

# **Leaf Spot Control and Peanut Yield with Selected Varieties and Sulfur**

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## Reasons for the Trial

Differences in variety susceptibility to leaf spot exist

Resistance to SDHI and DMI fungicides is present in leaf spot in North Carolina

Concern over development of resistance in leaf spot to other fungicide chemistries exists

Concern over ability to use chlorothalonil exists (registration in the US and prohibition in export markets)

Chlorothalonil plays a critical role in resistance management and is cost-effective

Fungicide options that do not possess high risk for leaf spot resistance are limited

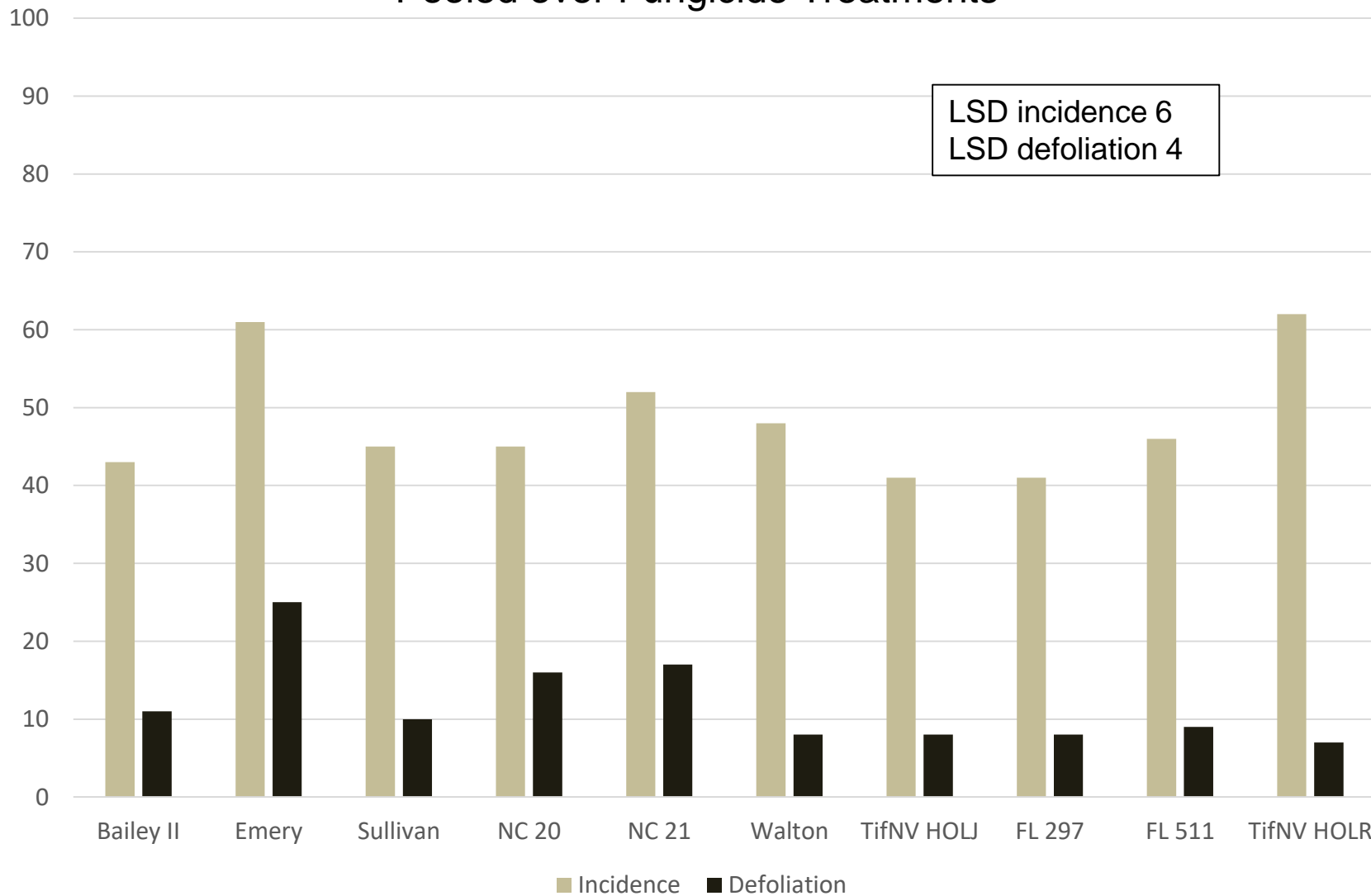
How does sulfur fit as a replacement for chlorothalonil?

Will response to sulfur differ based on variety selection?

# Materials and Methods

- Small plots, 4 rows by 30 feet
- 4 replications
- Planted in mid-May
- Conventional tillage
- Backpack (11002 flat fan)
- 31 psi, 3 mph
- Split plot design (variety as whole plot, fungicide as sub-plot)
- “Spray” on two-week schedule
- Bailey II, Emery, Sullivan, NC 20, and NC 21 were dug in late September based on pod mesocarp color
- Walton, TifNV HOLJ (Jumbo), Florunner 297, Florunner 511, and TifNV HOL R (Runner) were dug in mid-October based on pod mesocarp color
- For both digging cohorts, digging was approximately one week later than projected optimum maturity due to logistics and weather patterns
- Increases in maturity for the second digging cohort was minimal due to cool temperatures in late September and early October

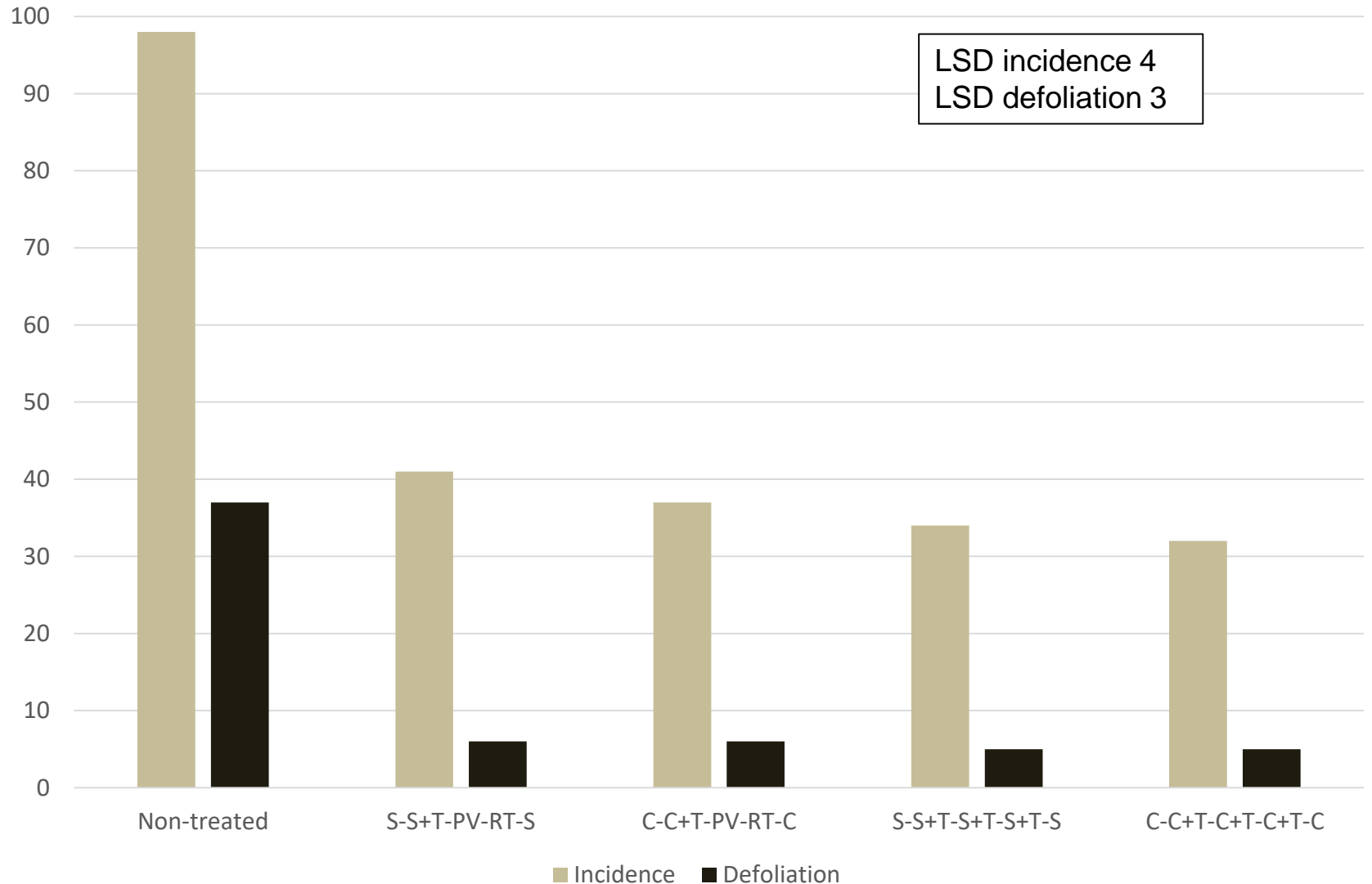
# Leaf Spot Incidence and Canopy Defoliation in Late September as Influenced by Variety Selection Pooled over Fungicide Treatments



# Leaf Spot Incidence and Canopy Defoliation in Late September as Influenced by Fungicides

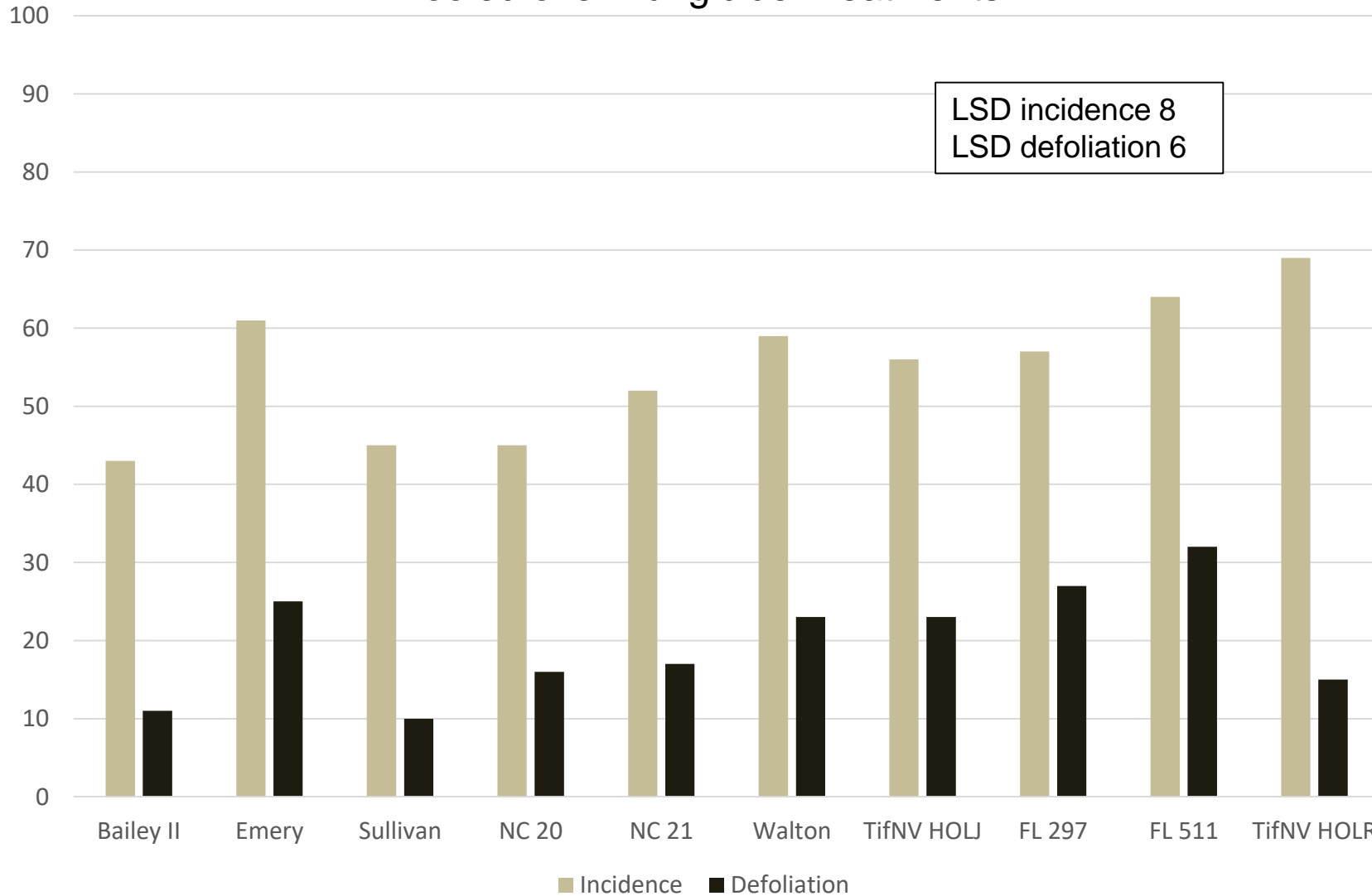
## Pooled over Varieties

Abbreviations: C, Chlorothalonil; PV, Provost Silver; RT, Revytek; S, Sulfur; T, Tebuconazole



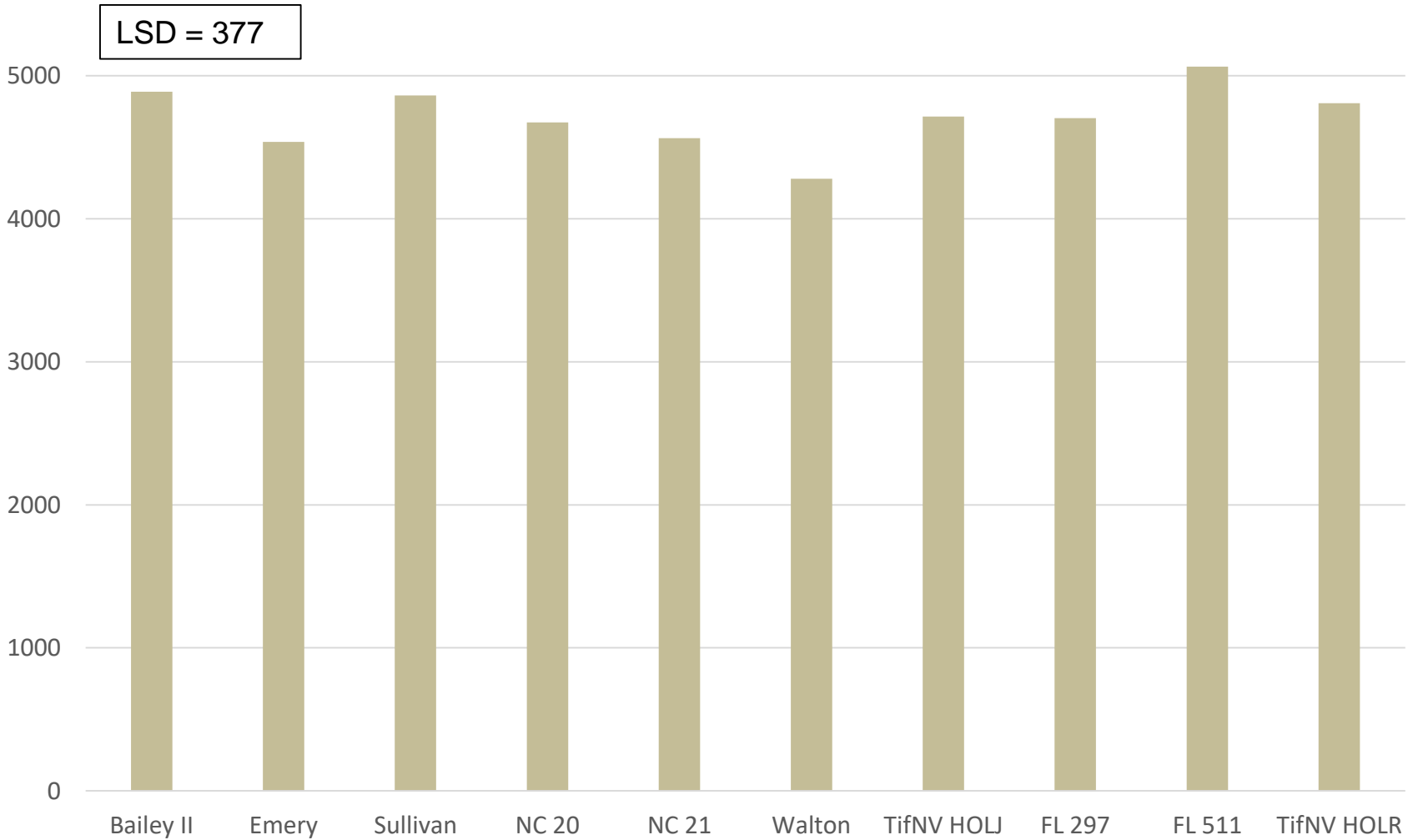
# Leaf Spot Incidence and Canopy Defoliation at Digging as Influenced by Variety Selection

Pooled over Fungicide Treatments



# Peanut Yield as Influenced by Variety Selection

## Pooled over Fungicide Programs

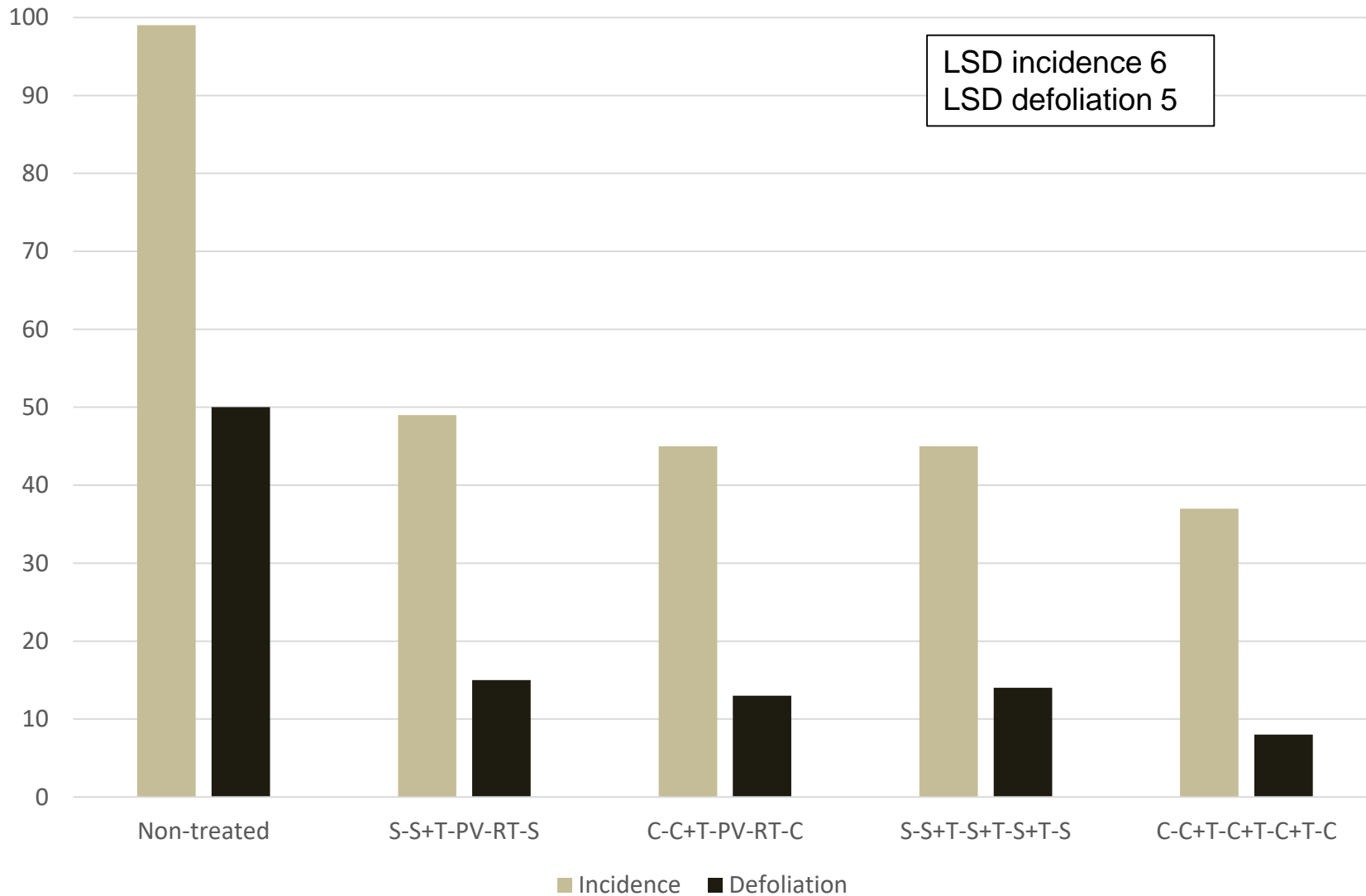


# Leaf Spot Incidence and Canopy Defoliation at Digging as Influenced by Fungicides

Pooled over Varieties

Abbreviations: C, Chlorothalonil; PV, Provost Silver; RT, Revytek; S, Sulfur; T, Tebuconazole

LSD incidence 6  
LSD defoliation 5

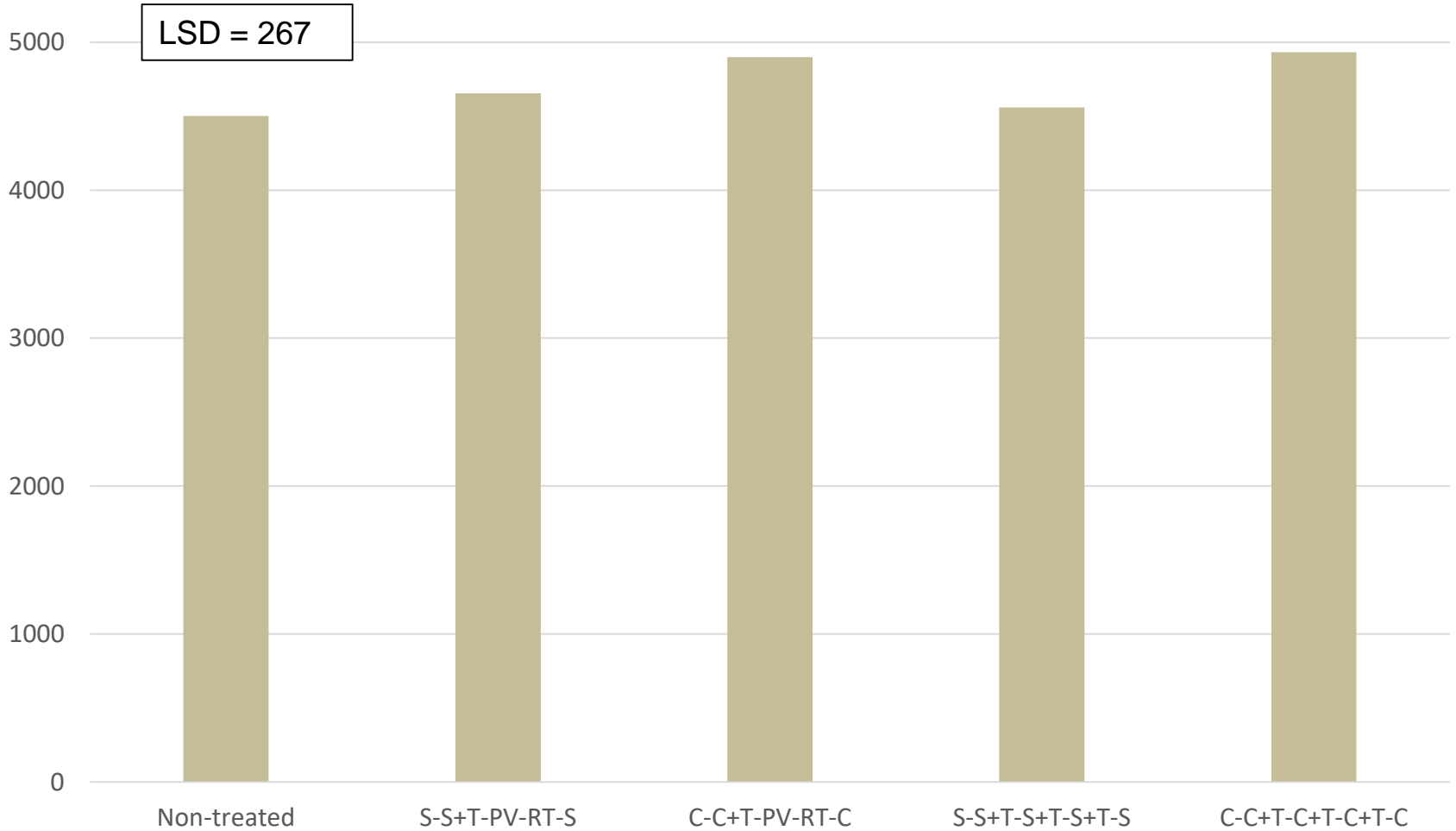




# Peanut Yield as Influenced by Fungicides

Pooled over Variety Treatments

Abbreviations: C, Chlorothalonil; PV, Provost Silver; RT, Revytek; S, Sulfur; T, Tebuconazole



# Summary

While the interaction of variety and fungicide program was significant for leaf spot incidence, canopy defoliation, and peanut yield, main effects are presented because the F-statistic was considerably greater for main effects relative to the interaction

Differences in leaf spot incidence and defoliation were noted among varieties with Bailey II, Sullivan, and NC 20 experiencing lower incidence and defoliation compared with other varieties (these differences may have been associated with the delay in digging in some cases, although temperatures in late September cooled significantly with relatively minor increases in disease observed)

Differences in leaf spot (incidence and defoliation) and yield were noted when comparing fungicide programs with either chlorothalonil or sulfur as the only leaf spot component (chlorothalonil provided greater protection)

When applied as the first and last spray in a 5-spray program, leaf spot incidence and canopy defoliation were similar with chlorothalonil or sulfur (yield was greater when chlorothalonil was used)