

Introduction

The Cotton Jassid (*Amrasca biguttula*), or two-spotted cotton leaf hopper, has become an emergent concern for cotton growers in Georgia and the entire US cotton growing region. The first detection in Brooks County, Georgia was on August 6th 2025, and the first detection of entire field damage was on August 8th. The only recommendation that was shown to work at that time was Bidrin. Due to lack of data on this emergent pest, University of Georgia Extension arranged research trials at UGA research station and on farm in several counties, including Brooks. The trials focused on insecticides likely to provide control. In Brooks County two trials were conducted at a farm location with a high infestation, one small plot and one large strip trial. A total of 9 insecticides were evaluated at this location, and data were collected by adult and nymph counts per 25 leaves at 4, 7, and 14 Days after treatment (DAT). At 4 DAT, in the small plot trial, Bidrin (79%), Centric (71%), Carbine (84%), and Sivanto (80%) stood out. The three insecticides evaluated in the strip trial all preformed well. At 4 DAT the control levels were: Bidrin 96%, Argyle 87%, and Centric 91%. These data were similar to other county trials as well as the research stations. These trials provide growers with the most up to date information for management of this emergent invasive pest.

Objectives

- Evaluate the efficacy of insecticides likely to provide control the cotton Jassid in a field situation
- Determine the yield difference between treatments and non-treated control
- Generate data to be used to create effective grower recommendations
- Disseminate the results

Materials and Methods

- Randomized Complete Block Design
- Small plot - 9 treatments x 4 reps:

NTC	Knack	Bifenthrin	Bidrin	Centric	Carbine	Dimethoate	Portal	Sivanto
	5 fl oz/ac	6.4 fl oz/ac	6 fl oz/ac	2 oz wt/ac	2.5 oz wt/ac	16 fl oz/ac	16 fl oz/ac	10.5 fl oz/ac

- Large strip trial - 4 treatments x 3 replications:

NTC	Bidrin	Argyle	Centric
	8 fl oz/ac	9 fl oz/ac	2.5 oz wt/ac

- Counts of adults and nymphs made at 4, 8, and 14 DAT
- Cooperating grower made a broadcast application of Bidrin after data collection
- 16 row feet hand harvested for NTC, Knack, Bidrin, Centric, and Carbine small plots

Results

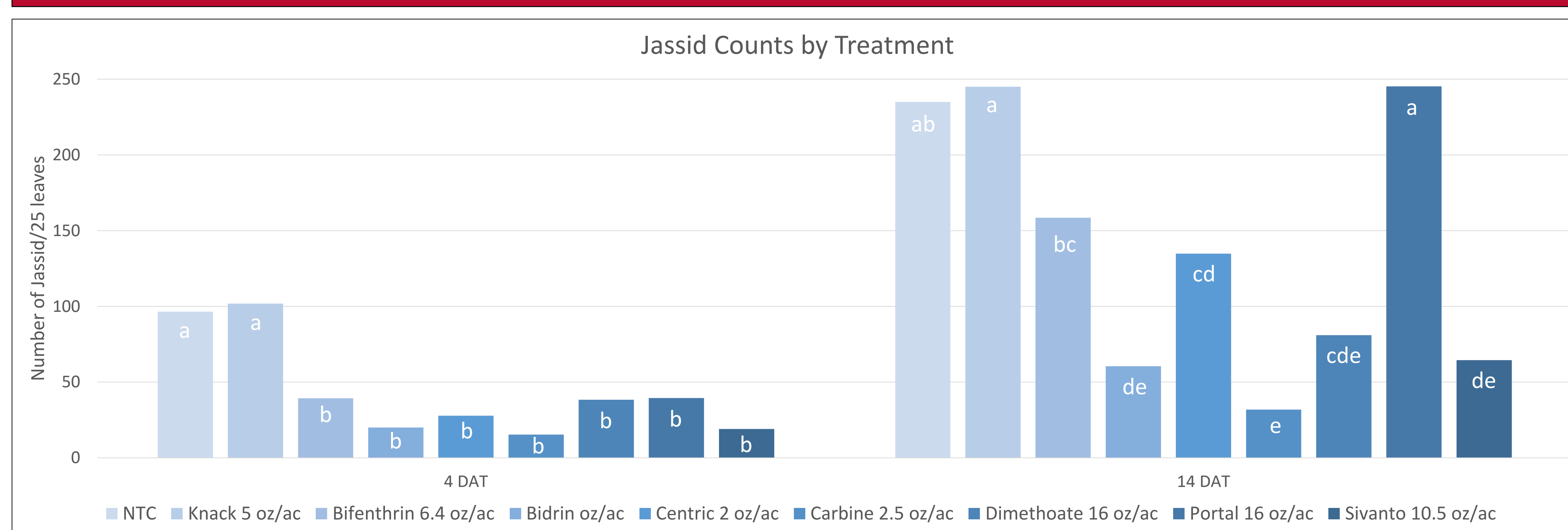


Figure 1. Total Jassid count (adult and nymph) per 25 leaves by treatment at 4 and 14 DAT. Means with the same letter do not significantly differ (P=.05, LSD).

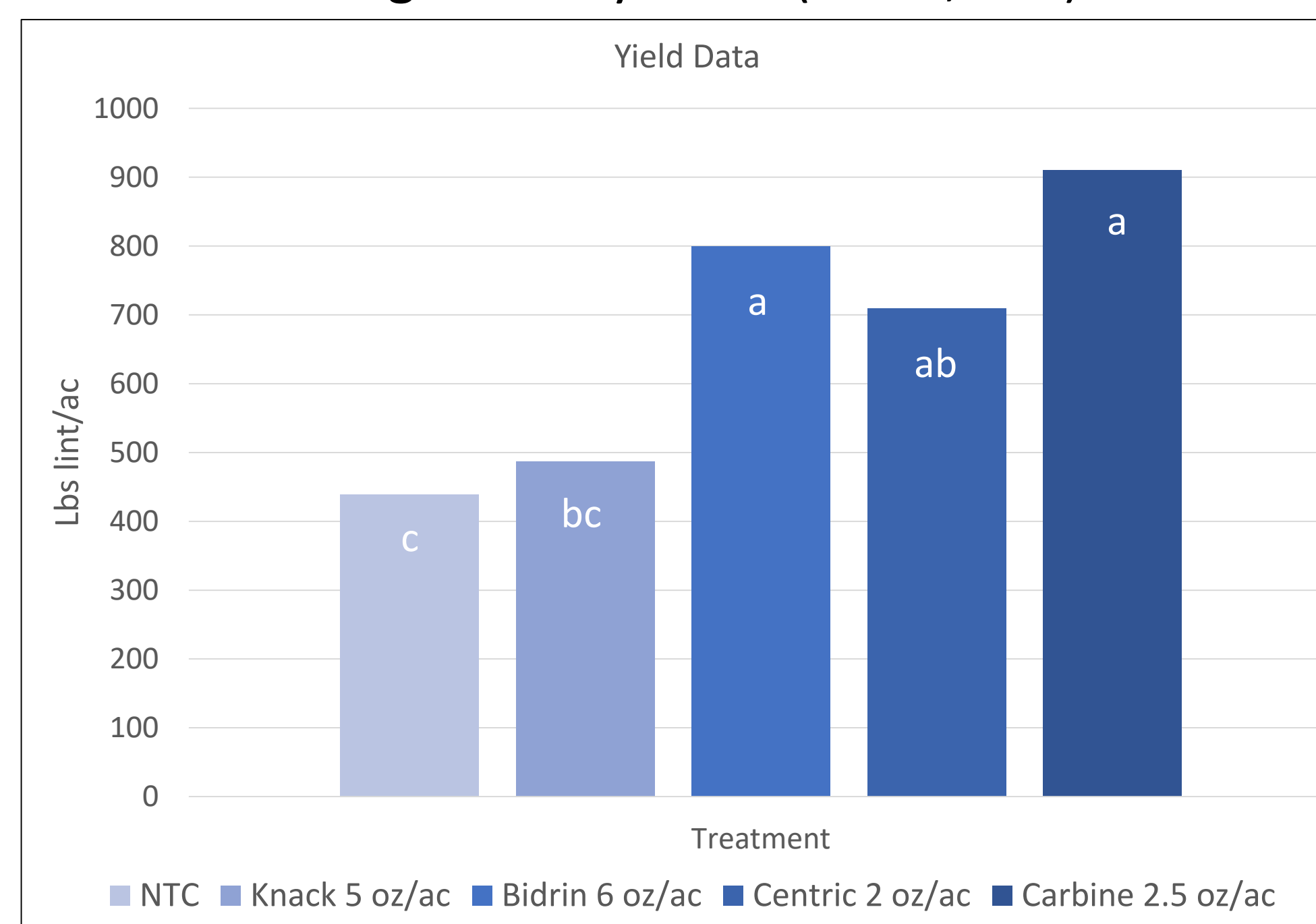


Figure 2. Lint yield for each harvested treatment in the small plot trial. Means with the same letter do not significantly differ (P=.05, LSD).

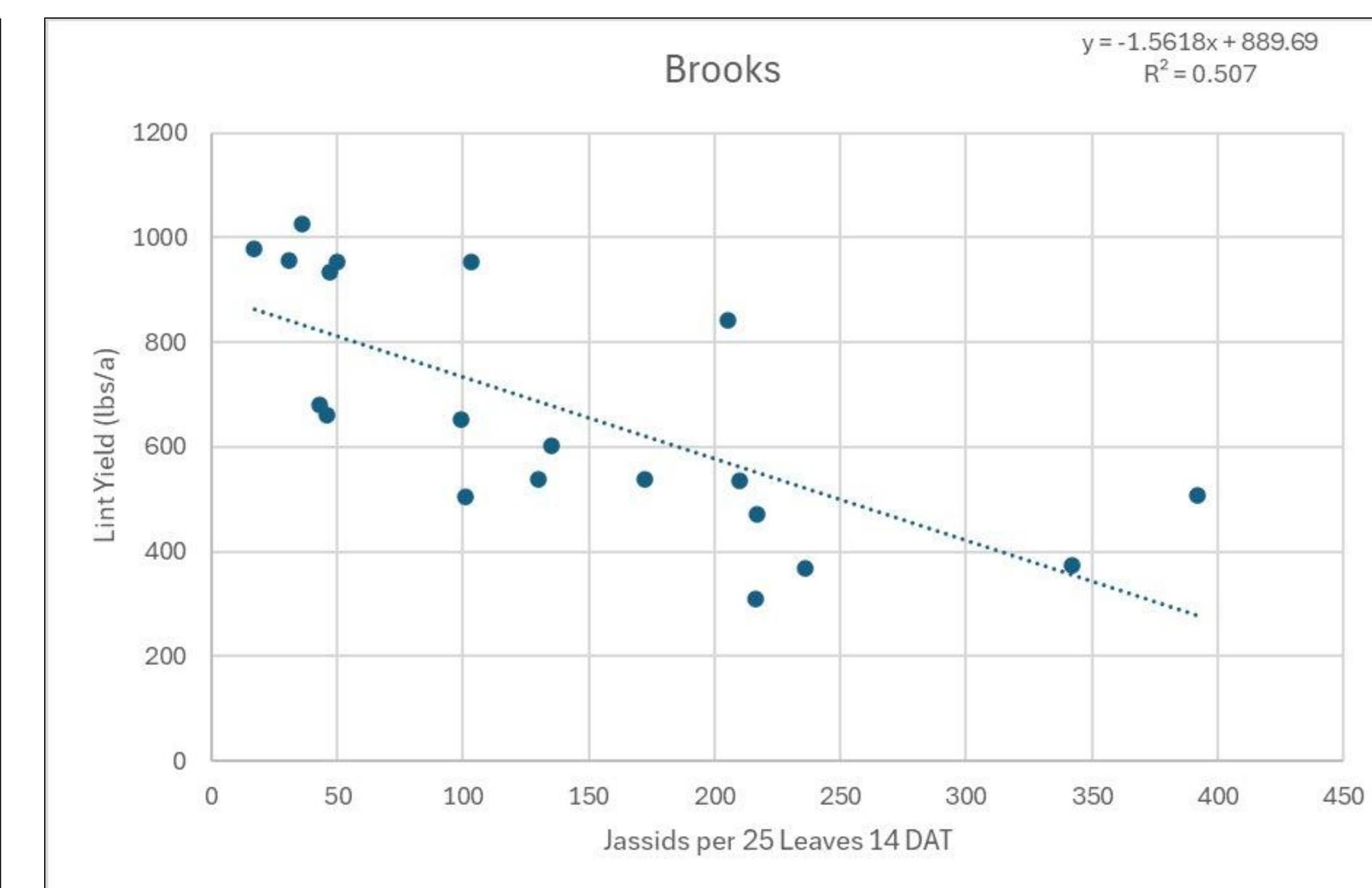


Figure 3. Regression of lint yield of harvested treatments by Jassid counts at 14 DAT



Image 1. Visual comparison of treated and non-treated plots at 16 DAT (left) and 41 DAT (right) by UAV image

Discussion

Several of the evaluated treatments preformed well. Almost all treatments showed some level of control. Within 14 DAT, many of the treatments had become re-infested. However, All treatments except Knack and Portal continued to show lower counts (figure 1). The collected yield data supports that treatments that maintain lower Jassid counts longer will result in higher yield (figures 2&3). Treatment timing could also play an important role. While the whole trial area was treated with Bidrin at 16 DAT, the plots that received an effective treatment seemed to retain more leaf color (image 1). Maintaining photosynthetically active leaf area is crucial to developing the bolls and directly effects yield.

Future Research

As growers move into the next cotton planting season, monitoring of populations will be the first step to understanding the impact on the crop. Being an emergent issue any data that can be collected to better understand timing and severity of infestation will help to develop a management strategy. Other field, lab, and greenhouse trials to test insecticides and rotation strategies will also be part of the next step in combatting the Jassid.