TITLE:

Cotton Yield Mapping at AG-CARES, Lamesa, TX, 2003

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RESULTS AND DISCUSSION:

A John Deere 7445 cotton stripper equipped with a MICRO-TRAK® yield monitor was used to harvest cotton at AG-CARES in 2003. The MICRO-TRAK® yield monitor system used is comprised of sensors located on the stripper conveyance ducts, and data logger to monitor cotton flow. At intervals of one to three seconds a data point is taken that consists of latitude, longitude, and an output from the sensors. The yield variable is calculated using the ground speed of the machine and the cotton flow calculated from the sensors located on the air shoot to the basket. An updated version of the data transfer process included software and hardware that allows for more efficient data handling. The data is transferred to a handheld computer equipped with software (Farm Works SiteMate®) capable of producing preliminary "on-the-go" maps. This program converts all data to a useable format (latitude, longitude, and cotton flow) that can then be processed and mapped by using more sophisticated mapping software such as ArcView. The main conversion done is the cotton flow variable. SiteMate® converts the flow of cotton to units of either bur cotton wt./A or lint cotton wt./A (based on the turnout from the gin). Using the processed data from SiteMate®, maps were created showing the relative differences in cotton production across different regions of the field (Figure 1). Higher yielding areas such as the peanut-cotton rotation and higher irrigation treatments are identifiable in the map.

AG-CARES 2003

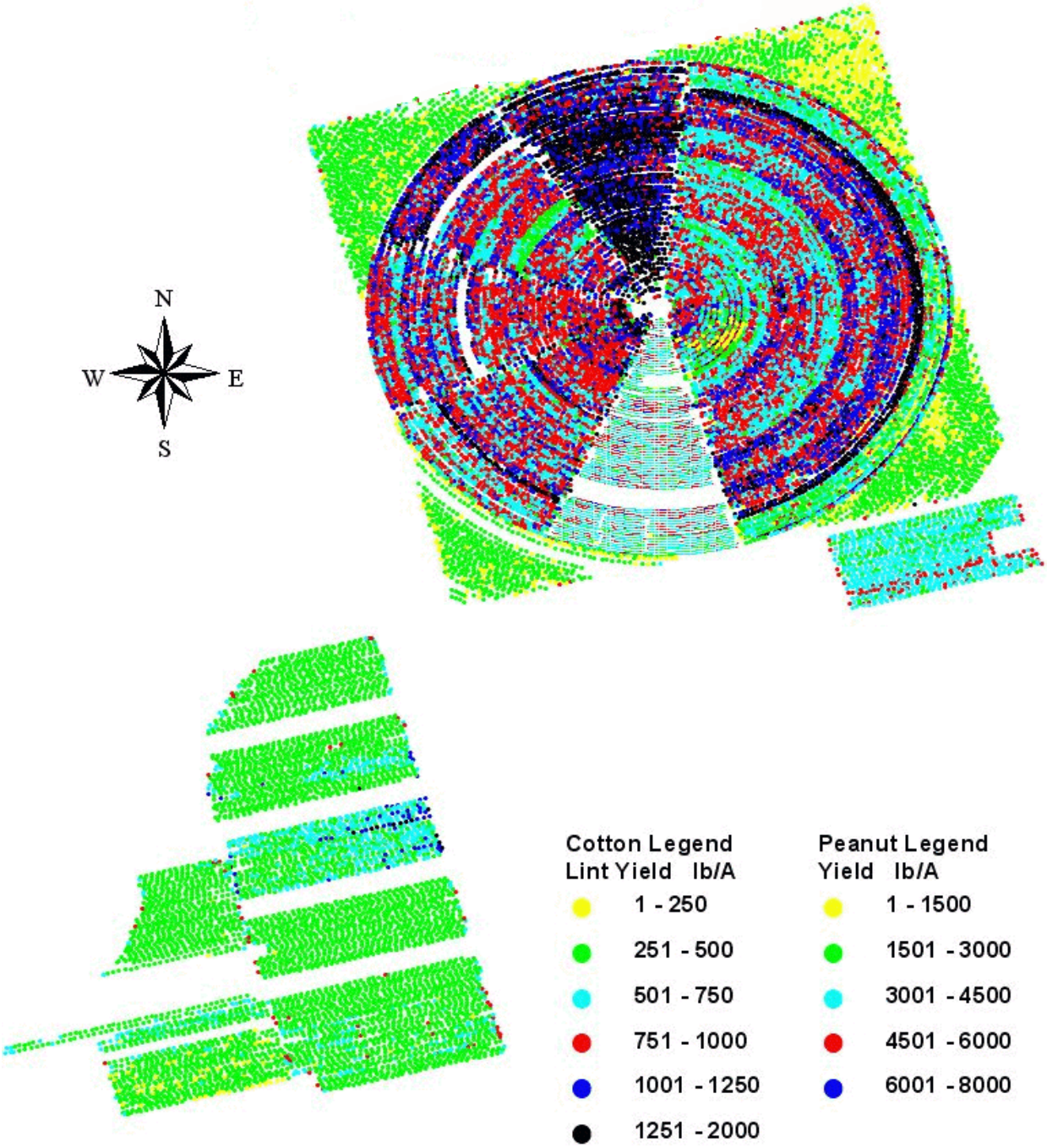

Figure 1. AG-CARES aerial map, Lamesa, TX, 2003.