

Evaluation of Butralin MH-Free Programs for Sucker Control in Burley Tobacco

2007 – UKREC, Princeton, KY

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2007 Sucker Control Trials

- Disclaimer:
 - The 2007 production season was extremely dry in west KY/TN with minimal sucker growth and vigor. As a result, sucker control from treatments applied in 2007 was somewhat higher than would be expected in seasons where average rainfall occurred.

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- Burley Variety: TN 90LC
 - Transplanted May 22; 40” rows, 32” plant spacing (4900 pl/A)
- RCBD experimental design with 4 replications
 - Plots 4 rows, 40 ft. long
 - All 4 rows treated, data collected from center 2 rows
- First contact fatty alcohol application made as manual stalk rundown with dropline.
- All other applications sprayed over-the-top.
 - Straight boom (2-row) with 20” nozzle spacing (trts 2-9)
 - 3 nozzle/row system (2-row), all TG5s, 55 gal/A (trts 1, 10, 11)
- Data collected: crop vigor, % sucker control, sucker wt. per plot, burley yield, quality grade index, revenue.

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Treatment	Applicaton Rate (gal/A)	Application Timing	Application Method
OST fb OST fb OST	2 gal fb 2 gal fb 2.5 gal	AT fb 7 days fb 14 days	SRD fb OT fb OT
OST fb OST fb Butralin	2 gal fb 2 gal fb 1 gal	AT fb 7 days fb 14 days	SRD fb OT fb OT
OST fb OST fb Butralin	2 gal fb 2 gal fb 1 gal	AT fb 7 days fb 14 days	SRD fb OT fb OT
OST fb OST fb Butralin	2 gal fb 2 gal fb 1 gal	AT fb 7 days fb 14 days	SRD fb OT fb OT
OST fb OST fb Butralin	2 gal fb 2 gal fb 1 gal	AT fb 7 days fb 14 days	SRD fb OT fb OT
OST fb OST+Butralin	2 gal fb 2 gal+1 gal	AT fb 7 days	SRD fb OT
OST fb OST+Butralin	2 gal fb 2 gal+1 gal	AT fb 7 days	SRD fb OT
OST fb OST+Butralin	2 gal fb 2 gal+1 gal	AT fb 7 days	SRD fb OT
OST fb OST+Butralin	2 gal fb 2 gal+1 gal	AT fb 7 days	SRD fb OT
OST fb MH	2 gal fb 1.5 gal	AT fb 7 days	SRD fb OT
1 OST	2 gal	AT	SRD

*fb=followed by; OST=Off Shoot T; MH=Royal MH-30; AT=at topping;
OT=over-the-top application; SRD=manual stalk rundown w/ dropline.

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Treatment	Boom Configuration and Spray Volume for Butralin Applications
OST fb OST fb OST	SRD dropline for 1 st app., then 3-nozzles/row, all TG5s, 55 gal/A
OST fb OST fb Butralin	Straight boom, 20" nozzle spacing, TG5-TG5-TG5-TG5, 25 psi, 50 gal/A
OST fb OST fb Butralin	Straight boom, 20" nozzle spacing, TG3-TG4-TG3-TG4, 25 psi, 50 gal/A
OST fb OST fb Butralin	Straight boom, 20" nozzle spacing, TG3-TG5-TG3-TG5, 25 psi, 50 gal/A
OST fb OST fb Butralin	Straight boom, 20" nozzle spacing, TG5-TG6-TG5-TG6, 20 psi, 60 gal/A
OST fb OST+Butralin	Straight boom, 20" nozzle spacing, TG5-TG5-TG5-TG5, 25 psi, 50 gal/A
OST fb OST+Butralin	Straight boom, 20" nozzle spacing, TG3-TG4-TG3-TG4, 25 psi, 50 gal/A
OST fb OST+Butralin	Straight boom, 20" nozzle spacing, TG3-TG5-TG3-TG5, 25 psi, 50 gal/A
OST fb OST+Butralin	Straight boom, 20" nozzle spacing, TG5-TG6-TG5-TG6, 20 psi, 60 gal/A
OST fb MH	SRD dropline for OST, then 3-nozzles/row, all TG5s, 55 gal/A for MH
1 OST	SRD dropline

*fb=followed by; OST=Off Shoot T; MH=Royal MH-30; AT=at topping; SRD>manual stalk rundown w/ dropline.

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Late-season plot evaluations, 4 wks after topping (preharvest)

Treatment	Tobacco Vigor (1-10, 10 best)	% Sucker Control (0-100%)	Sucker Wt (lbs) per 10 plants/plot	Sucker Wt/A (lbs)
OST fb OST fb OST	7.25 ab	75 g	1.50 a	735.0 a
OST fb OST fb But (5-5-5)	7.25 ab	83 cd	0.86 abc	422.6 abc
OST fb OST fb But (3-4-3)	7.06 b	77 f	1.09 abc	532.9 abc
OST fb OST fb But (3-5-3)	7.25 ab	79 ef	0.91 abc	447.1 abc
OST fb OST fb But (5-6-5)	7.44 ab	86 c	0.96 abc	471.6 abc
OST fb OST+But (5-5-5)	7.31 ab	82 de	0.96 abc	471.6 abc
OST fb OST+But (3-4-3)	7.44 ab	79 ef	0.98 abc	477.8 abc
OST fb OST+But (3-5-3)	7.44 ab	86 bc	0.65 bc	318.5 bc
OST fb OST+But (5-6-5)	7.88 a	90 b	0.58 c	281.8 c
OST fb MH	7.31 ab	95 a	0.68 abc	330.8 abc
1 OST	7.19 ab	68 h	1.45 ab	710.5 ab
LSD _{0.05}	0.76	3.7	0.83	405.8

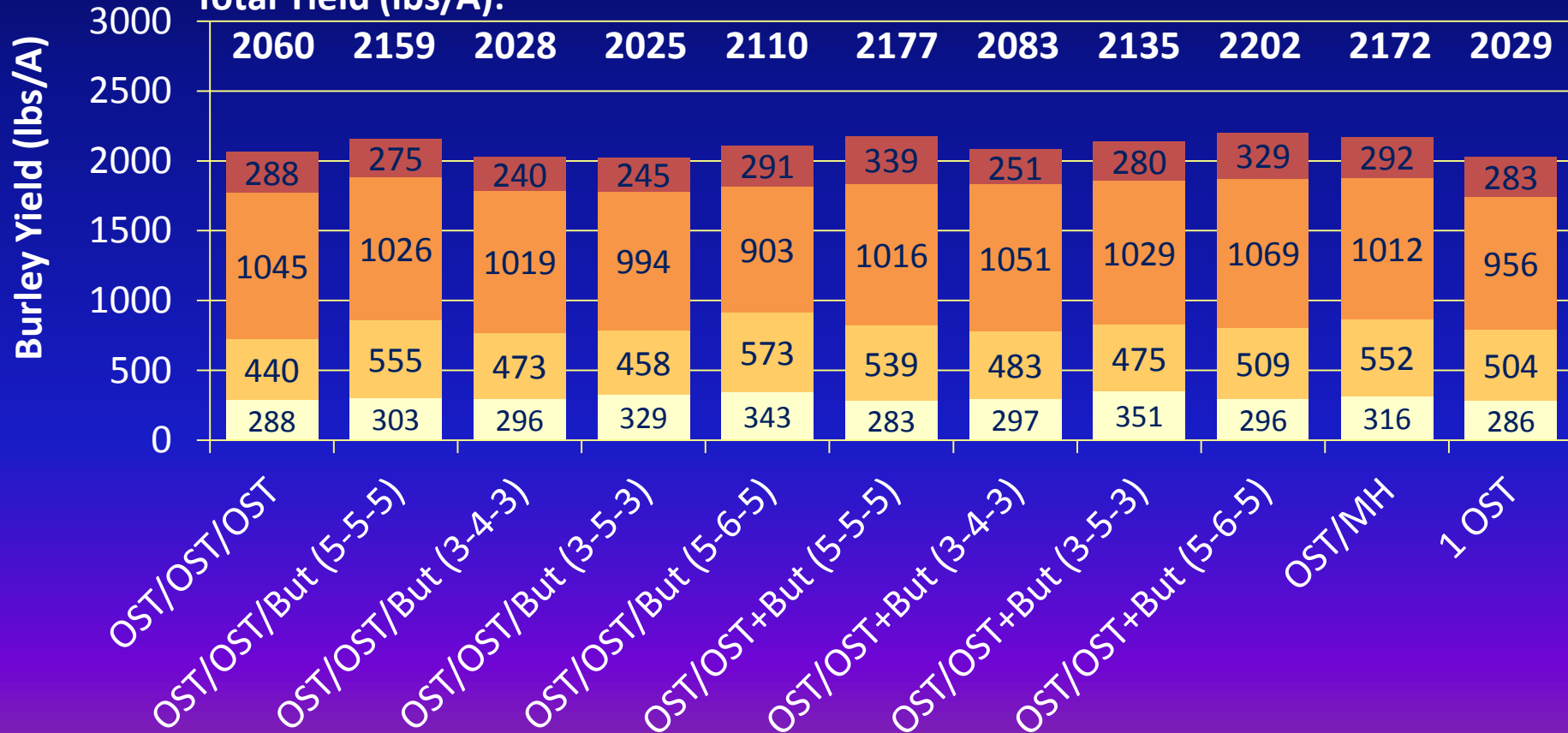
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Burley Yield

LSD_{0.05} = 77 103 173 80 221 (total)

■ Flyings ■ Cutters ■ Leaf ■ Tips

Total Yield (lbs/A):



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Quality Grade Index and Gross Revenue/A*

*Grade Index and Gross Revenue/A based on 2004 USDA grade and price support for Type 31 burley tobacco.

