILE tools.

Peer-reviewed UF EDIS (Extension) Publications:

Griffin, J.C., J. Vendramini, D. Rowland, and M.L. Silveira. 2017. Micronutrients considerations for warm-season forage grass systems in Florida. SS-AGR-418. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/ag419)

Carter, E. P. Troy, D. Rowland, B. Tillman, K. Wynn, K. Pierre, and M. Mulvaney 2016. Methods to evaluate peanut maturity for optimal seed quality and yield. SS-AGR-408. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/ag411)

Byrd, S.A., D.L. Rowland, and L. Zotarelli. 2014. Growth stages and tuber development of FL 1867 potato under full and reduced irrigation scheduling. SS-AGR-383. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/hs1213)

Dittmar, P. S. Byrd, L. Zotarelli, D. Rowland, and W. Stall. 2013. Manejo de malezas en las papas. HS1213. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/hs1213)

Dittmar, P., S. Byrd, L. Zotarelli, D. Rowland, and W. Stall. 2012. Weed management in potato. HS194. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/wg035)

Zotarelli, L., C. Hutchinson, S. Byrd, D. Gergela, and D. L. Rowland. Trastornos fisiológicos de la papa - Centro marrón y Corazón hueco. HS1214. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/hs1214)

Zotarelli, L., C. Hutchinson, S. Byrd, D. Gergela, and D.L. Rowland. 2012. Potato physiological disorders – brown center and hollow heart. HS945. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/hs197)

Zotarelli, L., C. Hutchinson, S. Byrd, D. Gergela, y D. L. Rowland. Trastornos fisiológicos de la papa - Grietas de Crecimiento. HS1211. Gainesville: University of Florida Institute of food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/hs1211)

Zotarelli, L., C. Hutchinson, S. Byrd*, D. Gergela, and D.L. Rowland. 2012. Potato physiological disorders – growth cracks. HS930. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/hs182)

Zotarelli, L., C.M. Worthington, C.M. Hutchinson, S. Byrd, D. Gergela, and D. Rowland. 2012. Potato physiological disorders – internal heat necrosis. HS 1145. Gainesville: University of Florida Institute of Food and Agricultural Sciences, Electronic Data Information Source (peer reviewed; http://edis.ifas.ufl.edu/hs395)

Campbell, D.N., D.L. Rowland, R. Schnell, J.A. Ferrell, and A.C. Wilkie. 2012. Determining the agronomic and physiological characteristics of the castor plant (*Ricinus communis* L.): developing a sustainable cropping system for Florida. Proc. Fla. State Hort. Soc. 125: (peer reviewed).

Rowland, D., S. Byrd, and J. Thompson 2011. Efficient water use in cropping systems. Research & Extension Highlights, Florida Sustainable Agriculture Research and Education, Summer 2011.

Bauer, P., W. Faircloth, D. Rowland, and G. Ritchie. 2012. Water-sensitivity of cotton growth stages. *In:* Cotton Irrigation Management for Humid Regions (C. Perry and E. Barnes, eds.), Cotton Inc., Cary, N.C.

Teaching

Highlights:

- Co-developed the Agroecology M.S. and Ph.D. concentrations - programs shared between the departments of Agronomy, Soil and Water Sciences, Agricultural and Biological Engineering, Entomology/Nematology and the School of Natural Resources and Environment; served as Program Director from inception to 2019
- Revenues were generated with “off-book” approval of program elements – funds are directed back to the department in support of the program and students (still ongoing).
- National Needs Fellows program in Agroecology with Florida A&M University
- Developed three related Agroecology Certificate programs, Sustainable Agroecosystems, Global Agroecology, and Tropical Agriculture
- Established formal agreements with fifteen international institutions (including UK, France, Australia, Brazil, South Korea, Italy, Israel, US Virgin Islands) for a shared graduate program allowing students to participate in research in global cropping systems

- Directed Agronomy Teaching Farm (on-campus farm) appointed 2012; eventually co-forming the UF Farm and Gardens under the Field and Fork program and served as the faculty liaison (appointed by the Dean of CALS) for the program until 2017

Table 1: List of courses developed and taught from 2010-2018 at the University of Florida.

Year	Course #	Course Title	Credits	Enroll. Range	Course Format
2011 & 2013	AGR 6442C	Physiology of Agronomic Plants	4	7-12	Lecture/Lab
2012-2013	AGR 4214C	Applied Field Crop Production	3	12-15	Lecture/Special Labs
2013-present	ALS 4154/5155	Global Agroecosystems	3	20-30	Lecture/DE format
2015-present	AGR 4214/5444	Phys & Ecol of Crops/Ecophys of Crop Prod	3	40-80	Lecture/DE format
2013 & 2016	AGR 6932	Seed Physiology	3	1	Lecture/Disc
2014	ALS 4932	Campus Food Systems	3	3	Lecture/Field Trips
2015	AGR 6905	Developing Plant Physiology Labs	3	4	Lecture/Labs
2015	AGR 6932	Physiology of Photochemistry	3	2	Lecture/Disc
2017-2018	ALS 6031	Project Teams in Agrobiology	3	7-10	Lecture/Project

Service as a faculty member

Highlights:

- Fellow, Crop Science Society of America 2019
- Board Member, Crop Science Society of America Board of Directors
- Associate Editor: Crop Science, Peanut Science
- Undergraduate Coordinator, Agronomy Department, UF
- Chair, Plant Science Program – UF Undergraduate Academic program for Agronomy, Plant Pathology, and Environmental Horticulture
- Panel Chair, USDA NIFA, SBIR Grants program
- Invited Reviewer, American Association for the Advancement of Science (AAAS) Grants Panel
- Completed HERS Leadership national program for women leaders in higher education
- Completed LEAD IFAS leadership training program, UF Institute for Food and Agricultural Sciences
- Appointed by the Dean of the College of Agricultural and Life Sciences (CALS) to serve on strategic goals and visioning committee, 2015
- Appointed by Dean of UF IFAS to serve on strategic goals and visioning committee, 2015
- Appointed by Dean of UF CALS to serve on Teaching Excellence workgroup, 2013

Membership in Professional Societies:

American Society of Agronomy
Crop Science Society of America
Soil Science Society of America

Selected Honors, Awards and Service:

2019	Fellow, Crop Science Society of America
2017	University of Florida, Term Professorship
2014-2017	Board of Directors, Crop Science Society of America
2015	Chair, Crop Irrigation Management Strategies Community, American Society of Agronomy
2012	Bailey Award, APRES
2010	Member Tri-Societies Women in Agronomy, Crops Committee
2010	Elected secretary, Texas AgriLife Research Faculty Association

2007	Elected CSSA chair of C2 crop physiology division
2001, 2002, 2003, 2004, 2006	Merit Award for Outstanding Performance, USDA-ARS
2005, 2007	Merit Award for Superior Performance, USDA-ARS

Selected Mentorships:

2021-2023	Co-developer and participant in new University of Florida Women Lead mentorship program for grad and post-doctoral scholars
2011 – 2015	Mentor, UF Minority Mentoring Program
2007 - 2012	CSSA Golden Opportunity Scholars Institute mentor; CSSA GO Scholars Selection Committee
2004, 2007	Mentored public school teachers and students, University of Georgia GIFT and Young Scholars Programs

Formal Leadership Training:

Trained Search Advocate, University of Florida/Oregon State University Search Advocate program

2024	HERS Coaching Circles Program
2018	HERS Leadership Institute (Higher Education Resource Services)
2017	LEAD IFAS Leadership Institute, University of Florida