

Plasticulture Irrigation in Dark Tobacco



Dwight Grise Farm – Logan Co.
Russellville, KY - 2004

Plasticulture Irrigation



- **Potential Benefits of Irrigation:**

- Precise water application to plant roots
- Increased yield and quality

- **Potential Benefits of Plastic:**

- Reduced evaporation of applied water from soil surface
- Cleaner tobacco, less dirt on lugs

- **Questions/Concerns:**

- Reduced standability without cultivation?
- Increased growth of ground suckers?

Plasticulture Irrigation Trial

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- 'Narrowleaf Madole' set May 26.
 - 40" row spacing, 30" plant spacing
 - Approximately 4900 plants/acre
- Treatments:
 - no plastic / no drip tape, no plastic / drip tape, plastic / drip tape.
 - Plots 100 ft. long, 4 replications of treatments.
- 200 lbs N/A applied prior to setting
- Herbicides: 5 oz Spartan, 1 pint Command
- Irrigation applied at approximately 1 inch every 10 days beginning at 1-2 weeks prior to topping.
- Greenhouse grade soluble calcium nitrate (15.5-0-0) applied through drip tape at a total of 100 lbs N/season. Dry calcium nitrate (100 lbs N/A) applied sidedress to plots without drip tape.

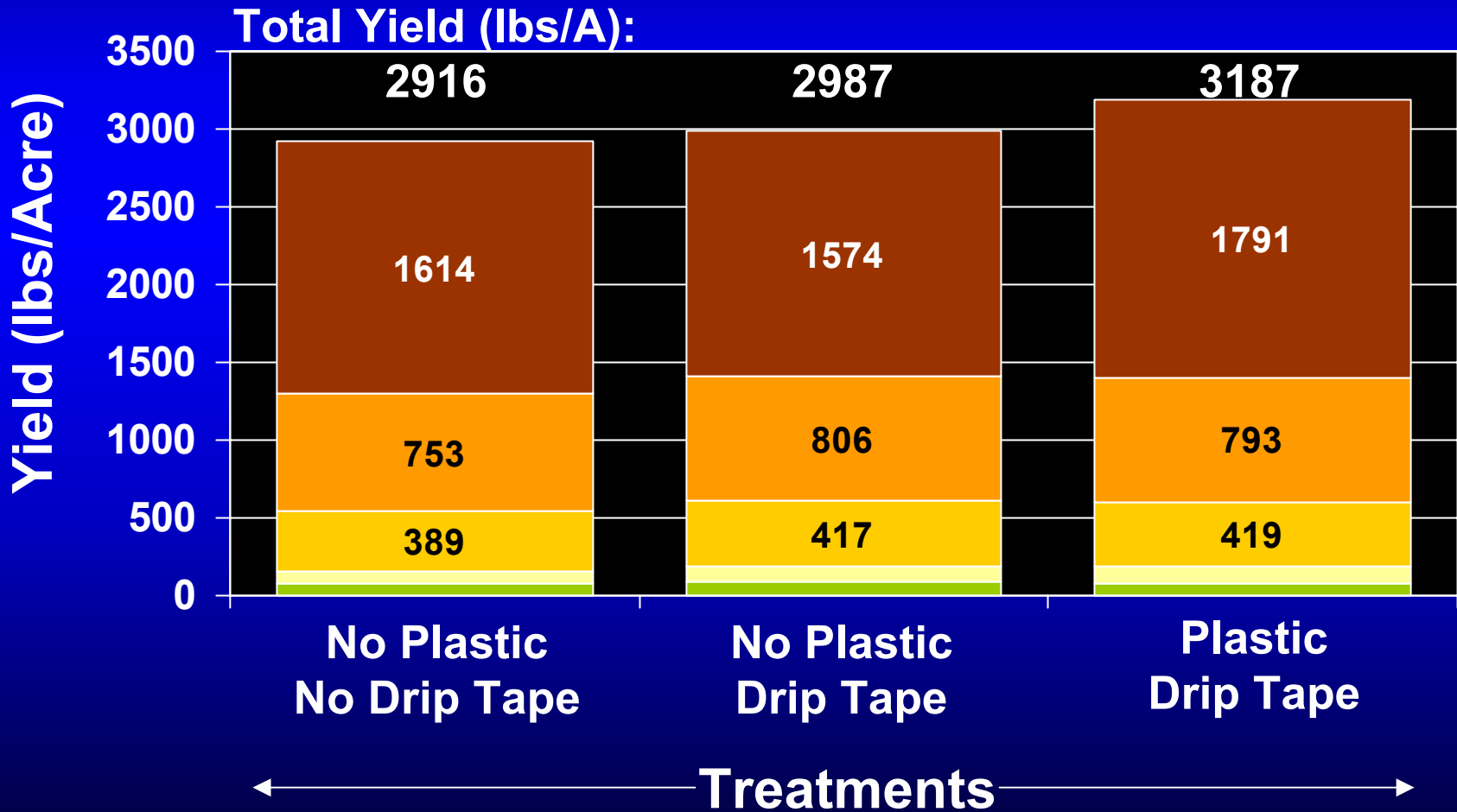


Plasticulture Irrigation in Dark Air-Cured Tobacco

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LSD_{0.05} = 69 24 57 197 311 514 (total)

Green Trash Lug Second Leaf



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•*Trial Summary:*

Cultivation was not used in any treatment, but there appeared to be no difference in standability of tobacco (irrigated or non-irrigated) compared to conventionally tilled tobacco grown in an adjacent field. At stripping, cleanliness of leaves from lower stalk positions was similar for tobacco grown under plastic or on bare ground. Rainfall was abundant in 2004 and there was no statistical differences in yield between treatments. However, total yield from tobacco grown with plastic and drip irrigation was 200 lbs greater than tobacco grown with drip irrigation and no plastic, and 271 lbs greater than tobacco grown without plastic or drip irrigation.

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