

Effect of Fungicide Programs and Lower Leaf Removal on Wrapper Leaf Production in Connecticut Broadleaf Cigar Wrapper Tobacco

Perkins, C., Bailey, A., Rodgers, C., Keeney, A., Witcher, V.; University of Kentucky, Research & Education Center, Princeton, KY, USA; Mitchell Richmond and Rob Ellis, University of Tennessee, Highland Rim Research & Education Center, Springfield, TN, USA.

Research History



- Increase in demand for air cured cigar wrapper tobacco
- Dealers urged Kentucky producers to try and meet demand Connecticut could not meet
- Variety trials: 2019
 - Six varieties tested, but no variety choice for growers
 - Selections of 'C33' are currently the only variety available for growers
- Nitrogen Rate Trials: 2019-2020
 - 75, 100, 125, **150**, **175**, 200, 225 lb N/Acre
- Fungicide Trials: 2019-2021
 - Evaluate fungicides on effectiveness against late-season frogeye leafspot
- Research took place at the University of Kentucky Research and Education Center in Princeton, KY

2021 Fungicide and Lower Leaf Research Trial Setup

- Standard Field Production Procedures
- Randomized complete block design with 4 repetitions
- 4 row plots 40' long; 40" row width with 32" plant spacing, gives plant population of 4900 plants/acre
- Preplant Fertilizer: 175 lb N/Acre; 100 lb P₂O₅/ Acre; 150 lb K₂O/ Acre
- Set date: May 24, 2021
- Finished Topping: July 15, 2021
- Harvest date: July 29, 2021
- 'SPX'; Hail and Cotton selection of 'C33'

Fungicide Trial

- 12 Fungicide treatments
- 1st application made 3 weeks after planting date
- Applications are made until time to harvest (approx. 6 weeks)
- Fungicides were chosen based on effectiveness against frogeye leafspot
- All applications Broadcasted with Hollow Cone Nozzles
- All 4 rows sprayed; data came from center 2 rows
- Spray volume changed as Tobacco increased in size
 - 15 gal/acre
 - 25 gal/acre
 - 40 gal/acre

2021 CT Broadleaf Fungicide Research: Focus on Frogeye Control in Late Season



Trt	Fungicide/Fungicide Program	Chemical Name	Classification	Number of Applications	Timing of Final Spray
1	Manzate/Quadris	Mancozeb/Axozystrobin	Fungicide	2	21 d
2	Manzate/Quadris/Revus	Mancozeb/Azoxystrobin/ Mandipropamide	Fungicide	5	7 d
3	Presidio	Fluopicolide	Fungicide	2	7 d
4	Orondis Ultra	Oxathiapiprolin/mefenoxam	Fungicide	2	7 d
5	Cueva	Copper octanoate	Copper	5	3 d
6	Double Nickel	<i>Bacillus amyloliquefaciens</i> strain D747	Biological	5	3 d
7	Regalia	<i>Reynoutria sachalinensis</i>	Biological	5	3 d
8	Velum Prime	Fluopyram	Fungicide	2	30 d
9	EXPERIMENTAL A (Topsin)	Thiophanate-methyl	Fungicide	4	14 d
10	EXPERIMENTAL B (Topguard)	Flutriafol	Fungicide	3	14 d
11	EXPERIMENTAL C (Miravis Top)	Pydiflumetofen+difenoconazole	Fungicide	3	14 d

2021 Lower Leaf Removal Trial Set-up

- 2 x 2 Factorial
- Leaves removed; no Leaves Removed
- Sprayed; not Sprayed
- Sprayed Quadris 3 days after topping
- Sprayed Double Nickel 3 days before harvest
- All plants topped at 10 leaves

*Quadris injury

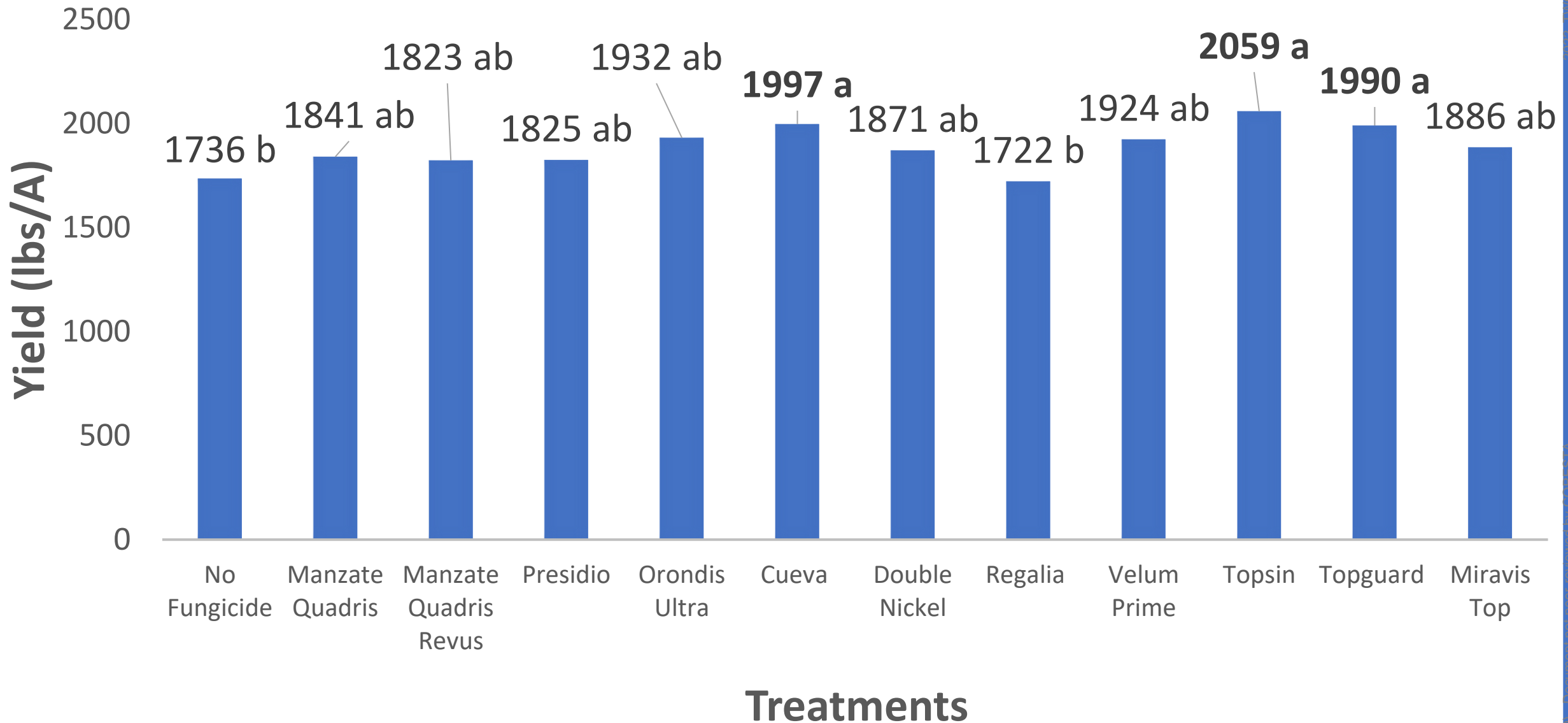


Treatments: Lower Leaf Removal Trial

- **Treatment 1:** No Leaves Removed, No Fungicide
- **Treatment 2:** No Leaves Removed Sprayed Quadris/Double Nickel
- **Treatment 3:** 4 bottom leaves removed, no fungicide
- **Treatment 4:** 4 bottom leaves removed, sprayed Quadris/Double Nickel
- **Treatment 5:** No leaves removed, No fungicide, Harvested top 6 leaves.

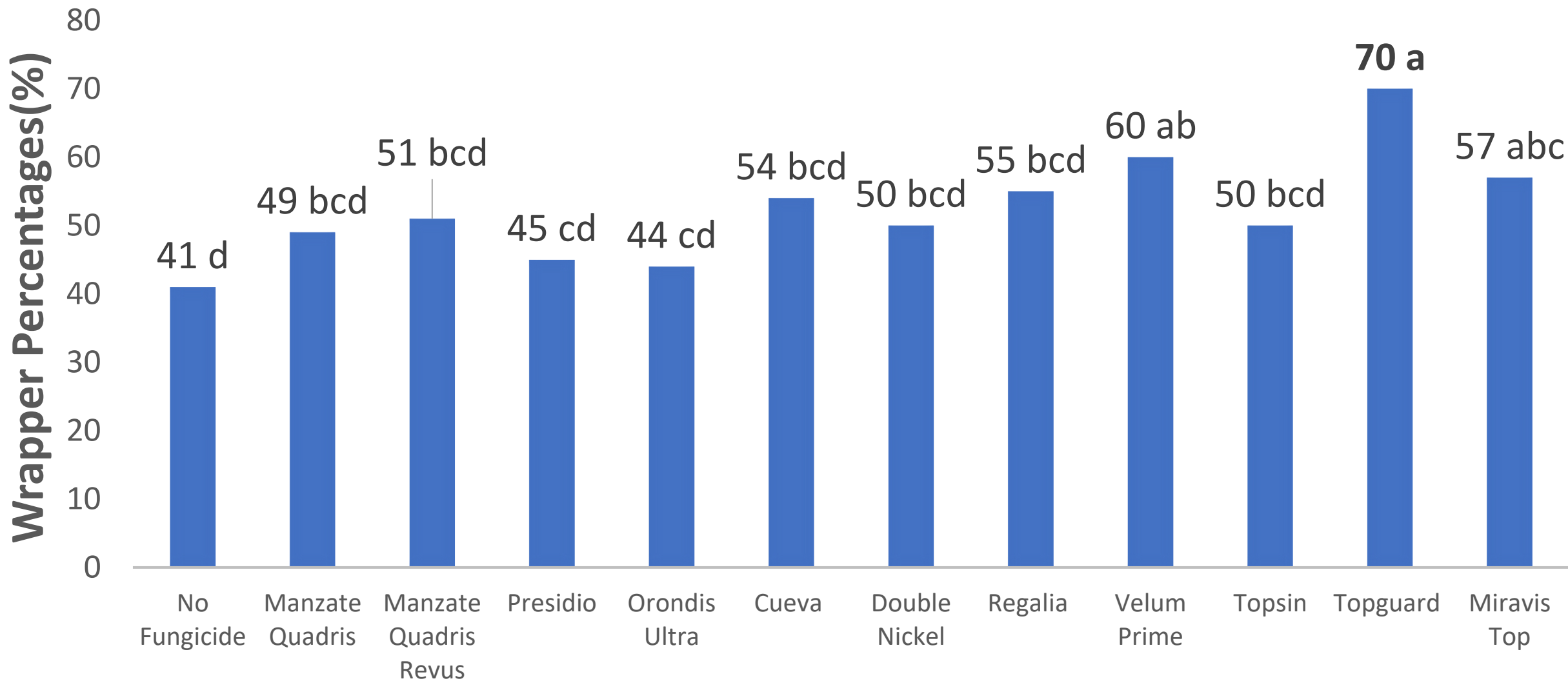


UKREC FUNGICIDE YIELD (LBS/A)



Data followed by the same letter are not statistically different accorded to LSD, alpha = 0.10

UKREC FUNGICIDE WRAPPER PERCENTAGES (%)

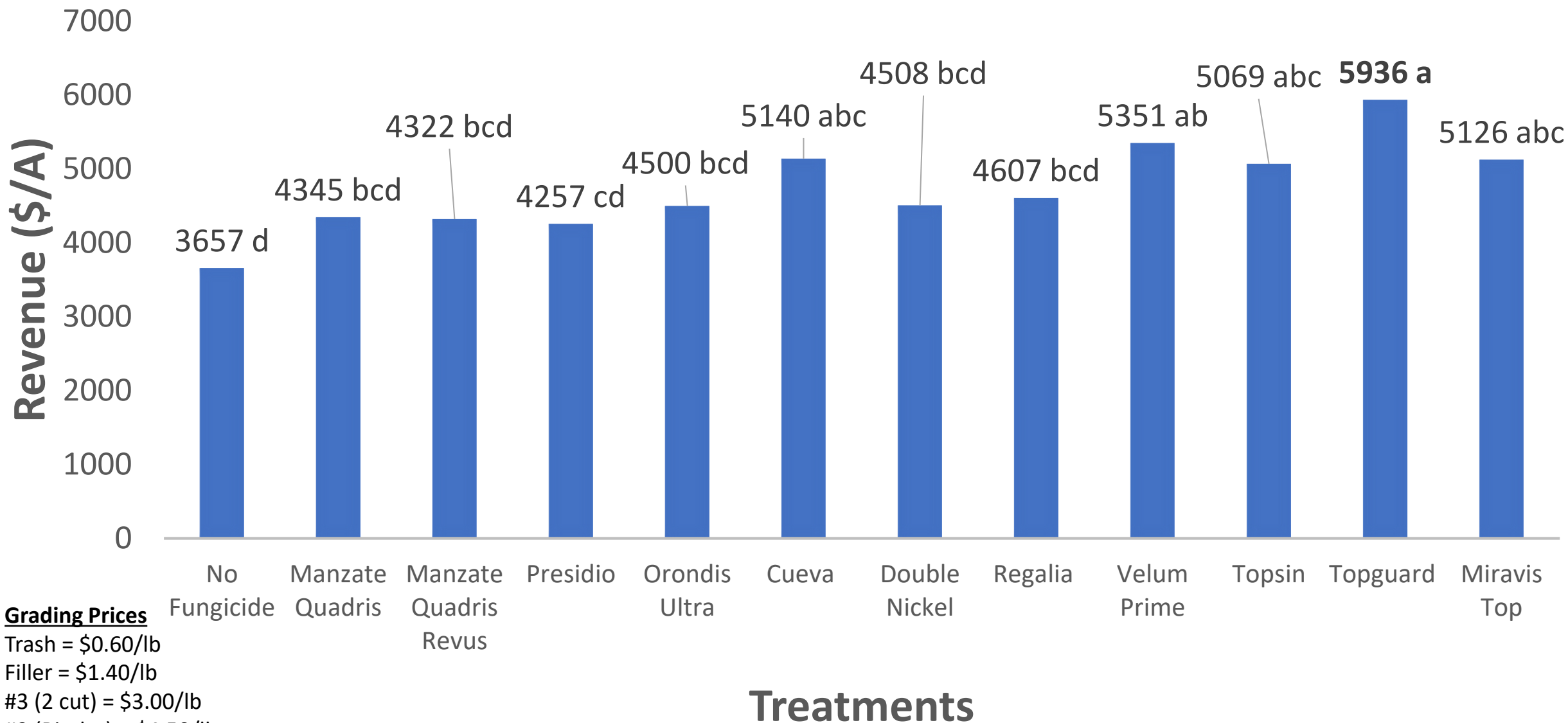


*Wrapper percentages were a sum of #3, 2, 1 divided by the total yield

Treatments

Data followed by the same letter are not statistically different according to LSD, alpha = 0.10

UKREC FUNGICIDE GROSS REVENUE (\$/A)



Grading Prices

Trash = \$0.60/lb

Filler = \$1.40/lb

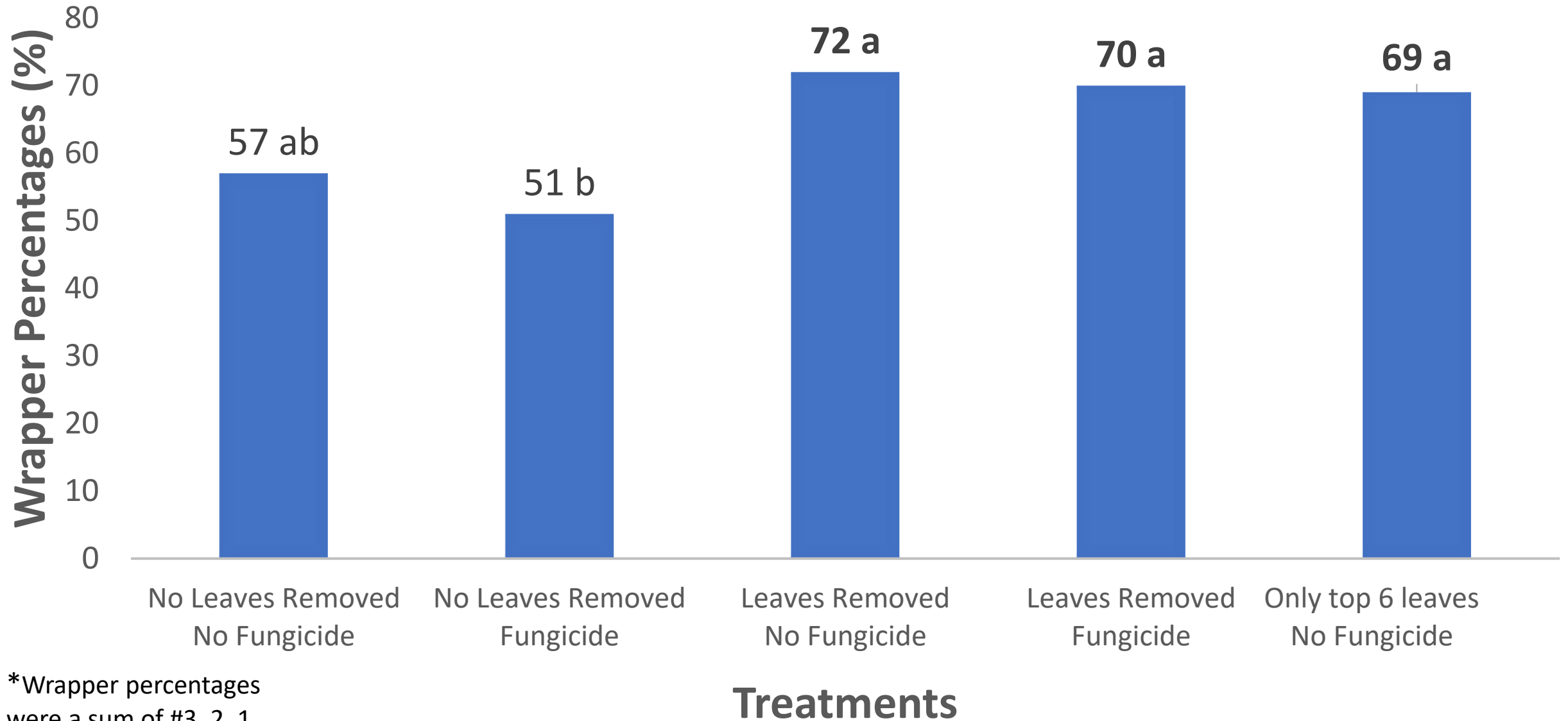
#3 (2 cut) = \$3.00/lb

#2 (Binder) = \$4.50/lb

#1 (Wrapper) = \$6.85/lb

Data followed by the same letter are not statistically different accorded to LSD, alpha = 0.10

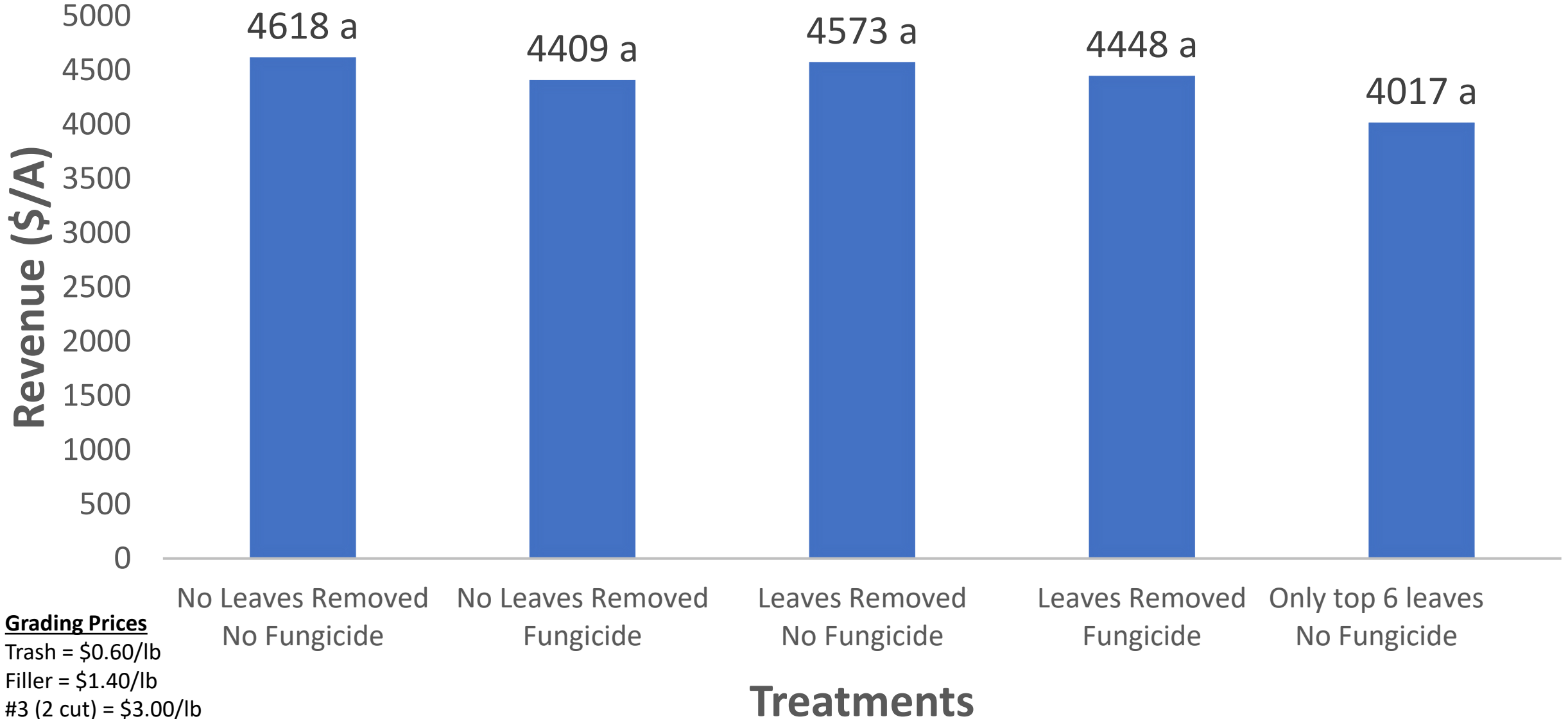
UKREC LOWER LEAF WRAPPER PERCENTAGES (%)



*Wrapper percentages were a sum of #3, 2, 1 divided by the total yield

Data followed by the same letter are not statistically different accorded to LSD, alpha = 0.10

UKREC LOWER LEAF GROSS REVENUE (\$/A)



Grading Prices

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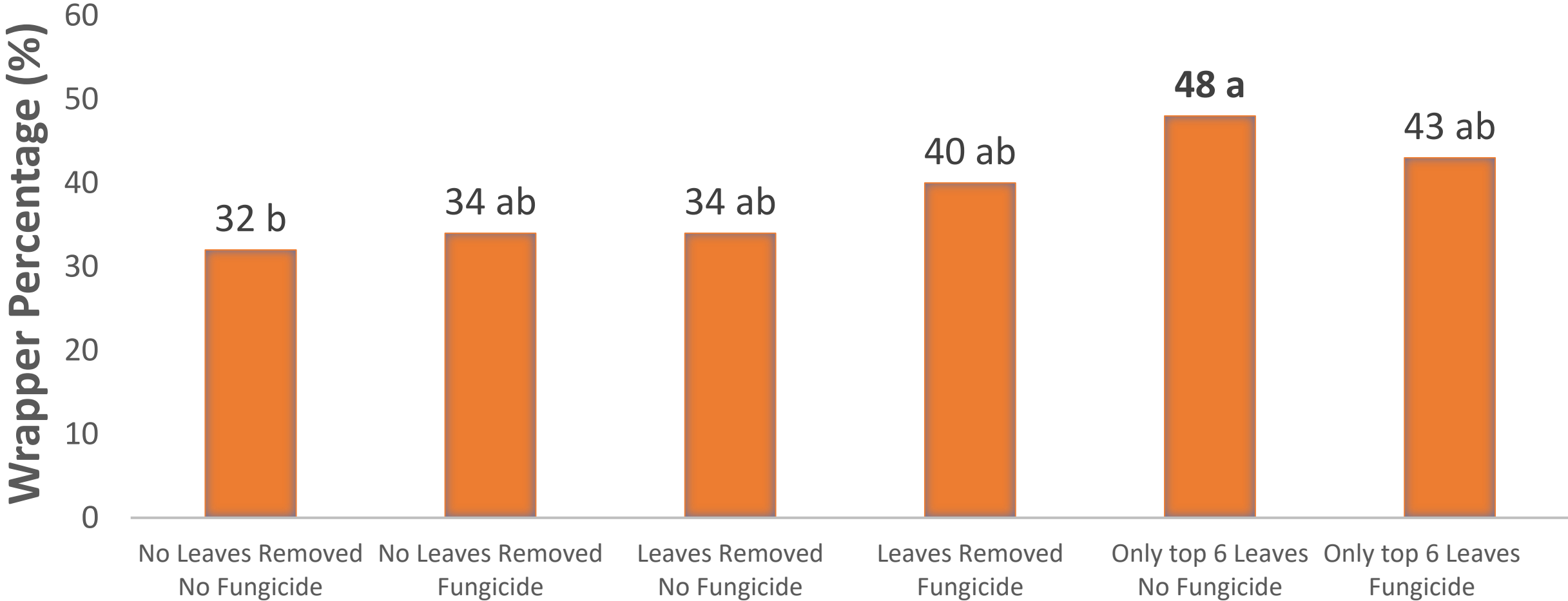
Tennessee Department of Agriculture

SPRINGFIELD LOWER LEAF YIELD (LBS/A)



Data followed by the same letter are not statistically different accorded to LSD, alpha = 0.10

SPRINGFIELD LOWER LEAF WRAPPER PERCENTAGE (%)

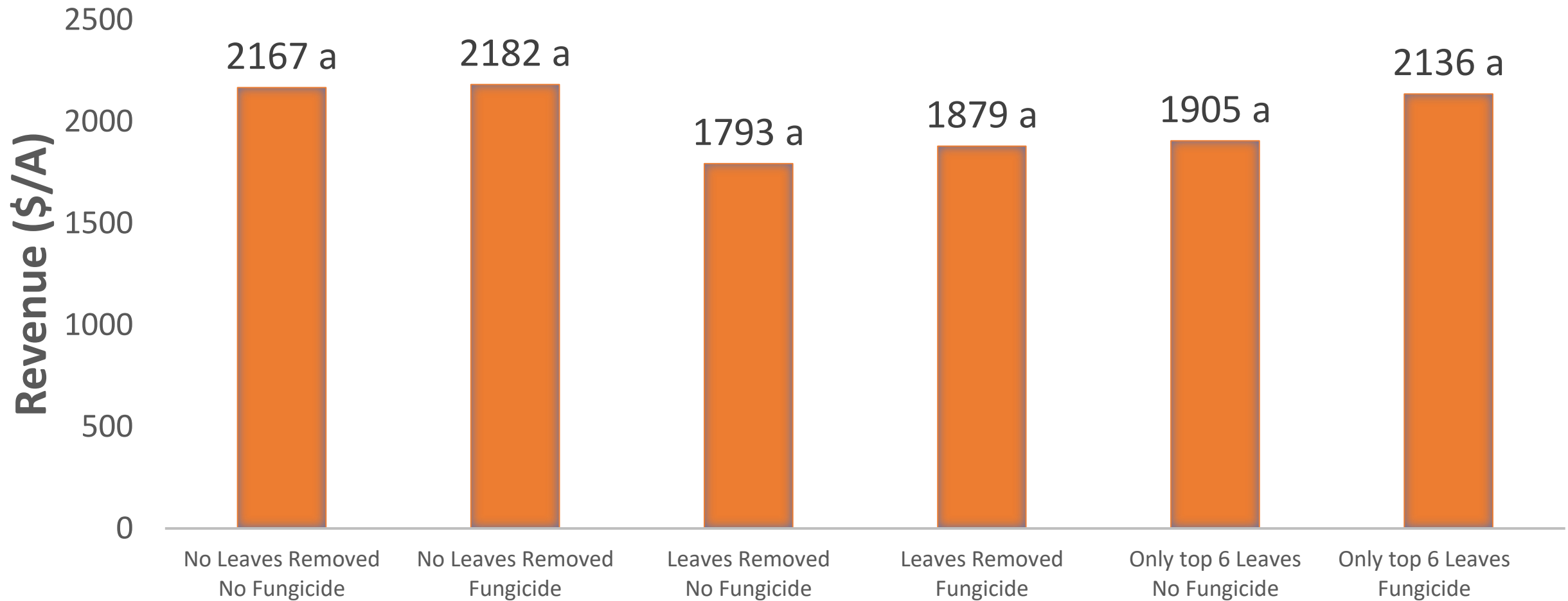


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SPRINGFIELD LOWER LEAF GROSS REVENUE (\$/A)



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Summary

Topguard, Velum Prime, Cueva, and Topsin were the best producers in yield, percent wrapper, and Revenue

Lower Leaf Removal increases overall wrapper percentage, but it has little effect on total revenue because of lower overall yield.

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