

Buzzworthy! Moving Closer to a Sustainable Food Future by Mimicking Nature on Agricultural Lands

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Background/Objectives. Modernized efficient food and fiber production is critical for national security, human health, and independence. Agriculture represents one of America's most important industries and it is vulnerable to overuse of high quality land and climate change. Drought, flooding, severe storms, and native habitat conversion leads to habitat loss which in turn affects regional biodiversity. While the linkage between climate change resiliency and species biodiversity can be somewhat indirect, enhanced vegetative community structure does have a direct link to carbon sequestration and soil health. Additionally, provisioning of biodiversity, through habitat enhancement is predicted to help buffer insect and wildlife populations against climate variability. One component of biodiversity, important to agriculture, is pollinators. Pollinators are an essential part of ecosystems and without them more than 100 crops and an estimated \$3 billion in annual economic value would be at risk. Many crops depend on pollination by species such as birds, bats, and insects. Our case study focuses on establishing pollinator habitat to enhance insect pollinator services on blueberry (*Vaccinium* spp.) farm sites in rural southeast Georgia. Blueberry farmers contribute significantly to Georgia's economy, and these farms rely heavily on both native bees and honeybees for production.

Approach/Activities. Under technical service agreements with the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Woodard & Curran is working collaboratively with NRCS, the University of Georgia (UGA), and Georgia blueberry growers to advance wide-spread adoption of efficient Integrated Pollinator and Pest Management (IPPM) practices on commercial agricultural land. Woodard & Curran is leading the technical plan development and application of conservation practices while UGA is ensuring that guided practices are supported by the latest available research findings. UGA is also providing ecological monitoring to showcase pollinator and biodiversity responses to implemented practices. Outcomes of our project will provide technical guidance materials that will be used during training events and workshops on IPPM.

Results/Lessons Learned. Our technical service agreement contract began in Fall 2020 and runs through Fall 2024. The team has currently completed site selection at four blueberry farms in southeastern Georgia. We have completed technical development of the pollinator habitat conservation plans for each site including site preparation, seed and planting specifications, monitoring and maintenance plans. UGA conducted initial baseline monitoring for both vegetation and insect communities at each site. During fall and winter (2021-2022) season, in coordination with producers, we will implement our technical pollinator habitat conservation plan on three blueberry farms, and complete implementation for all four farms by the end of 2022. We will track vegetative growth and pollinator activity over the 2022-2023 growing seasons. For our presentation, we plan to discuss the status of the program, site selection activities, the conservation plan development process, site preparation best practices, and lessons learned from this program as well as our experience with other similar pollinator habitat implementation projects.