Fitzroy B. Beckford (Roy)

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PERSONAL STATEMENT

I believe in the transformative power of education and outreach in addressing contemporary challenges in agriculture and natural resource management. With 30 years of experience in international agriculture, natural resources, extension outreach, and organizational management, I have developed deep expertise in advancing these initiatives. My career has been characterized by a commitment to environmental research, strategic educational programs, and impactful communication, all aimed at driving innovation in science education and outreach. I am motivated to leverage my skills in leading programs that serve communities, ultimately enhancing economic and social development

EDUCATION

Ph.D., Sustainability Education (Integrated Food-Energy Systems), Prescott College, Arizona – May 2015

MSc., Agriculture and Rural Development, University of the West Indies, Trinidad – June 2000

AAS., Animal Health and Veterinary Public Health, REPAHA (CARICOM), Guyana, South America - 1987

CAREER HISTORY

Associate Dean, College of Agriculture and Life Sciences (CALS), and Director of Extension, University of Vermont (May 03, 2021, to Present).

Responsibilities:

- Working with the Dean, Deans Council and college administrators, responsible for developing and participating in an environment that is supportive and respectful of faculty, staff, and students and creating a college that values excellence
- Administrative head of Vermont's state-wide Extension programs, activities, with extension offices located in 12 locations, and multiple applied research sites across all Vermont's counties
- Oversee the annual procurement and management of Smith-Lever and other multimillion million-dollar capacity funds directed to UVM Extension
- Provide leadership to Extension Faculty and Educational Outreach staff in program design, development, and delivery
- Ensure that Extension organizational structures are workable and strategic plans are implemented and refreshed in a timely manner to stay relevant to community needs
- Prepare reports and documentation of accomplishments for the US Department of Agriculture, state of Vermont, and the University as required
- Accommodate, support and supervise the functions of Northeast Sustainable Agriculture Research Education (NE-SARE) as regional host of this institution

Key Achievements since May 2021:

- Co-PI for the \$15 million dollar USDA grant establishing the Leahy Institute for Rural Partnerships, one of three such institutes in the US https://www.uvm.edu/ruralpartnerships
- Conducted ground-breaking research on the Vermont Dairy Sector to assess near term opportunities for sector development and operator success https://nedairyinnovation.com/resources/vermont-goat-dairy-research/
- Appointed to the Vermont Milk Commission by the Governor of Vermont
- Appointed Associate Professor for Extension in the College of Agriculture and Life Sciences, and focused on food systems teaching for undergraduates and graduates
- Serves as Chair of the association of Northeast Extension Directors (NEED) which ensures regional connection to national issues in development and planning
- Serves as Co-Chair of ECOP's Climate Priority Action Plan (PAT)
- Appointed Co-chair of the Vermont Agriculture Disaster Task Force by the Governor of Vermont
- Serve on multiple committees and boards at university, state, regional and national levels including ECOP, APLU, and the Extension Foundation
- Restructured UVM Extension's staffing and programmatic architecture by developing and implementing a new organizational structure in 2021

Agriculture Project Development Consultant to Al Attiya Gardens, Doha, Qatar (*January* 30, 2020, to September 30, 2020).

Responsibilities:

 Modelled and presented a sustainable operational plan for a US \$30 million investment agricultural production company, to produce a wide array of open and covered vegetable and small fruit crops in indoor hydroponic systems.

Key Achievements:

- Provided a plan of work for the organizational structure, budget allocation, enterprise
 management, and future expansion of the production company in anticipation of
 increased food demand during the 2022 Soccer World Cup games hosted by Qatar
- Operationalized full project start-up and worked with Arabic speaking staff under difficult conditions during the outbreak of the Coronavirus pandemic, to see the implementation of each agribusiness enterprise developed in the submitted plan.

Agriculture & Natural Resources Program Leader, North Carolina Agricultural and Technical State University (NCAT), College of Agriculture and Environmental Sciences (December 2018 to January 2020).

Core Responsibilities:

- As one of four members of the Extension leadership team, functionally contributed to the management of state funded programs and mandates, and fiscal resources
- Worked in close collaboration with the Extension Administrator, and with the Dean of the College of Agriculture and Environmental Sciences (CAES) to provide insight and

recommendations on issues ranging from regional food hubs to conceptualizing the development of the Interdisciplinary Resource Center for Small Farmers

- Administered fiscal spending, and provided academic and scientific leadership for the Agriculture and Natural Resources (ANR) Unit
- Promoted scientific innovation and community engagement through educational initiatives and outreach programs

Key achievements:

- Appointed to the national Wells Fargo IN² Board (St. Louis, Missouri) to allocate funding (US\$4.5 Million) to start-up business innovators across the US
- Appointed and served as secretary/outreach officer to the southern region public universities Agriculture/Natural Resources program leader's network (PLN)
- Reformed the functional capacity of the ANR Unit through a group approach that entrusted team members with developing the first program mission and strategic vision
- Developed social media content and email marketing that enabled information generated in the ANR Unit to be relayed to NC stakeholders in real time
- Collaborated with local stakeholders to develop customized pest management solutions that enhanced agricultural/ecological sustainability
- Established high level collaborations with county executives, district/regional directors, and program leaders within the state-wide Cooperative Extension Service
- Integrated diverse agricultural and environmental research findings into the unit's strategic plan
- Assisted with fundraisers and marketing operations, and oversaw \$6.2 Million in grant funding from private as well as Federal sources accrued to the ANR Unit from 2018-2020

County Extension Director, University of Florida, Institute of Food and Agricultural Sciences (IFAS), Lee County Extension (*February 2014 to November 2018*).

Core Responsibilities:

- Managed a professional faculty of extension agents working in agriculture, natural resources, horticultural sciences, marine and aquatic environments, 4-H youth development, family and consumer sciences, food systems, small farms initiatives, and environmental sustainability
- Developed annual work plans, implemented organization mission goals, managed annual budgets and departmental activities, and supervised administrative staff across all UF/IFAS Lee County Extension programs

Key Results as County Extension Director:

 Developed and coordinated the effective establishment of a functionally efficient and diverse Advisory Board to work proactively in the interest of county resiliency, and for the growth, development, and expansion of the County Extension organization

- Acquired annualized grant funding of \$1.5 million to establish the first food systems education program in Lee County as a direct consequence of the efforts of a focusoriented Lee County Food Task Force established under my leadership
- Taught classes in Sustainable Agriculture at the Florida Gulf Coast University (FGCU)
- Mentored and trained extension agents in the state of Florida, fostering a culture of continuous learning and improvement
- Established collaborative research initiatives with local stakeholders to enhance agricultural productivity and ecological sustainability
- Consulted on "building Extension efficiencies", "Natural Resources" and "agriculture development" issues in Haiti, Paraguay, Zimbabwe, Jamaica, and Qatar

Agriculture and Natural Resources Agent II and III, University of Florida, IFAS, Lee County Extension (April 2005 to March 2014)

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Key Results:

- Developed and implemented the contemporary ANR program in Lee County, Florida, and promoted to Agent III (Associate Professor Equivalent) and tenured by UF senate within six years of employment
- Established focused training workshops and program planning sessions collaboratively with subject-matter experts and policymakers in non-traditional areas such as urban farming, alternative enterprises, aquatic and natural areas education, agricultural diversification, and renewable energy
- Developed and implemented impactful educational programs addressing agricultural pest management, environmental stewardship, and sustainable practices
- Trained, and subsequently managed more than 300 Master Naturalist Volunteers and established the Southwest Florida Master Naturalist Chapter in Lee County, Florida
- Conducted public relations outreach on current issues in natural resources, production agriculture, and environmental resiliency programming.
- Founded and co-chaired the Southwest Florida Small Farmers Network which boosted interest in regional small farming enterprising and grew to a membership of 1,300 between 2007 and 2014
- Consulted with key stakeholders including the Florida Dept. of Agriculture to oversee the passage of Florida's first County Agritourism Ordinance aimed at improving the county's food systems and natural resources services sector

Agriculture Center Manager, Ministry of Natural Resources, Department of Agriculture, Government of the British Virgin Islands (BVI), Tortola, BVI. (*October 1994 to September 2003*)

Key Results:

- Served as Acting Chief Agricultural Officer (CAO) for the government of the British Virgin Islands in 2003, managing a staff of 150 and a budget of US \$2.5 million
- Member of the BVI Government's trade delegation which successfully negotiated bilateral trade and maritime agreements with neighbouring Caribbean Island territories

- Developed work programs and supervised marketing and outreach team responsible for implementing rural development intervention among subsistence enterprisers
- Utilized applied research, extension, and marketing strategies which increased the aggregate revenue of small-farmer groups from US \$15,000 in 1994 to \$470,000 per annum by the year 2000

Service on Boards and Committees (2021-present)

- Member, Vermont Food Bank Board of Advisors, March 2025-present
- Member, Agriculture Innovation Board/VT Pesticide Board (Appointed by the VT Secretary of Agriculture) 2022-Present
- Member, Board of Advisors, Vermont Council on World Affairs, 2023-Present
- Member, Intervale Board of Directors, 2023-Present
- Member, Board of Advisors & iWork's Board, Leahy Institute for Rural Partnerships, 2022-Present
- Co-Chair Vermont Agriculture Recovery Task Force, Appointed by the Vermont Governor, 2023-Present
- Member -Vermont Milk Commission (Appointed by the Governor of the state of Vermont) 2022-Present
- Member, Gund Institute Review Panel, (A team appointed by the VP of Research to assess the performance of the Gund Institute over the five years; 2017-2022)
- Member, ARS Food Systems Research Center Director Search Committee, College of Agriculture and Life Sciences, December 2021-March 2022.
- Member, Lake Champlain Sea Grant Director Search Committee, Rubenstein School, January 2022-April 2022.

SHORT TERM INTERNATIONAL CONSULTATIONS

- Saudi Arabia: Afforestation project for farmers and landowners, Qassim Region Saudi Ministry of Vegetation Cover, (January 15-22, 2025).
- Belize, Central America: Farmer Education and Development Initiative (June 2019)
- Global Leaf Energy Corp: Production of bioenergy crops, Gov. of Jamaica outreach, Kingston, Jamaica (August 2017 and November 2018)
- Buy A Brick Foundation: Farm to School Breakfast feeding program, Hwange District of Victoria Falls, Zimbabwe (June-July 2016)
- Florida Association for Volunteer Action in the Caribbean and Americas (FAVACA): Irrigation management/composting for small farmers development in Haiti (Annually each March, from March 2009 to March 2014)
- Costa Rica Seed Company: Farmer education on the propagation of Jatropha curcas to produce biodiesel and bio-kerosene in Costa Rica (September 2009).
- McNear International/Government of Paraguay: Adoption of Integrated Food-Energy Systems (IFES) strategies for rural Indigenous populations, Yrbuqua, Paraguay (November 2011)
- GuiLac Firm, Miami, Florida: Biodiesel feedstock applications in the Dominican Republic (October 2010)

HONORS AND AWARDS

2023 – Government of the British Virgin Islands, Dept of Agriculture, Contribution to Legacy Building/ Service Award

- 2015 Florida Association of County Agriculture Agents (FACAA) Search for Excellence Award; Award for innovative programming in Young, Beginning or Small Farmers/Ranchers
- 2014 University of Florida, IFAS; FEAFCS State Award for Innovative Programming
- 2013 University of Florida, IFAS; FANREP Mid Career Leadership Award
- 2012 University of Florida Extension Initiative, Innovation Team Award
- 2011 Florida Volunteer Corps Service Award Certificate
- 2011 Florida State Beekeeper's Association Lifetime Membership Award
- 2010 Florida Biomass Feedstock Growers Association Lifetime Membership Award
- 2009 National Association of County Agriculture Agents-Search for Excellence Award
- 2008 University of Florida, IFAS: FANREP Early Career Leadership Award
- 2008 Fort Myers Police Department, Weed and Seed Program Community Service Award
- 2003 Government of the British Virgin Islands Top Civil Servant Award, Distinguished Service in the Public Sector
- 2002 and 2001 Government of the British Virgin Islands Worker of the Year Award

PUBLICATIONS

Books Published

Poverty and Climate Change: Restoring a Global Biogeochemical Equilibrium. 290 pages - Taylor and Francis Books, Routledge Publishers, UK/NY. January 2019 https://www.routledge.com/Poverty-and-Climate-Change-Restoring-a-Global-Biogeochemical-Equilibrium/Beckford/p/book/9780367500580

Advancing an integrated food-energy system (IFES) in Haiti: Applying resiliency and sustainability models in ecologically degraded environments, 305 pages – UMI 3706257 – ProQuest, Ann Arbor, MI. May 2015.

The Third Pillar: Unearthing the Agro-economic Potential of the British Virgin Islands, 129 pages – ISBN 976-8180-65-X (Pbk) – Tandem Press, London. April 2002

Books Edited

Wessinger, K.J., 2017. Creative Practice and Socioeconomic Crisis in the Caribbean; A path to sustainable growth. Earthscan books, London and New York. https://www.amazon.com/Creative-Practice-Socioeconomic-Crisis-Caribbean/dp/0415784425

Journals Edited

Journal of Sustainability Education, 2014-2016. www.susted.com

Publications – Dairy Industry Research Report (Principal Investigator)

Beckford, R., et al, 2023. Vermont Goat Dairy Research Report: Understanding the challenges and Opportunities of an expanding Goat Dairy Sector in Vermont.

Publications - Papers (Peer Reviewed)

Kluson, R., **Beckford, R**., Halman, R., 2008. The Southwest Florida Small Farmer Network: A Participatory and Regional Approach to Diversified Horticultural Production Extension. Proc. Fla. State Hort. Soc. 121:228–229. 2008.

https://www.cabidigitallibrary.org/doi/pdf/10.5555/20183271603

Publications - Book Chapters (Peer Reviewed)

*Statement of practice from Taylor and Francis/Routledge Publishers: All of our books are peer-reviewed at proposal and/or manuscript stage by respected academic specialists who provide advice on the content, quality, and potential market for a finished book, and our textbooks are widely researched and reviewed by active teachers in the field. https://search.app/KTA2Q1EYCmwZVWfVA

Beckford, F. B. 2019. "The American Native and the European Invader," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 5–15. London: Routledge. file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/The%20American%20native%20and%20the%20European%20invader%20%E2%80%93%20the%20nexus 25 02 10 22 42 58.pdf

Beckford, F. B. 2019. "Facets and Consequences of Environmental Slavery," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 16–25. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/Facets%20and%20consequences%20of%20environmental%20slavery 25 02 10 22 43 52.pdf

Beckford, F. B. 2019. "It's the Ecology Stupid," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 26–40. London: Routledge. file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/It%E2%80%99s%20the%20ecology,%20stupid 25 02 10 22 44 35.pdf

Beckford, F. B. 2019. "The Biogeochemical Cycles in the Era of Anthropogenic Climate Change," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 41–49. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/The%20biogeochemical%20cycles%20in%20the%20era%20of%20anthropogenic%20climate%20change 25 02 10 22 4 5 26.pdf

Beckford, F. B. 2019. "A Review of the Biogeochemical Cycling of the Elements of Life," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 50–70. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/A%20review%20of%20the%20 biogeochemical%20cycling%20of%20the%20elements%20of%20life_25_02_10_22_46_12.pdf

Beckford, F. B. 2019. "Addressing the Biogeochemical Cycles with Transformative Anthropocentrism," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 71–74. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/Addressing%20the%20biogeochemical%20cycles%20with%20Transformative%20Anthropocentrism 25 02 10 22 46 58. pdf

Beckford, F. B. 2019. "Feeding the Future: Farming in the Post-Carbon Economy," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 77–96. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/Feeding%20the%20future 25

Beckford, F. B. 2019. "Transitioning to Low-Carbon Farming: An Assessment of the Process," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 97–108. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/Transitioning%20to%20low-carbon%20farming 25 02 10 22 48 08.pdf

Beckford, F. B. 2019. "The Kinetic Role of Biochar in Climate Change Mitigation," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 109–123. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/The%20kinetic%20role%20of% 20biochar%20in%20climate%20change%20mitigation 25 02 10 22 49 25.pdf

Beckford, F. B. 2019. "Biochar in the Age of Renewable Energy Policy," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 124–137. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/Biochar%20in%20the%20age% 20of%20renewable%20energy%20policy 25 02 10 22 50 04.pdf

Beckford, F. B. 2019. "How Alleviating Energy-Poverty will also improve the Climate," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 138–166. London: Routledge.

file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/How%20alleviating%20energy-poverty%20will%20also%20improve%20the%20climate 25 02 10 22 50 43.pdf

Beckford, F. B. 2019. "Envisioning a Transformative Age," In: Poverty and Climate Change Restoring a Global Biogeochemical Equilibrium, 167–175. London: Routledge. file:///C:/Users/roybe/OneDrive/Desktop/P&CC%20chapters/Envisioning%20a%20transformative%20age 25 02 10 22 51 16.pdf

White Papers

Beckford, F. B et al., 2024: The Cooperative Extension System Climate Action Plan: A vision for Co-Creating climate change solutions with our partners for Agriculture Lands, Natural Resources, and Community. Insights and opportunities identified via the 2024 Climate Action Convening, January 31-Feb 1, Tucson, Arizona. https://extension.org/portfolio-item/cooperative-extension-system-climate-action-plan/

Beckford, F.B., Dubuque, N., 2024: Vermont Agriculture Recovery Task Force: Extreme Weather Impact and Recovery.

https://agriculture.vermont.gov/sites/agriculture/files/documents/Ag%20Recovery%20Task%20Force%20Report.pdf

Beckford, F.B., 2009. Managing sensitive lands and habitats in the Lee County DR/GR Area through the application of low impact sustainable agricultural practices. https://www.esterotoday.com/wp-content/uploads/DRGR/doc2/981574557v0.pdf

Lectures/Speaker Invitations and Course collaborations – UVM

Beckford, F. B., 2024. Part 3: The Columbian Exchange - Birth of the modern global food system. *Farm to Table Course*, foundational food systems course for undergraduate food systems and nutrition majors. Department of Nutrition and Food Sciences, Spring 2024.

Beckford, F.B. 2024. Fruit Economics: The political economy of Latin America and the Caribbean. CDAE 003. Spring 2024.

Beckford, F. B., 2023. Part 2: The Columbian Exchange - Birth of the modern global food system. *Farm to Table*, foundational food systems course for undergraduate food systems and nutrition majors. Department of Nutrition and Food Sciences, Spring 2023.

Beckford, F. B., 2022. The Columbian Exchange - Birth of the modern global food system.

Farm to Table Course, foundational food systems course for undergraduate food systems and nutrition majors. Department of Nutrition and Food Sciences, Fall 2022

Beckford, F.B., 2022. The case of Haiti. Introduction to development in the Caribbean and Central America. CDAE 003. October 2022.

Beckford, F.B., 2022. Proactive Persistence: Extension's approach to the Covid-19 pandemic. Larner School of Medicine speaker series. April 2022

Beckford, F.B., 2022. Fruit Economics: The political economy of Latin America and the Caribbean. Issues & Solutions seminar, Food Systems Graduate Program, March 24, 2022.

Beckford, F.B., 2021. Extension in the history and future of the land grant university. GundxChange Speaker Series, Gund Institute. September 17, 2021

Presentations, Invited (US States)

Beckford, F. B. 2019. Keynote Address: Mechanization, Robotics & Artificial Intelligence for Labor Intensive Agriculture, NC A&T State University, North Carolina Ag Expo, Wilmington, NC, December 5-7, 2019.

Beckford, F.B. 2013. Energy solutions with sustainable agricultural practices. Sarasota Sister Cities International Conference on Sustainability through Renewable Energy & Aquaculture. University of South Florida Campus, November 2013, Sarasota/Manatee Counties, Florida. http://alturl.com/st5qo

Beckford, F. B.2013. Getting started in farming: The decision-making process. ECHO International Intern Training Conference, September 3013. Fort Myers, Florida.

Beckford, F. B.2013. The cost of production: Crop budgets. Growing Growers, Expanding Markets and Accessing Healthy Food in Broward County Conference. September 2013. Ft. Lauderdale, Florida. http://www.touchbroward.org/growing-growers-workshops/

Beckford, F.B., 2011. The Current Status of Jatropha curcas Research in Florida. Florida Alliance for Renewable Energy (FARE) Conference. Sanibel Island, Florida.

Becker, T., Beckford, F.B., Avila, M., 2011. Better Worm Recyclers for Great and Small Practitioners. FANREP. EPAF Annual Conference, Orlando, Florida.

Beckford, F. B., 2011. Growing Vegetables in South Florida. Lehigh Acres Edible Exchange, Lee County, Florida.

Beckford, F. B., 2011. Littoral Bank Reconstruction. Lee County Hyacinth Control District, Pond Watch Quarterly Meeting, Buckingham, Florida.

Beckford, F. B., 2011. Invasive Species 101/102: Vines, Shrubs and Grasses. 16th Annual Southwest Florida Invasive Species Conference, Florida Fish and Wildlife Service. Florida Gulf Coast University.

Beckford, F. B. 2011. The Urban Stormwater Pond Management Program. Lee County Extension. South Florida Water Management District, Fort Myers Service Area, Ft. Myers.

Beckford, F. B., and Avila M., 2009. "The SustainabLEE Community Partnership Meetings – a Participatory Approach to Community Consensus Through Sustainability Extension." Extensional Professionals Association of Florida (EPAF) Professional Improvement Meeting, Twenty-Third Annual Proceedings, Lake Buena Vista, FL, p 58.

Beckford, F. B.2009. "Development of Jatropha curcas as a Biodiesel Feedstock." Lee County Extension, EPAF Professional Improvement Meeting, <u>Twenty-Third Annual Proceedings</u>, Lake Buena Vista, FL, p 16.

Beckford, F. B.2009. Lee County Urban Farm Tour 2009. Extensional Professionals Association of Florida (EPAF) Professional Improvement Meeting, <u>Twenty-Third Annual</u> Proceedings, Lake Buena Vista, FL, p 29.

Brown, S. H.; Beckford, F. B., Hill, C.B.; & Headlee, K.S.; 2009. "A Taste of Lee: Introducing

Locally Raised Exotic Products to Growers and Consumers." Extensional Professionals Association of Florida (EPAF) Professional Improvement Meeting, <u>Twenty-Third Annual</u> Proceedings, Conference Proceedings, Lake Buena Vista, FL, p 14.

Beckford, F. B. 2008. "Jatropha as a Biodiesel Feedstock" Florida State Horticultural Society (FSHS) Annual Meeting, Ft. Lauderdale, Florida.

Kluson, R., Beckford, F.B. and Halman, R. 2008. The Southwest Florida Small Farmer Network - a Participatory and Regional Approach to Diversified Horticultural Production Extension. FSHS Annual Meeting, Ft. Lauderdale, FL.

Presentations, Invited (National/International)

Beckford, F. B.2013. Biochar for soil and crop productivity in integrated food-energy systems. 2013 North American Biochar Symposium, October 2013. University of Massachusetts, Amherst. http://symposium2013.pvbiochar.org/

Beckford, F.B., 2011. Jatropha curcas, Hibiscus cannabinus and Camelina sativa as Biofuel Feedstocks. Bioenergy Conference of the Americas, Medellin, Colombia, South America.

Beckford, F. B.2010. "Jatropha curcas – The Lee County Experience." Engineers Without Borders International Conference, Denver, Colorado, USA, March 18-21, 2010.

Beckford, F. B.2009. "J. curcas, from Potential to Kinetic Energy." Biofuels Conference, Costa Rica Seed Company, Jaco Beach, Costa Rica.

Beckford, F. B. 2009. "Jatropha as a Biodiesel Feedstock" Jatropha World Conference, Miami, Florida.

Beckford, F. B. 2008. "Small-farming alternatives for energy production and added income streams", ECHO International Agricultural Conference, Fort Myers, Florida.

Beckford, F. B. 2008. "Jatropha as a Biodiesel Feedstock" National Biodiesel Conference, Orlando, Florida.

Beckford, F. B.2008. "Small-farming Alternatives for Energy Production and Added Income Streams." ECHO International Agricultural Conference, Fort Myers, Florida.

Selected Extension Publications (UF/IFAS)

As Agriculture and Natural Resources agent at the University of Florida IFAS, Lee County Extension, I published a substantial number of county facts sheets and audiovisual presentations over 15 years.

Curriculum Guides and Handbooks

Beckford, F. B.2008. Pine Trees of Florida. Lee County Extension, UF/IFAS (16 pages).

Beckford, F. B.2008. "Plants Poisonous to Horses in Southwest Florida - A collection of Factsheets" Lee County Extension: UF/IFAS. (52 pages)

Beckford, F. B.2007. "Starting your Rabbit Business" Lee County Extension: UF/IFAS. (11 pages)

Beckford, F. B.2007. "Goats - Starting your Herd" Lee County Extension: UF/IFAS. (54 pages)

Beckford, F. B.2007. "Alpacas - Starting your Herd" Lee County Extension: UF/IFAS. (34 pages)

Beckford, F. B.2007. "Horse Management in the Florida Environment - A Collection of Factsheets" Lee County Extension: UF/IFAS. (65 pages)

Extension Papers and County Factsheets

Beckford, F. B.2018. Pruning Tropical Fruit Trees: Mango. Lee County Extension, UF/IFAS (4 pages).

Beckford, F. B., and Gresham, R. 2014. Agritourism activities, practices and uses in Lee County, Florida. Lee County Extension, UF/IFAS (7 pages).

Beckford, F. B., and Prosnak, M. 2014. Lee County Extension Plant and Insect Diagnostic Clinic (PIDC). Lee County Extension, UF/IFAS (4 pages).

Beckford, F. B.2014. Protecting your agricultural resources from freeze and frost. Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2014. An update list of safe chemicals for use at local community garden sites. Lee County Extension, UF/IFAS (5 pages).

Beckford, F. B.2014. Morse Shores Preserve and eco-park: Approaches in developing the site. Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2014. Nutrient balance issues: Notes. Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2013. Community garden and farmers markets' location in Lee County. Lee County Extension, UF/IFAS (1 page).

Beckford, F. B.2013. Lee County farm trail participants. Lee County Extension UF/IFAS (1 page).

Beckford, F. B.2013. Biochar for soil and crop productivity. Lee County Extension, UF/IFAS (1 page).

Beckford, F. B.2013. An illustrative farm plan. Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2013. A generic community garden plan, demonstrating raised beds. Lee County Extension, UF/IFAS (1 page).

Beckford, F. B.2013. Making a compost pile – A pictorial illustration. Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2013. Making hot compost in 8 steps. Lee County Extension, UF/IFAS (4 pages).

Beckford, F. B.2013. Making compost – the basics. Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2013. Food Desert Areas (FDAs) and food security in Lee County. Lee County Extension, UF/IFAS (1 page).

Beckford, F. B.2013. Planting the pond and lake littoral zones. Lee County Extension, UF/IFAS (1 page).

Beckford, F. B.2013. Desirable, ethnic, non-traditional, and traditional vegetables and herbs for South Florida. Lee County Extension, UF/IFAS (1 page).

Beckford, F. B.2011. Home Gardening Tips; Composting. Lee County Extension, UF/IFAS (1 page)

Beckford, F. B.2011. Home Gardening Tips; Rules of Thumb for Water Use on Gardens. Lee County Extension, UF/IFAS (2 pages)

Beckford, F. B.2011. Jatropha Propagation Methods; Nursery Seedlings. Lee County Extension, UF/IFAS (2 pages)

Beckford, F. B.2011. Pesticide use in Community Gardens. Lee County Extension, UF/IFAS (4 pages)

Beckford, F. B.2011. Instructions; Planting Sugarcane. Lee County Extension, UF/IFAS (2 pages)

Beckford, F. B.2011. Some Basic Information for Raising Hogs Profitably. Lee County Extension, UF/IFAS (3 pages)

Beckford, F. B.2011. The Urban Stormwater Pond Management Program. Lee County Extension, UF/IFAS (2 pages)

Beckford, F. B.2011. Recommended Treatment techniques for Invasive Plants Within SWFL-CISMA Boundary. Lee County Extension, UF/IFAS (4 pages)

Beckford, F. B.2010. Controlling Predation on Goats – Some Ideas. Lee County Extension, UF/IFAS (6 pages).

Beckford, F. B.2010. Cuban Treefrog - *Osteopilus septentrionalis*. Lee County Extension, UF/IFAS (3 pages).

Beckford, F. B.2009. Pruning Tropical Fruit Trees: Avocado. Lee County Extension, UF/IFAS (2 pages)

Beckford, F. B., and Iseneker, D. 2007. Benefits of Bees to Food and Agriculture. Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2007. Earleaf Acacia, an Invasive and Undesirable Plant. Lee County Extension, UF/IFAS (1 page).

Beckford, F. B.2006. Growing Shiitake Mushrooms: Getting Started. Lee County Extension, UF/IFAS (1 page).

Beckford, F.B. 2005. Bloat in Ruminants (Goats). Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2005. Grassland Crayfish (*Procambarus gracilis*). Lee County Extension, UF/IFAS (1 page).

Beckford, F. B.2005. Excluding Non-native Walking Catfish from Fishponds. Lee County Extension, UF/IFAS (2 pages).

Beckford, F. B.2005. Caring for the Orphaned or Abandoned Calf. Lee County Extension, UF/IFAS (2 pages).

Instructional Multimedia Developed for Workshops and Educational Seminars

Beckford, F. B.2017. Appropriate Technology: Biochar as a sustainable agricultural practice. Lee County Extension, UF/IFAS (78 slides)

Beckford, F. B.2017. State of Extension. Lee County Extension, UF/IFAS (7 slides)

Beckford, F. B.2017. Smallholder Animal Systems. Lee County Extension, UF/IFAS (105 slides)

Beckford, F. B.2017. Production of herbs in South Florida, UF/IFAS (27 slides)

Beckford, F. B.2017. Edible Native Fruits of Florida. Lee County Extension, UF/IFAS (33 slides)

Beckford, F. B.2017. Lee County Urban Farms, 2017. Lee County Extension, UF/IFAS (5 slides)

Beckford, F. B.2017. Some landscaping ideas for companion planting with common shrubs and succulents of South Florida. Lee County Extension, UF/IFAS (39 slides)

Beckford, F. B.2017. Vegetable production basics for Cape Coral. Lee County Extension, UF/IFAS (57 slides)

Beckford, F. B.2017. Cane Toads (S. marina) in South Florida. Lee County Extension, UF/IFAS (7 slides)

Beckford, F. B.2017. Inflorescences. Lee County Extension, UF/IFAS (34 slides)

Beckford, F. B.2017. Invasive trees of Florida; the big six. Lee County Extension, UF/IFAS (15 slides)

Beckford, F. B.2016.Basic Hydroponics: Hydroponics 101. Lee County Extension, UF/IFAS (25 slides)

Beckford, F. B.2016.Best practices for Tropical fruits in the SW Florida environment. Lee County Extension, UF/IFAS (95 slides)

Beckford, F. B.2016.Biochar for soil restoration and environmental management. Lee County Extension, UF/IFAS (50 slides)

Beckford, F. B.2016. Citrus diseases and some citrus alternatives. Lee County Extension, UF/IFAS (44 slides)

Beckford, F. B.2016. Classifying plants. Lee County Extension, UF/IFAS (26 slides)

Beckford, F. B.2015.Common shrubs and succulents of SW Florida. Lee County Extension, UF/IFAS SCIENCES (23 slides)

Beckford, F. B.2016. Joel Boulevard Agro-Eco Park. Lee County Extension, UF/IFAS (50 slides)

Beckford, F. B.2016. Managing Food waste: Hunger, consumption, and waste. Lee County Extension, UF/IFAS (27 slides)

Beckford, F. B.2016. Poisonous Plants. Lee County Extension, UF/IFAS (39 slides)

Beckford, F. B.2016. Raising meat goats in SW Florida. Lee County Extension, UF/IFAS (59 slides)

Beckford, F. B.2016. Summer vegetable production in SW Florida. Lee County Extension, UF/IFAS (65 slides)

Beckford, F. B.2016. Species, varieties, hybrids, cultivars, clones, and GMO's. Lee County Extension, UF/IFAS (7 slides)

Beckford, F. B.2016. Gardening trends and project design ideas. Lee County Extension, UF/IFAS (41 slides)

Beckford, F. B.2015.Getting started in farming. Lee County Extension, UF/IFAS (17 slides)

Beckford, F. B.2015.Biochar for soil restoration and environmental management. Lee County Extension, UF/IFAS (37 slides)

Beckford, F. B.2015. Lee GROWS: Extension 2015. Lee County Extension, UF/IFAS (18 slides)

Beckford, F. B.2015. Lychee production in South Florida. Lee County Extension, UF/IFAS (51 slides)

Beckford, F. B.2015. Introduction to organic farming. Lee County Extension, UF/IFAS (42 slides)

Beckford, F. B.2015. Small farming: Urban farming trends in Lee County 2015 update. Lee County Extension, UF/IFAS (40 slides)

Beckford, F. B.2015. Managing the scourge of fire ants. Lee County Extension, UF/IFAS (17 slides)

Beckford, F. B.2015. Herbicides: A focus on glyphosate, AKA 'roundup'. Lee County Extension, UF/IFAS (56 slides)

Beckford, F. B.2014. Grow strawberries like a pro. Lee County Extension, UF/IFAS (59 slides)

Beckford, F. B.2014. Some additional information on mangoes. Lee County Extension, UF/IFAS (44 slides)

Beckford, F. B.2014. Review for the General Standards (CORE) Exams: A Reassessment. Lee County Extension, UF/IFAS (148 slides)

Beckford, F. B.2014. Healthy Lee nutrition goal team: Improving the nutritional habits of the people of Lee County. Lee County Extension, UF/IFAS (20 slides)

Beckford, F. B.2014. Innovative farmer presentation: Herban Gardens. Lee County Extension, UF/IFAS (9 slides)

Beckford, F. B.2014. Poisonous plants. Lee County Extension, UF/IFAS (39 slides)

Beckford, F. B.2014. Small farming/Urban farming trends in Lee County, Florida. Lee County Extension, UF/IFAS (34 slides)

Beckford, F. B.2014. The case for urban farms. Lee County Extension, UF/IFAS (9 slides)

Beckford, F. B.2014. Urban and community gardening: An update. Lee County Extension, UF/IFAS (35 slides)

Beckford, F.B. 2013. Energy solutions with sustainable agricultural practices. Lee County Extension, UF/IFAS (38 slides)

Beckford, F. B.2013. Threats to Florida's Natural Upland Ecosystems: A Review of Invasive Species and Mode of Invasiveness. Lee County Extension, UF/IFAS (45 slides)

Beckford, F. B.2013. Basics of Composting. Lee County Extension, UF/IFAS (27 slides)

Beckford, F. B.2013. The Urban Pond as Wetland Habitat. Lee County Extension, UF/IFAS (74 slides)

Beckford, F. B.2013. Algae Management on Ponds. Lee County Extension, UF/IFAS (51 slides)

Beckford, F. B.2013. Making Hot Compost in Eight Steps. Lee County Extension, UF/IFAS (9 slides)

Beckford, F. B.2013. Getting started in farming: The decision-making process. Lee County Extension, UF/IFAS (32 slides)

Beckford, F. B.2013. Gardening systems for small-scale agro-entrepreneurs. Lee County Extension, UF/IFAS (34 slides)

Beckford, F. B.2013. 'Micro-production' of food and herbs for underserved populations. Lee County Extension, UF/IFAS (25 slides)

Beckford, F. B.2013. Understanding vegetable garden insects. Lee County Extension, UF/IFAS (53 slides)

Beckford, F. B.2013. Growing tomatoes successfully. Lee County Extension, UF/IFAS (46 slides)

Beckford, F. B.2013. Tomatoes: For 4-H'ers. Lee County Extension, UF/IFAS (13slides)

Beckford, F. B.2013. Pruning tropical fruit trees. Lee County Extension, UF/IFAS (28 slides)

Beckford, F. B.2013. Plant propagation methodologies - Mango. Lee County Extension, UF/IFAS (32 slides)

Beckford, F. B.2013. Deleterious conditions of <u>Mangifera indica</u>. Lee County Extension, UF/IFAS (36 slides)

Beckford, F. B.2013. Biochar for Soil and Crop Productivity in Integrated Food-Energy Systems. Lee County Extension, UF/IFAS (44 slides)

Beckford, F.B. 2013. The Biogeochemical Cycles and Global Climate Change. Lee County Extension, UF/IFAS (28 slides)

Beckford, F. B.2013. Planning the livestock farm: Assessing resources and setting goals. Lee County Extension, UF/IFAS (18 slides)

Beckford, F. B.2013. Understanding internal parasites of goats. Lee County Extension, UF/IFAS (29 slides)

Beckford, F. B.2013. The cost of production: Crop budgets. Lee County Extension, UF/IFAS (43 slides)

Beckford, F. B.2013. Vegetable growing systems: from raised beds to community gardening. Lee County Extension, UF/IFAS (29 slides)

Beckford, F. B.2011. Invasive Species 101/102: Grasses, Vines and Shrubs. Lee County Extension, UF/IFAS (45 slides)

Beckford, F. B.2011. Control of Fire Ants on Pastures. Lee County Extension, UF/IFAS (34 slides)

Beckford, F. B.2011. Expanding the Farm Business Beyond the Farm Gate. Lee County Extension, UF/IFAS (22 slides)

Hazell, J.E., Owens, L., Headlee, K., Hill, C. B., Beckford, F.B., Becker, T., Brown S. H., Suggs, C. 2011. UF/IFAS. Lee County Extension. (13 Slides)

Beckford, F. B.2011. Snakes of Florida. Lee County Extension, UF/IFAS (31 slides)

Beckford, F. B.2011. Growing Vegetable in Florida: Some Common Considerations. Lee County Extension, UF/IFAS (42 slides)

Beckford, F. B.2011. Handling, Storage and Spill Management of Herbicides. Lee County Extension, UF/IFAS (31 slides)

Beckford, F. B.2011. History of Plant Propagation. Lee County Extension, UF/IFAS (41 slides)

Beckford, F. B.2011. Home Gardening Essentials. Lee County Extension, UF/IFAS (38 slides)

Beckford, F. B.2011. Littoral Bank Reconstruction. Lee County Extension, UF/IFAS (15 slides)

Beckford, F. B.2011. Plant Propagation Methodologies: Seeding, Grafting, Budding, layering and Cuttings. Lee County Extension, UF/IFAS (54 slides)

Beckford, F. B.2011. Propagation of Plants by Cuttings. Lee County Extension, UF/IFAS (24 slides)

Beckford, F. B.2011. Propagation by Seed. Lee County Extension, UF/IFAS (19 slides)

Beckford, F. B.2011. The Advantage of Net and Shade Houses in Urban Agriculture. Lee County Extension, UF/IFAS (21 slides)

Beckford, F. B.2011. Twelve Native Edible Plants of Florida. Lee County Extension, UF/IFAS (14 slides)

Beckford, F. B.2008. "Identifying and Choosing Plants for the Littoral Space". Lee County Extension, UF/IFAS (15 slides)

Beckford, F. B.2008. Aqua-scaping and Wildlife habitat. Lee County Extension, UF/IFAS (40 slides)

Beckford, F. B.2008. The Importance of Littoral Plants in the Management of Aquatic Systems. Lee County Extension, UF/IFAS (41 slides)

Beckford, F. B.2008. "Careers in Agriculture". Lee County Extension, UF/IFAS (10 slides)

Beckford, F. B.2008. "So, You Wanna Grow Jatropha". Lee County Extension, UF/IFAS (60 slides)

Beckford, F. B.2008. "Jatropha curcas as Biodiesel Feedstock". Lee County Extension, UF/IFAS (27 slides)

Beckford, F. B.2008. "Plants Poisonous to Horses in South Florida". Lee County Extension, UF/IFAS (18 slides)

Beckford, F. B.2008. "Careers in Agriculture". Lee County Extension: UF/IFAS (10 slides)

Beckford, F. B.2008. "Jatropha curcas as Biodiesel Feedstock" Lee County Extension, UF/IFAS. (27 slides)

Beckford, F. B.2008. "Plants Poisonous to Horses in South Florida". Lee County Extension, UF/IFAS (18 slides)

Wilson, N. M., Beckford, F. B., Walter, J. & Elliott, R. M. 2007. "Small Farm Tour: Livestock and Marketing" Lee County Extension, UF/IFAS (16 slides)

Beckford, F. B.2007. "Lee County Alternative Energy Project". Lee County Extension, UF/IFAS (37 slides)

Beckford, F. B.2007. "Propagating Edible Tropicals". Lee County Extension: UF/IFAS (61 slides)

Beckford, F. B.2007. "The Pineapple; Ananas comomos". Lee County Extension: UF/IFAS (13 slides)

Beckford, F. B.2007. "Horse Management in the Florida Environment". Lee County Extension: UF/IFAS (10 slides)

Beckford, F. B.2007. "Why Raise Goats in Florida? Selecting Goats, Do's and Don'ts". Lee County Extension: UF/IFAS (38 slides)

Beckford, F. B.2007. "Apis mellifera in the Florida Environment". Lee County Extension, UF/IFAS (47 slides)

Beckford, F. B.2007. "Diseases and Pests of the Honeybee". Lee County Extension, UF/IFAS (45 slides)

Beckford, F. B.2007. "History, Structure and Purpose of the Honeybee". Lee county Extension: UF/IFAS (74 slides)

Beckford, F. B.2007. "Honing the Honey Harvest; Basic Bee Botany". Lee County Extension, UF/IFAS (49 slides)

Beckford, F. B.2007. "How to Plant a Banana Plant". Lee County Extension: UF/IFAS (12 slides)

Beckford, F. B.2007. "Practical Suggestions for Efficient Rescue Efforts in 911 Bee Stinging Incidents". Lee County Extension: UF/IFAS (28 slides)

Beckford, F. B.2007. "Introduction to Tropical Fruits". Lee County Extension: UF/IFAS (49

slides)

Beckford, F. B.2007. "Nutrition and Health – Rabbits". Lee County Extension: UF/IFAS (18 slides)

Beckford, F. B.2006. "How to Plant a Tree Seedling". Lee County Extension: UF/IFAS (19 slides)

Beckford, F. B.2006. "Non-timber Forest Products for Forest Landowners". Lee County Extension: UF/IFAS (32 slides)

Beckford, F. B.2006. "Ponds and Lakes". Lee County Extension: UF/IFAS (47 slides)

Beckford, F. B.2006. "Pasture Renovation and Management - Why Renovation is Important" Lee County Extension: UF/IFAS (34 slides)

Beckford, F. B.2006. "The Jeopardy Tree Game". Lee County Extension: UF/IFAS (40 slides)

Beckford, F. B.2006. "Water Jeopardy". Lee County Extension: UF/IFAS (51 slides)

Beckford, F. B.2006. "Let's Talk about Trees". Lee County Extension: UF/IFAS (16 slides)

Beckford, F. B.2006. "Markets and Marketing for Goats and Goat By-products". Lee County Extension: UF/IFAS (28 slides)

Beckford, F. B.2006. "Everything a Kid Should Know about Honeybees". Lee County Extension: UF/IFAS (15 slides)

Beckford, F. B.2006. "Swine Care and Management" (49 slides). Lee County Extension: UF/IFAS (49 slides)

Beckford, F. B.2006. "Goat Health and Diseases; Injection Methods" (60 slides). Lee County Extension: UF/IFAS (60 slides)

Beckford, F. B.2006. "Best Management Practices - BMP's" in Urban Crop Production. Lee County Extension: UF/IFAS (49 slides)

Beckford, F. B.2006. "Identification and Management of some Non-indigenous Plants Important to Southwest Florida". Lee County Extension: UF/IFAS (33 slides).

Beckford, F. B.2006. "Identification of Some Natural Areas Invasive Weeds" (30 slides). Lee County Extension: UF/IFAS (30 slides)

Beckford, F. B.2006. "Steps to Protect Yourself from Pesticides - English/Spanish" (14 slides). Lee County Extension: UF/IFAS (14 slides)

Beckford, F. B.2006. "Vegetable Gardening in Southwest Florida". Lee County Extension: UF/IFAS (33 slides)

Beckford, F. B.2006. "The Goat's Mammary System". Lee County Extension: UF/IFAS (37 slides)

Beckford, F. B.2006. "Creating Wildlife Habitat with Native Aquatic Plants". Lee County Extension: UF/IFAS (53 slides)

Beckford, F. B.2005. "Refuges and Preserves". Lee County Extension: UF/IFAS (21 slides)

Beckford, F. B.2005. "Raising Healthy Goats and Lambs". Lee County Extension: UF/IFAS (38 slides)

Beckford, F. B.2005. "Raising Healthy Poultry and Rabbits". Lee County Extension: UF/IFAS (30 slides)

Beckford, F. B.2005. "Application Methods and Rates – Aquatic Areas Pesticides. Lee County Extension: UF/IFAS (36 slides)

Beckford, F. B.2005. "Application Methods and Rates - Natural Areas Pesticides". Lee County Extension: UF/IFAS (42 slides)

Beckford, F. B.2005. "ID of Invasive Species and Non-target Species". Lee County Extension: UF/IFAS (29 slides)

Beckford, F. B.2005. "Herbicides Used in Natural Areas and their Characteristics" (49 slides). Lee County Extension: UF/IFAS (49 slides)

Beckford, F. B.2005. "Herbicide Technology and Usage". Lee County Extension: UF/IFAS (50 slides)

Beckford, F. B.2005. "Stinging Insects - Bees". Lee County Extension: UF/IFAS (27 slides)

Beckford, F. B.2005. "Winged Invaders - Africanized Killer Bees". Lee County Extension: UF/IFAS (35 slides)

Beckford, F. B.2005. "Florida's 6 Major Endangered Animals - SWAMPS". Lee County Extension: UF/IFAS (12 slides)

Abstracts (Conferences)

Beckford, F. B.2015. Advancing an Integrated Food Energy System (IFES) in Haiti: Applying resiliency and sustainability models in ecologically degraded areas. Doctoral dissertation abstract, May 2015, Prescott College, Arizona. http://gradworks.umi.com/37/06/3706257.html

Beckford, F.B. 2013. The biogeochemical cycles and global climate change. Interdisciplinary PhD Workshop in Sustainable Development. April 2013. New York. http://www.fight-entropy.com/2013/01/third-interdisciplinary-phd-workshop-in.html

Beckford, F.B., 2011. Jatropha curcas, Hibiscus cannabinus and Camelina sativa as Biofuel Feedstocks. Bioenergy Conference of the Americas, Medellin, Colombia, South America.

Becker, T., Beckford, F.B., Avila, M., 2011. Better Worm Recyclers for Great and Small Practitioners. FANREP. EPAF Annual Conference, Orlando, Florida.

Beckford, F. B.2008. "Jatropha curcas (Physic Nut) as a Potential Biodiesel Feedstock Crop in Florida," Florida State Horticultural Society (FSHS), Annual Conference Proceedings.