

# 2007 Sucker Control Trials

- Regional Growth Regulator Trials
- MH-Free Sucker Control Trials
- MH-Free Nozzle Study

# Sucker Control Trials

- The Regional Sucker Control Trials are conducted under the auspices of the Regional Growth Regulator Committee of the Tobacco Worker's Conference. Treatments proposed by the committee were treatments 1-7. Treatment 8 was added for this study only. A sprayer malfunction on treatment 2 produced results that were not characteristic of the past performance of this treatment. Treatments 3 (MH at 1.5 gal/a), 4 (Royal MH-30 at 1.5 gal/a + Flupro at 0.5 gal/a), & 5 (Royal MH-30 at 1.5 gal/a + Butralin at 0.5 gal/a) were all excellent treatments. Both the Off-shoot T followed by Off-shoot T + Butralin at 0.5 gal/a & Off-shoot T followed by Off-shoot T + Butralin at 1 gal/a were acceptable, but not as clean as treatments 3-5. Butralin at 1 gal/a by itself was as good as when Off-shoot T was added. All Treatments were made with a West Texas Lee high clearance sprayer using a three nozzle arrangement in a TG-3 – TG-5 – TG-3 configuration and an application volume of 60 gal/a. Applicator speed was 2.4 mph at 30 psi. Plots were 55 ft by 2 rows (42" rows) in a randomized complete block design with four replications.

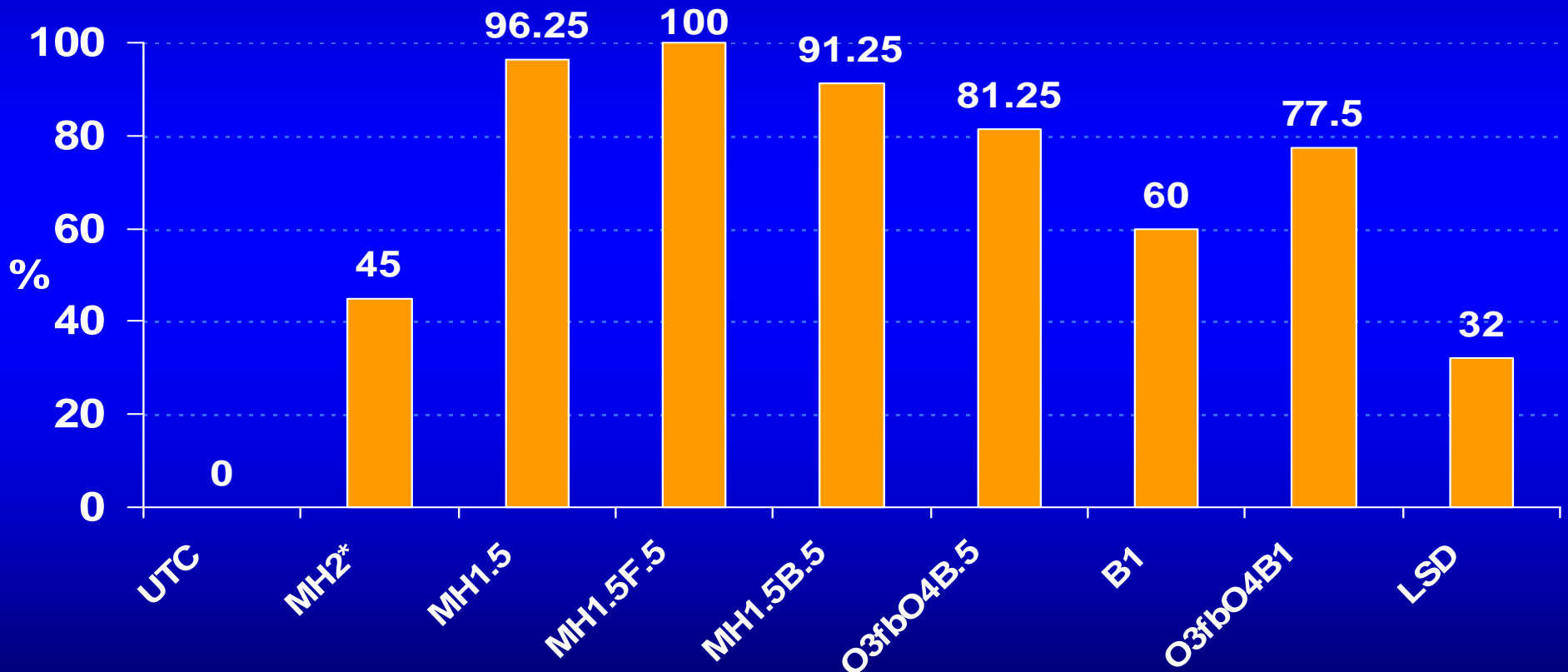
# Regional Sucker Control Treatments\*

	1 <sup>st</sup> Treatment (Elongated Bud)	2 <sup>nd</sup> Treatment (At topping – 10-25% bloom)
1		Untreated Check
2		Royal MH-30 (2 gal/a)
3		Royal MH-30 (1.5 gal/a)
4		Royal MH-30 (1.5 gal/a + Flupro 0.5 gal/a)
5		Royal MH-30 (1.5 gal/a + Butralin 0.5 gal/a)
6	Off-shoot T (3%)	Off-shoot T (4%) + Butralin (0.5 gal/a)
7		Butralin (1 gal/a)
8	Off-shoot T (3%)	Off-shoot T (4%) +Butralin (1 gal/a)

\* 60 gal/a at 2.4 mph and 30 psi using a West Texas Lee high clearance sprayer  
Treatments were scheduled for 5 days apart but were applied 7 days apart due to weather

# Comparison of Sucker Control Treatments at Two Weeks after Application

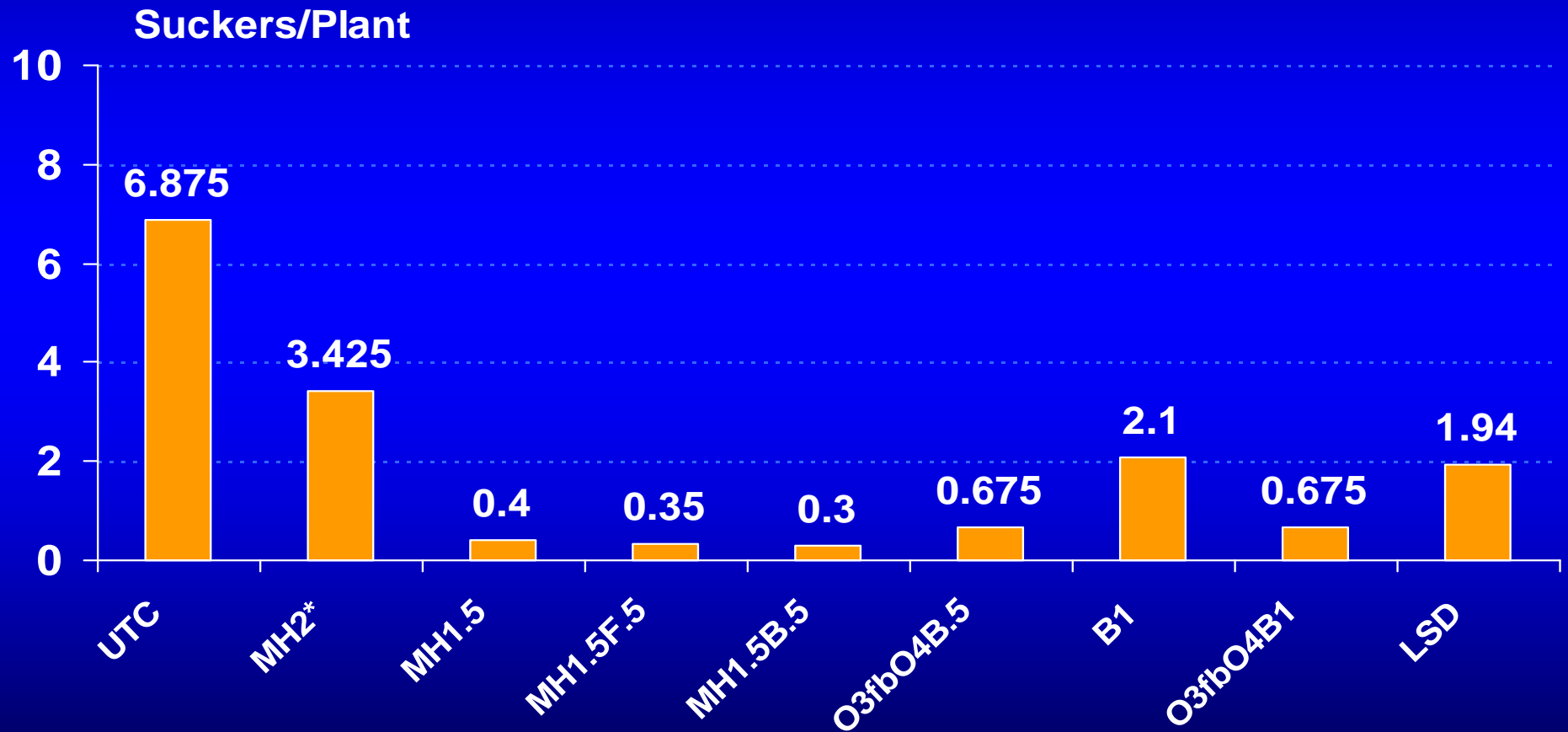
## UK Spindletop Farm



(MH= Royal MH-30, F=Flupro, B=Butralin,) in (gal) O=Off-Shoot-T in (%),  
UTC=untreated check, fb=followed by at 7 days. \*=Sprayer malfunctioned

# The Effects of Sucker Treatment on Sucker Number per Plant

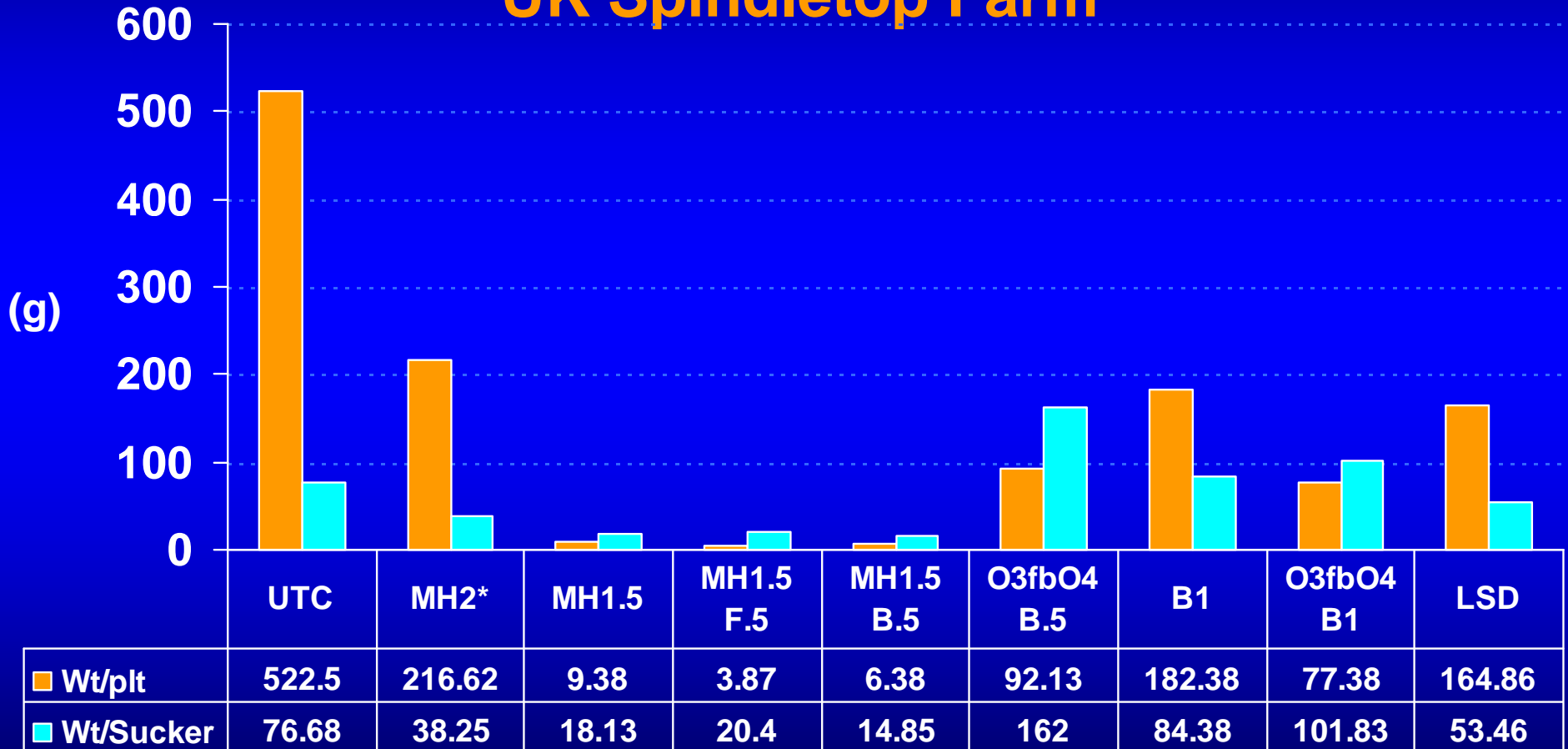
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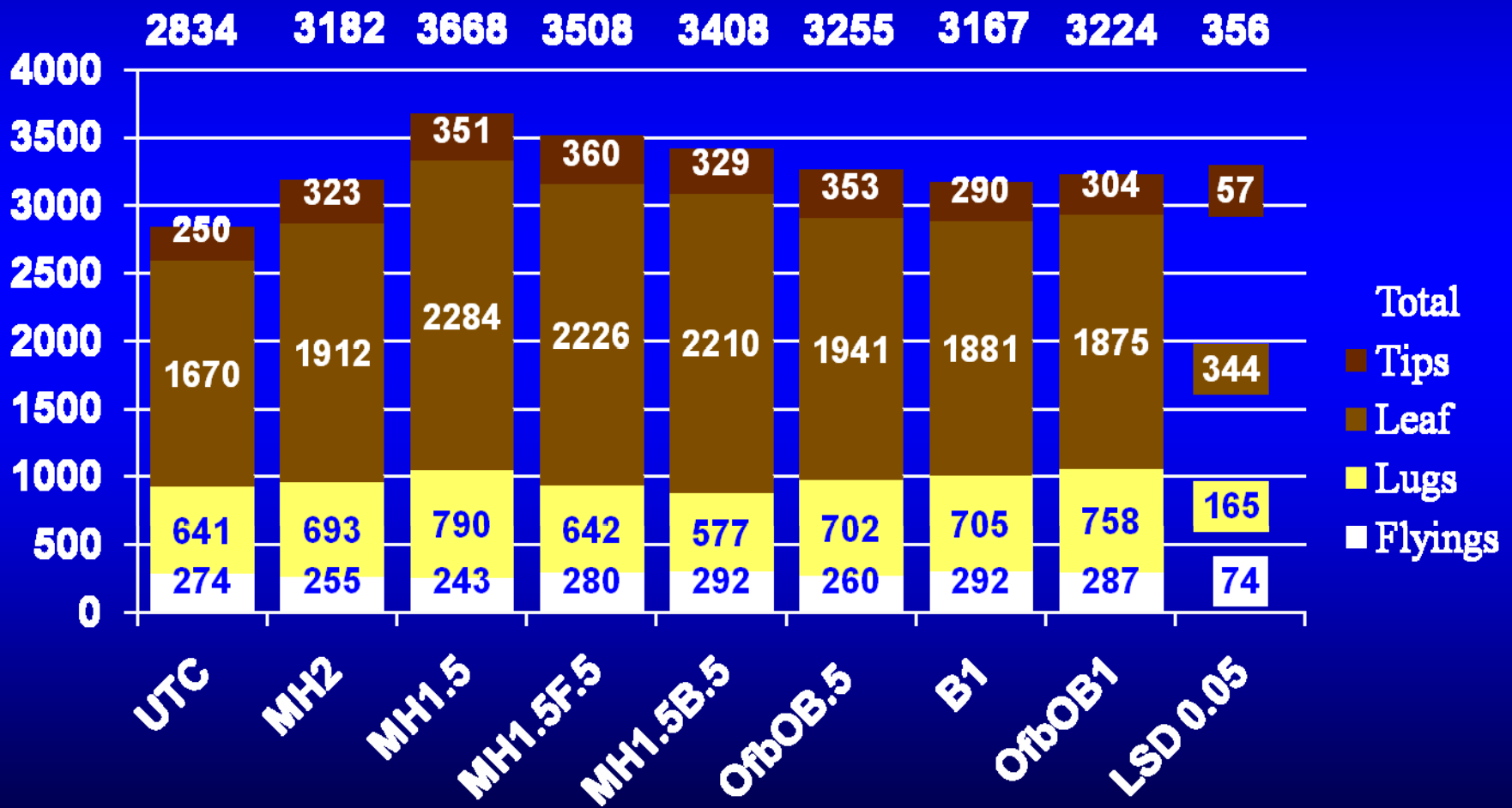
# The Effects of Sucker Treatment on Sucker Weight

## UK Spindletop Farm



(MH= Royal MH-30, F=Flupro, B=Butralin,) in (gal) O=Off-Shoot-T in (%),  
 UTC=untreated check, fb=followed by at 7 days. \*=Sprayer malfunctioned

# The Effects of Sucker Treatment on Yield UK Spindletop Farm



# MH Free Sucker Control Trials

- **Treatments with MH produced 100% control. However, results from Off-shoot T at 4% followed by a tank mix of Off-shoot T + Butralin at 1 gal/a followed by Butralin at 1 gal/a were close to those containing MH. The results from this treatment (5) were not statistically better than treatments 2, 4, 6, & 7. A 3% concentration of Off-shoot T applied before topping did not perform as well as a 4% concentration. All Treatments were made with a West Texas Lee high clearance sprayer using a three nozzle arrangement in a TG-3 – TG-5 – TG-3 configuration and an application volume of 60 gal/a. Applicator speed was 2.4 mph at 30 psi. Plots were 30 ft by 2 rows (42” rows) in a randomized complete block design with four replications.**



# MH Free Trails Treatments

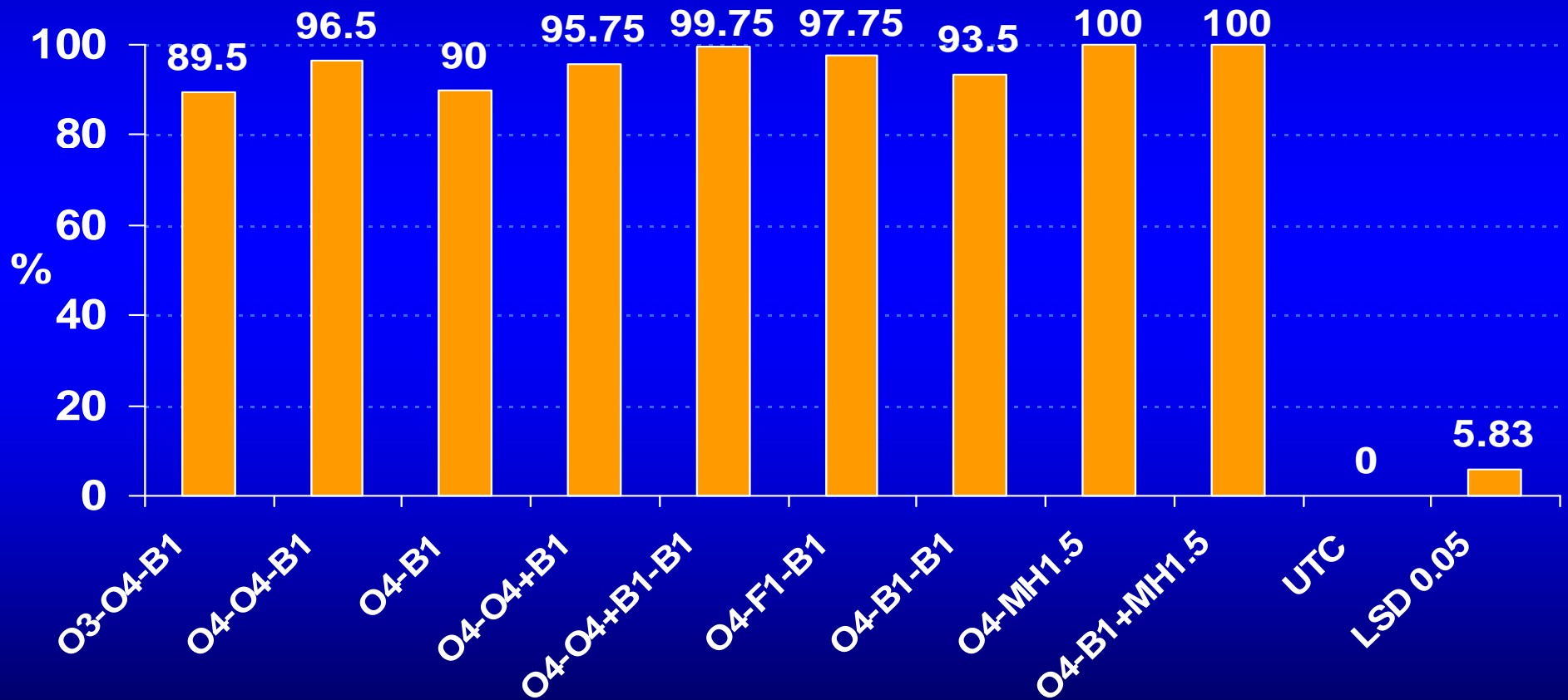
	1 <sup>st</sup> Treatment (Elongated Bud)	2 <sup>nd</sup> Treatment At topping ( 10-25% bloom)	3 <sup>rd</sup> Treatment 5 days post top
1	Off-Shoot T 3%	Off-Shoot T 4%	Butralin 1
2	Off-Shoot T 4%	Off-Shoot T 4%	Butralin 1
3	Off-Shoot T 4%	Butralin 1	
4	Off-Shoot T 4%	Off-Shoot T 4%+Butralin 1	
5	Off-Shoot T 4%	Off-Shoot T 4%+Butralin 1	Butralin 1
6	Off-Shoot T 4%	Flupro 1	Butralin 1
7	Off-Shoot T 4%	Butralin	Butralin 1
8	Off-Shoot T 4%	Royal MH 1.5	
9	Off-Shoot T 4%	Butralin 0.5+Royal MH1.5	
10	Untreated Check		

\* 60 gal/a at 2.4 mph and 30 psi using a West Texas Lee high clearance sprayer  
Treatments were applied 5 days apart

# MH Free Trials

## Comparison of Sucker Control Treatments

### UK Coldstream Farm

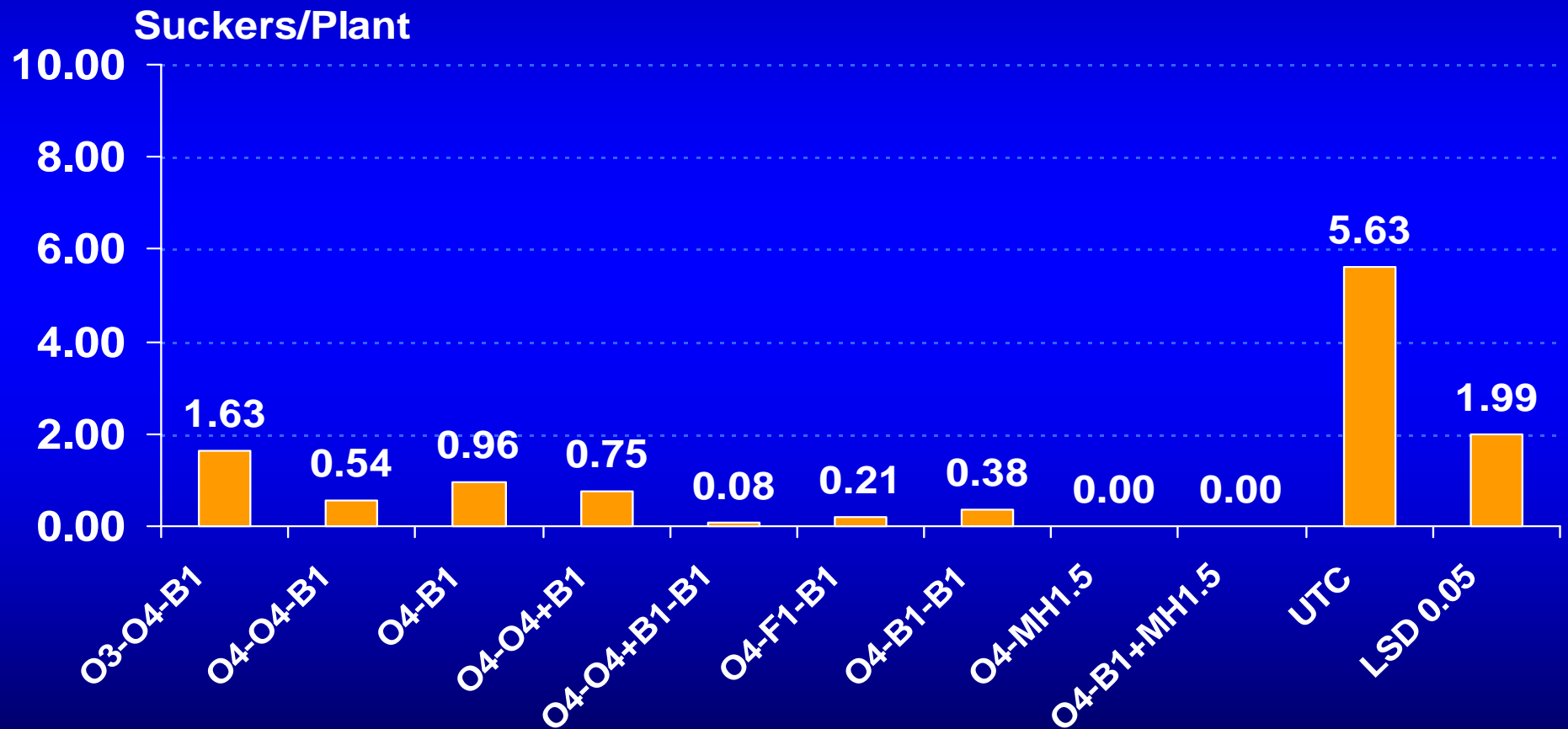


(MH= Royal MH-30, F=Flupro, B=Butralin,) in (gal) O=Off-Shoot-T in (%),  
UTC=untreated check (-) followed by at 5 days.

# MH Free Trials

## The Effects of Sucker Treatment on Sucker Number per Plant

### UK Coldstream Farm



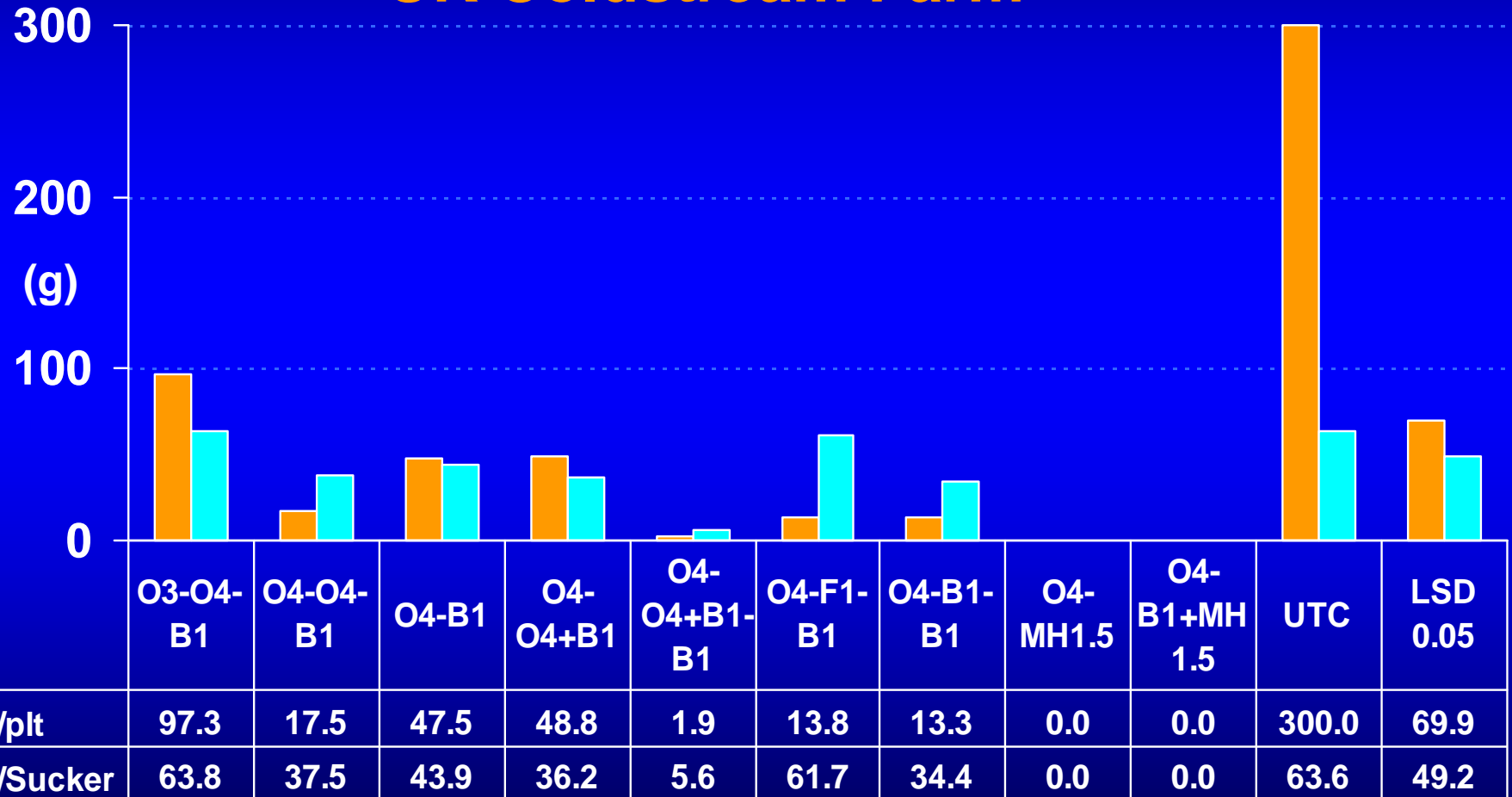
(MH= Royal MH-30, F=Flupro, B=Butralin,) in (gal)

UTC=untreated check O=Off-Shoot-T in (%), (-) followed by at 5 days

# MH Free Trials

## The Effects of Sucker Treatment on Sucker Weight

### UK Coldstream Farm



(MH= Royal MH-30, F=Flupro, B=Butralin,) in (gal) O=Off-Shoot-T in (%),  
UTC=untreated check, (-) followed by at 5 days.

# MH Free Trials: The Effects of Sucker Treatment on Sucker Weight

## UK Coldstream Farm



(MH= Royal MH-30, F=Flupro, B=Butralin,) in (gal) O=Off-Shoot-T in (%),  
 UTC=untreated check, (-) followed by at 5 days.

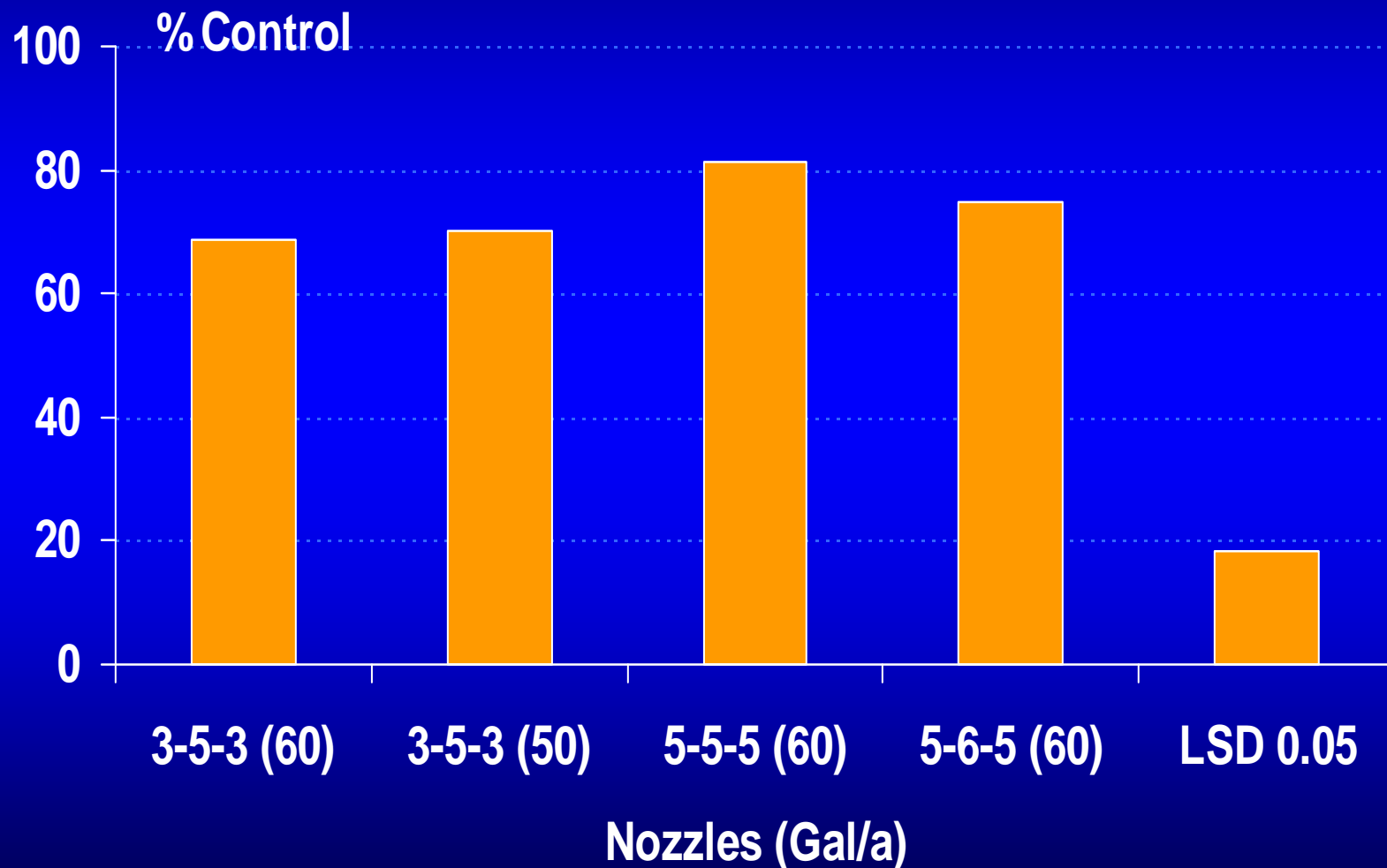
# MH-Free Nozzle Study

- Application technique changed a MH-Free sucker control program from unsuccessful to successful. Nozzle size was studied as part of the overall application technique trial. While a rundown method is known to work successfully, mechanical application has proven difficult to achieve acceptable results. All treatments were applied with a CO<sub>2</sub> backpack with an over-the-shoulder two row boom. Plots were 40 ft by 2 rows (42" rows) in a randomized complete block design with four replications.
- Treatments consisted of 4% Off-shoot T at elongated bud followed by a combination of Off-shoot T at 4 % plus Butralin at 1 gal /a.

## MH-Free Nozzle Size Treatments

	Nozzles Arrangement	PSI	MPH	Gal
1	TG-3 - TG-5 - TG-3	30	2	60
2	TG-3 - TG-5 - TG-3	30	3	50
3	TG-5 - TG-5 - TG-5	30	3	60
4	TG-5 - TG-6 - TG-5	30	3	60

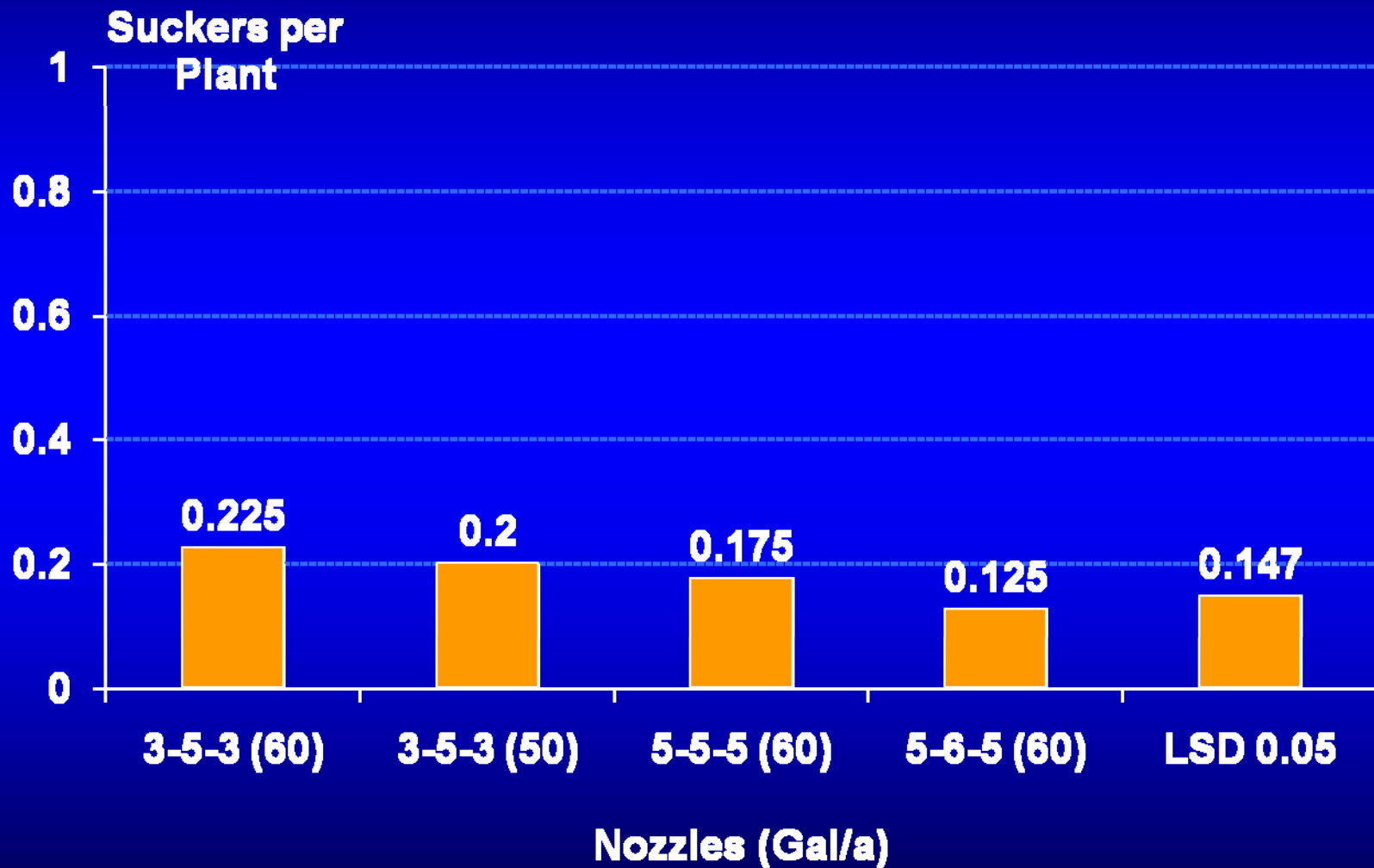
# Effects of Nozzle Size on Sucker Control



All Nozzles were TG full cone nozzles



# Effects of Nozzle Size on Sucker per Plant



All Nozzles were TG full cone nozzles

# Effects of Nozzle Size on Yield Woodford Co. Farm

