

2011 Dark Tobacco Sucker Control Trial

MSU West Farm, Murray, KY

- **Objectives:**

- 1) Compare sucker control from various treatments including contacts, local systemics, and MH when applied mechanically with standard 3-nozzle/row applications or with conveyor hoods.
 - 2) Compare sucker control with standard rates of MH, reduced rates of MH, and non-MH systems.
- PD 7309LC dark tobacco transplanted June 14
 - 40" rows, 32" plant spacing = 4900 plants/acre
 - Topped August 17, harvested October 6
 - Plots 4 rows, 40 ft. long, 4 replications
 - All 4 rows treated, data collected from center 2 rows
 - All applications made at 60 gal/A with and without conveyor

Suckercides Tested

- Contact:
 - Off-shoot T (OST) – C₆ - C₈ - C₁₀ - C₁₂ fatty alcohols
- Local systemics
 - Flupro (flumetralin) – 1.2 lbs ai/gal
 - Butralin – 3 lbs ai/gal
- Systemic - maleic hydrazide
 - Royal MH-30 – 1.5 lbs ai/gal

Conveyor Spray Hoods

- Funnel device that fits over standard 3-nozzle system to concentrate spray closer to stalk.
- Potential advantages:
 - Better coverage on leaf axils on stalk
 - Less leaf exposure could mean less residues
- Potential disadvantage:
 - Narrower treated width, straight tobacco more critical



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MSU West Farm, Murray, KY - Treatments

Trt	Treatment	Rate (gal/A)	Application Method	Timing
1	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1.5 gal+0.5 gal	Standard 3-nozzle	1 wk pretop fb top fb 1 wk post top
2	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1.5 gal+0.5 gal	Standard with conveyor	1 wk pretop fb top fb 1 wk post top
3	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1 gal+0.5 gal	Standard 3-nozzle	1 wk pretop fb top fb 1 wk post top
4	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1 gal+0.5 gal	Standard with conveyor	1 wk pretop fb top fb 1 wk post top
5	OST fb OST fb MH	2 gal fb 2 gal fb 1.5 gal	Standard 3-nozzle	1 wk pretop fb top fb 1 wk post top
6	OST fb OST fb MH	2 gal fb 2 gal fb 1.5 gal	Standard with conveyor	1 wk pretop fb top fb 1 wk post top
7	OST fb OST fb OST+Flupro fb OST+Flupro	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard 3-nozzle	1 wk pretop fb top fb 1 wk post top fb 2 wk post top
8	OST fb OST fb OST+Flupro fb OST+Flupro	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard with conveyor	1 wk pretop fb top fb 1 wk post top fb 2 wk post top
9	OST fb OST fb OST+Butralin fb OST+Butralin	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard 3-nozzle	1 wk pretop fb top fb 1 wk post top fb 2 wk post top
10	OST fb OST fb OST+Butralin fb OST+Butralin	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard with conveyor	1 wk pretop fb top fb 1 wk post top fb 2 wk post top
11	1 OST	2 gal	Standard	1 wk pretop

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MSU West Farm, Murray, KY – Preharvest Sucker Control

Trt	Treatment	Rate (gal/A)	Application Method	% Sucker Control	#Plants w/ suckers/ 30	Sucker Wt (lbs)/10 plants
1	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1.5 gal+0.5 gal	Standard 3-nozzle	93 a	2 e	4.4 d
2	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1.5 gal+0.5 gal	Standard with conveyor	86 b	4 e	4.3 d
3	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1 gal+0.5 gal	Standard 3-nozzle	83 b	5 e	11.8 cd
4	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1 gal+0.5 gal	Standard with conveyor	85 b	5 e	5.6 d
5	OST fb OST fb MH	2 gal fb 2 gal fb 1.5 gal	Standard 3-nozzle	87 ab	4 e	5.5 d
6	OST fb OST fb MH	2 gal fb 2 gal fb 1.5 gal	Standard with conveyor	84 b	4 e	5.2 d
7	OST fb OST fb OST+Flupro fb OST+Flupro	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard 3-nozzle	48 de	22 bc	23.1 ab
8	OST fb OST fb OST+Flupro fb OST+Flupro	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard with conveyor	54 c	18 d	21.6 ab
9	OST fb OST fb OST+Butralin fb OST+Butralin	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard 3-nozzle	46 e	23 b	22.4 ab
10	OST fb OST fb OST+Butralin fb OST+Butralin	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard with conveyor	53 cd	19 cd	16.4 bc
11	1 OST	2 gal	Standard	16 f	30 a	27.0 a

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MSU West Farm, Murray, KY – Dark Fire-Cured Tobacco Yield

Trt	Treatment	Rate (gal/A)	Application Method	Lug Yld (lbs/A)	Second Yld (lbs/A)	Leaf Yld (lbs/A)	Total Yld (lbs/A)
1	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1.5 gal+0.5 gal	Standard 3-nozzle	333 a	611 a	2524 a	3467 a
2	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1.5 gal+0.5 gal	Standard with conveyor	426 a	481 a	2499 a	3406 ab
3	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1 gal+0.5 gal	Standard 3-nozzle	418 a	643 a	2091 bc	3152 bc
4	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1 gal+0.5 gal	Standard with conveyor	399 a	590 a	2372 ab	3362 ab
5	OST fb OST fb MH	2 gal fb 2 gal fb 1.5 gal	Standard 3-nozzle	417 a	647 a	2122 bc	3185 abc
6	OST fb OST fb MH	2 gal fb 2 gal fb 1.5 gal	Standard with conveyor	457 a	706 a	2125 bc	3288 ab
7	OST fb OST fb OST+Flupro fb OST+Flupro	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard 3-nozzle	383 a	461 a	1994 c	2839 de
8	OST fb OST fb OST+Flupro fb OST+Flupro	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard with conveyor	390 a	447 a	2059 c	2896 cde
9	OST fb OST fb OST+Butralin fb OST+Butralin	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard 3-nozzle	336 a	635 a	1682 d	2652 ef
10	OST fb OST fb OST+Butralin fb OST+Butralin	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard with conveyor	419 a	533 a	2019 c	2971 cd
11	1 OST	2 gal	Standard	359 a	503 a	1633 d	2495 f

2011 Dark Tobacco Sucker Control Trial

MSU West Farm, Murray, KY – Dark Fire-Cured Tobacco Quality Grade Index

Trt	Treatment	Rate (gal/A)	Application Method	Dark-Fired Quality Grade Index
1	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1.5 gal+0.5 gal	Standard 3-nozzle	47.6 a
2	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1.5 gal+0.5 gal	Standard with conveyor	38.6 ab
3	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1 gal+0.5 gal	Standard 3-nozzle	41.4 ab
4	OST fb OST fb MH + Flupro	2 gal fb 2 gal fb 1 gal+0.5 gal	Standard with conveyor	35.7 ab
5	OST fb OST fb MH	2 gal fb 2 gal fb 1.5 gal	Standard 3-nozzle	42.8 ab
6	OST fb OST fb MH	2 gal fb 2 gal fb 1.5 gal	Standard with conveyor	38.7 ab
7	OST fb OST fb OST+Flupro fb OST+Flupro	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard 3-nozzle	36.9 ab
8	OST fb OST fb OST+Flupro fb OST+Flupro	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard with conveyor	38.5 ab
9	OST fb OST fb OST+Butralin fb OST+Butralin	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard 3-nozzle	41.6 ab
10	OST fb OST fb OST+Butralin fb OST+Butralin	2 gal fb 2 gal fb 2 gal+0.5 gal fb 2 gal+0.5 gal	Standard with conveyor	37.5 ab
11	1 OST	2 gal	Standard	32.6 b

Summary

- Dark:
 - Only MH-containing treatments provided acceptable sucker control
 - Sucker control in non-MH treatments was approximately half that of MH treatments.
 - No major effect of conveyor hoods in MH treatments
 - Slightly better sucker control in non-MH treatments when conveyors were used
 - Better sucker control in MH treatments resulted in much better yields also
 - Average total yield/A of MH treatments = 3310 lbs/A
 - Average total yield/A of non-MH treatments = 2840 lbs/A
 - Quality grade index similar between MH and non-MH treatments