

## AN OPTICAL YIELD MONITOR FOR PEANUTS

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**OBJECTIVE:** Evaluate the potential of adapting a cotton optical yield monitor for accurately measuring yield in peanut.

**RESULTS:**

During FY17, with funding from the Georgia Peanut Commission which was leveraged by funding from Kelley Manufacturing Company (KMC) we evaluated the potential of adapting an optical yield monitor (OYM) developed for use on cotton to peanut. The OYM was developed at Mississippi State University. The OYM consists of two mass-flow sensors, a data acquisition system, and a DGPS receiver. The mass-flow sensors are active optical sensors that contain the energy source and detectors in one single unit. Our colleagues loaned us their prototype OYM – the only one in existence. We evaluated the OYM during the 2016 growing season. Our conclusion from the 2016 study was that the OYM has great potential to serve a peanut yield monitor if design modifications could be implemented to improve its durability.

During FY18, we redesigned the mass-flow sensors and contracted with a prototyping firm (Bencor, Houston, TX) to fabricate four mass flow sensors for us. Our intent was to field test the new mass flow sensors during the 2017 growing season. However production delays at Bencor exacerbated by Hurricane Harvey resulted in us not receiving the mass flow sensors in time for field testing.

All involved parties are committed to completing this project and KMC continues to be interested in marketing the technology. We intend to request a 1-year no-cost extension on the funds and conduct testing during the 2018 growing season.