

Evaluating Georgia Peanut Production Scenarios Using the Field to Market Fieldprint Platform Sensitivity Analysis

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As growers begin or continue to implement improved on-farm management practices, the use of new technologies has allowed growers to quantify their sustainable impacts. Field to Market: The Alliance for Sustainable Agriculture, a multi-stakeholder initiative (MSI), has been at the forefront of this movement in quantifying on-farm sustainability. With the use of their Fieldprint Calculator, researchers and growers can convert yearly crop management practices into quantifiable scores based on eight sustainability metrics. In Georgia, peanut is an essential row crop grown and is considered the official state crop. As the peanut industry continues to spotlight the importance of sustainability and implementing improved management practices, researchers have identified a need to measure sustainability trends in the peanut crop. Additionally, sensitivity analyses can be conducted with the use of the Fieldprint Calculator to simulate different production scenarios. Simulations can be used to determine optimum production changes for maximizing sustainability. Therefore, the main objective of this project is to evaluate sensitivity analyses using the Field to Market Fieldprint Calculator to evaluate ways that sustainability metrics can be improved upon in peanut production and how they vary from year-to-year. Data collection began in 2014 with one grower and has grown to 45 growers in 2021. Evaluation of the data identified trends in the energy use and greenhouse gas emissions metrics. These trends will serve as a base-layer for growers making improved management decisions to better their on-farm sustainability. Thus, we have begun running simulations specifically on tillage and irrigation management. These simulations will help us to determine the effects of changing production practices on these two sustainability metrics. By running the simulations, we will be able to better advise producers as to which production practices will have the greatest impact on these metrics.