

# Extending the Grazing Season with Summer Stockpiling

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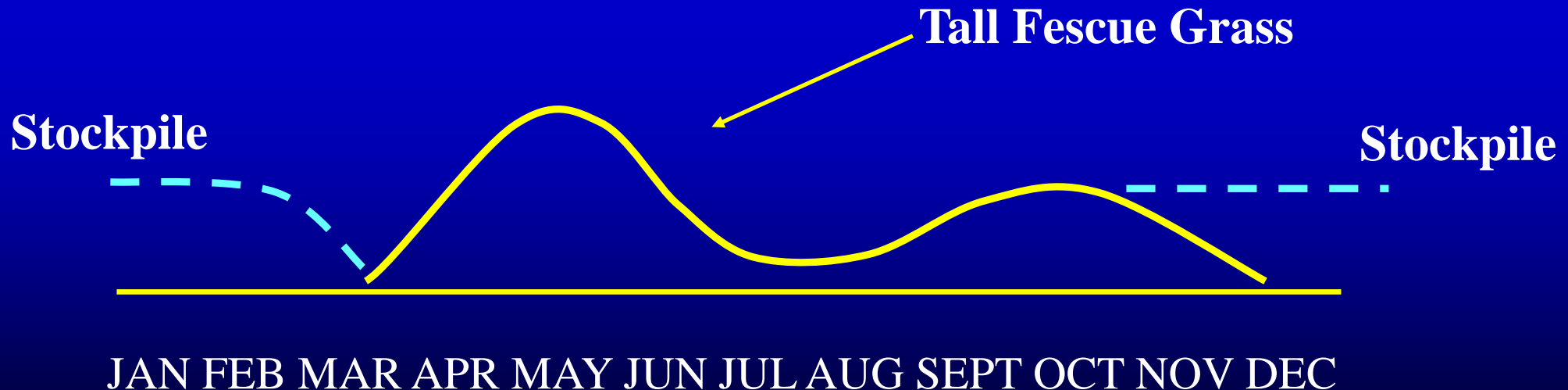
**Virginia Cooperative Extension**  
Virginia Tech • Virginia State University

# What is Stockpiling anyway?

- Stockpiling is the process of accumulating standing forage during the growing season to be grazed during periods of little or no growth. While we generally think of stockpiling as a program for winter grazing, it can also be employed in some climates for standing forage during heat or drought induced summer dormancy.” Jim Gerrish – *Kick the Hay Habit*.

# Stockpiling Tall Fescue for Winter

- **Fall Stockpiling Tall Fescue**
  - allowing forage growth to accumulate  
August – Nov/December/January
  - best option for extending grazing
- **Seasonal Distribution**



# Challenges to Fall Stockpiling

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- Lack of Infrastructure – fence, electric, water,
- No available land to stockpile
  - High stocking rate? 2 acres per cow or less
- Summer slump
  - Slow grass growth in summer
  - Particularly with cool season grasses
  - Summer annuals expensive and challenging to implement

- One potential solution:

Summer Stockpile Cool Season Grasses



# Virginia Tech SVAREC/McCormick Farm

- 500 acres of fescue-based pasture
- 230 cows managed for research & production
- (2.17 acres pasture/cow)
- Overabundance of pasture growth in spring that was hayed and fed back out an average of 150 days/year
- Often difficult to stockpile any fall pasture (late-summer/fall drought common)
- What if some of the spring growth was set aside to be grazed instead of hayed? Expense? Quality?



# Summer stockpiling system

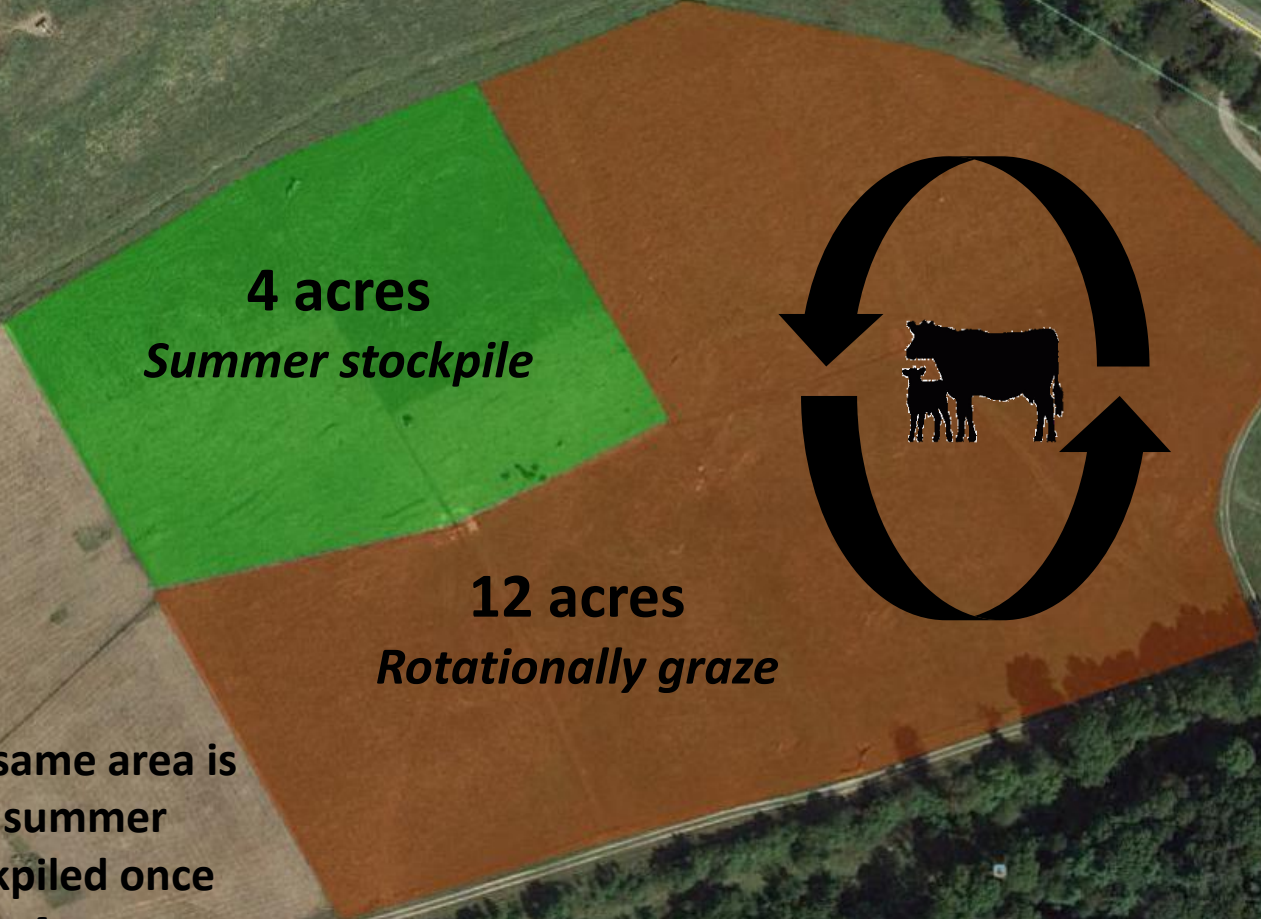
- **Stockpiled spring & summer growth for grazing in late-summer and fall**
- **Enabled fall stockpiling of pasture to extend grazing season to February or later**
- **The Shenandoah Valley AREC routinely averages around 270 days of grazing/year**
- **Quality similar to most first cutting hay**
- **Estimated feed cost savings \$1.37/head/day compared to feeding hay**

# Summer Stockpiling

- Approximately 20% of available grazing acreage in spring was “stockpiled” beginning at green-up.
- This “stockpile” increases stock density at a time (spring) when grass grows robustly. High stock density increases forage utilization. Pasture rotation on grazing acres increased frequency helping to harvest growing grass
- Late June -July-August – grass growth slows, forage availability decreases
- August - Move livestock onto summer stockpile – strip graze,(just like you would fall stockpile) allowing fall stockpile to accumulate



# Green up through mid-July



The same area is only summer stockpiled once every 4 years

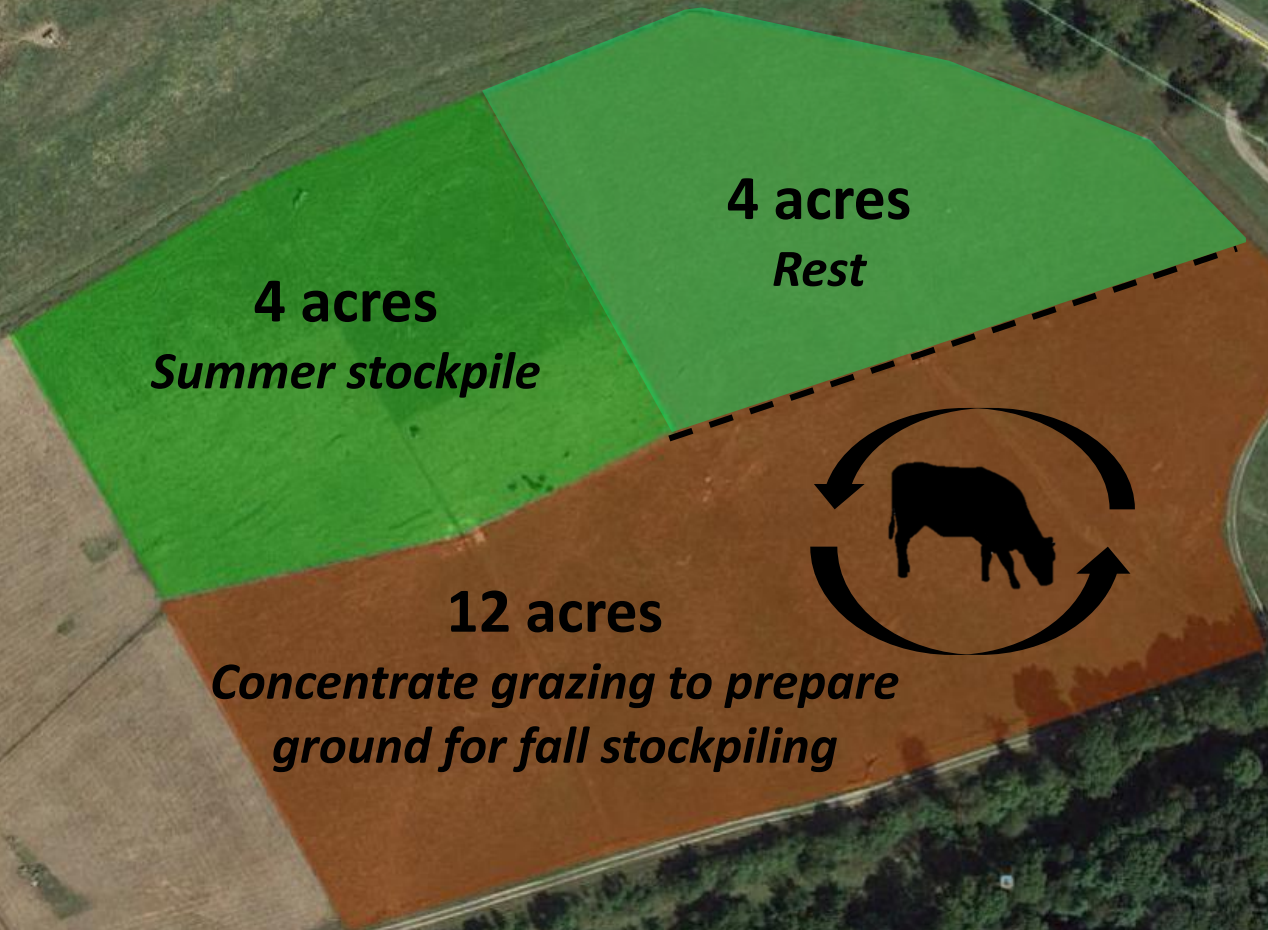






Legend

**mid-July to mid-August**



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Google earth

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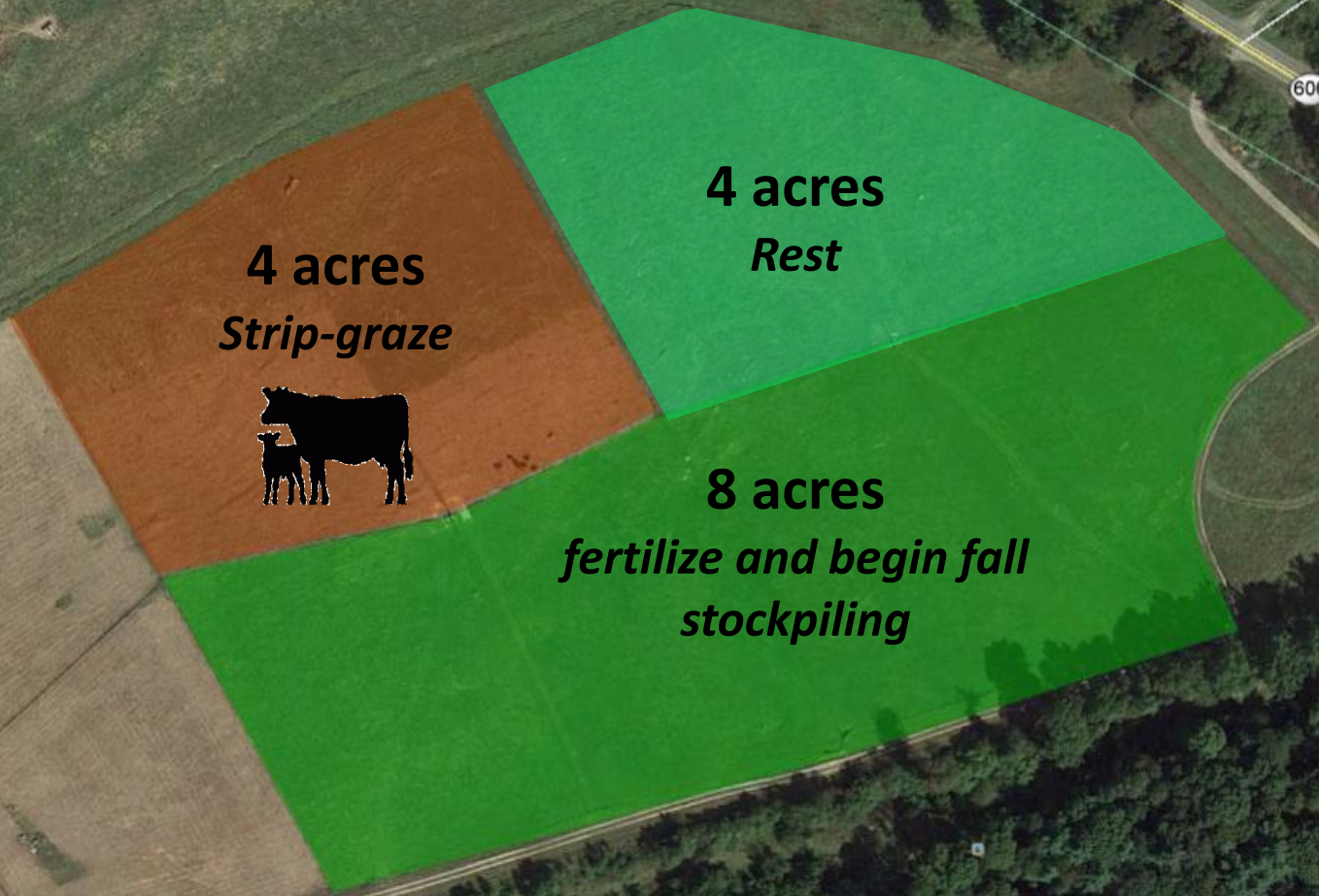
500 ft





Legend

**mid-August to mid-October**



Google earth

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500 ft





Slide courtesy of Bobby Clark, Luray







# Cost Comparison to Feeding Hay

SVAREC Summer Stockpile Costs		
	Lbs Forage	
	7137.5	
	0N/acre	0N/Ton Forage
Opportunity cost of not grazing earlier	\$50.00	\$14.01
Cost of feeding supplemental hay		
Labor	\$20.00	\$5.60
Supplies	\$10.00	\$2.80
Total Costs	\$80.00	\$22.42
Cost per cow per day (30 lbs dry matter/day)		\$0.34

Costs of Traditional System		
	SVAREC Hay	
	tons	2.5
	Per acre	Per ton
Fertilizer	\$151.70	\$60.68
Lime Pro-rated 3 years	\$10.00	\$4.00
Fuel Harvest	\$12.96	\$5.18
Labor Harvest	\$53.40	\$21.36
Storage Cost	\$2.00	\$0.80
Fuel Feeding	\$6.00	\$2.40
Labor Feeding	\$15.00	\$6.00
Machinery Fixed Costs	\$36.46	\$14.58
Total Cost	\$287.52	\$115.01
Cost per cow per day (30 lbs dry matter/day)		\$1.73

What about the quality? Is it any good?

Year	Location	%CP	%TDN
2015	SVAREC	8.6	54.8
2015	SVAREC	8.6	54.2
2016	SVAREC	11.9	57.2
2016	SVAREC	11.8	57.8
2017	Augusta	9.7	56
2017	Page	8.2	56
2017	Shenandoah A	8.8	55
2017	Clarke	15.3	55
2017	Shenandoah B	14.2	59



# Summer stockpiled pasture forage

	% pro
<b>CLIPPED FORAGE (averaged across years &amp; nitrogen treatments)</b>	
<b>FISTULA FORAGE (averaged across years &amp; nitrogen treatments)</b>	

- **Cattle averaged 60.5 days of grazing during the 2 years of our study (S**

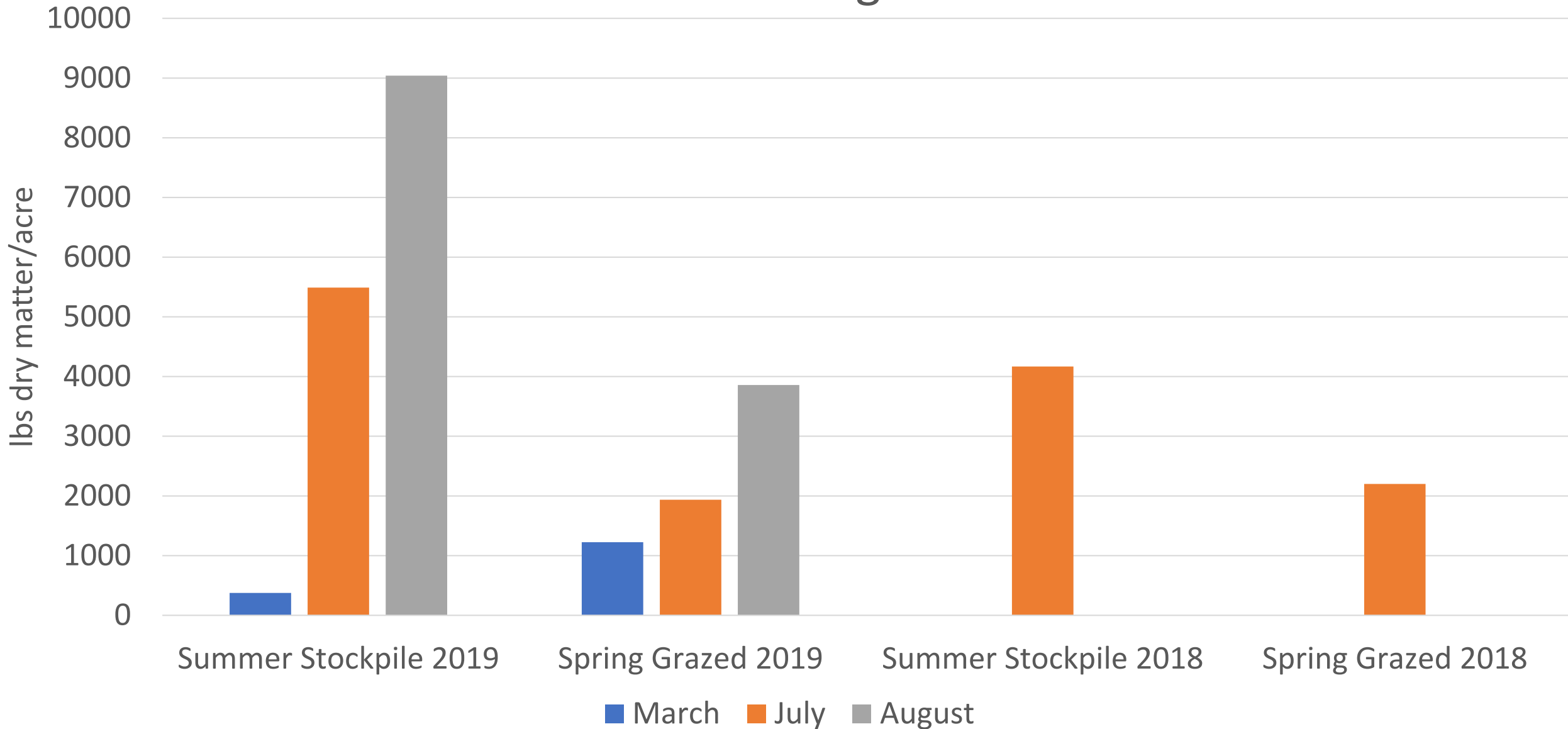


*Thank you to the Virginia Agricultural Council for funding forage quality analyses.*

# What about the yield?

Year	Location	Yield Date	Yield (DM lbs/acre)
2009	SVAREC - Boneyard & Carr	9/29/2009	5600
2015	SVAREC	9/3/2015	8167
2016	SVAREC	8/22/2016	5505
2017	Augusta	8/1/2017	3215
2017	Price Page	8/4/2017	5951
2017	Funkhouser Shenandoah A	8/1/2017	5702
2017	Luttrel Clarke	8/1/2017	4017
2017	Hafner Shenandoah B	8/1/2017	2773
2018	Rockingham	7/11/2018	4169
2019	Rockingham	8/15/2019	9041
<b>Average</b>			<b>5644</b>

# Comparison of Forage Yield - Summer Stockpile vs. Spring Grazed Pasture - Rockingham 2018-2019





More importantly –  
Grazing Days?

- Critical to strip graze or intensely graze
- Also select a field that was not wintered on (Augusta was)

**Table 2 – Yield, Stock Density and Grazing Days**

Year	Location	Yield Date	Yield (DM lbs/acre)	Stock Density (AUM/acre)	Summer Stockpile Grazing Days	Fall Stockpiling Grazing Days
2015	SVAREC	9/3/2015	7783	37.1	68	85
2016	SVAREC	8/22/2016	5725	37.1	68	63
2017	Augusta	8/1/2017	3215	8.1	20	
2017	Page	8/4/2017	5951	42.3	45	

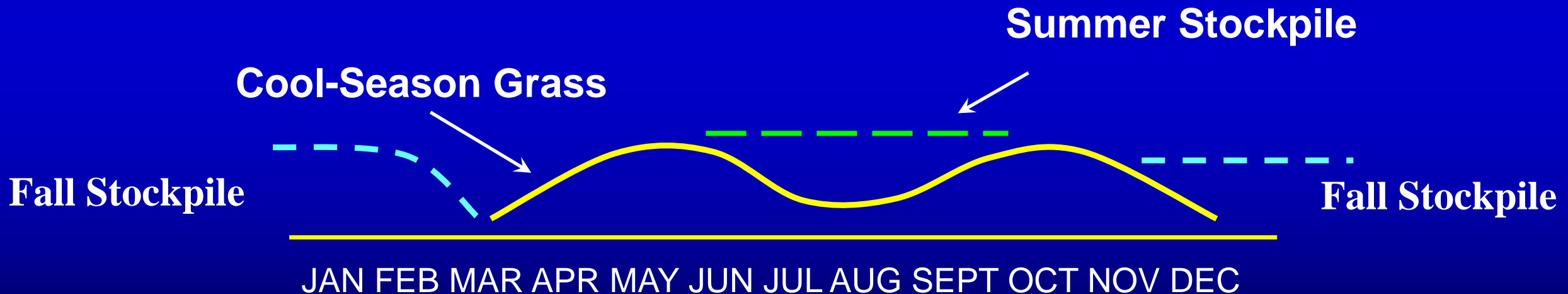
# Economic Summary

- At the Shenandoah Valley AREC/McCormick Farm summer stockpiling has provided an average of 60+ days of late-summer grazing per year, and in turn helps the farm graze close to 90 days of fall stockpile.
- Estimated savings using Summer Stockpiling fall stockpiling system to extend grazing have resulted in an average of \$36/cow/year versus making and feeding hay using summer stockpiled acreage.
- Summer stockpiling is a tool to facilitate fall stockpiling and winter grazing. It should be considered if surplus hay is being made on grazable acreage (fenced and watered) and the operation is feeding hay during a dry fall
- Under most conditions summer stockpile can yield an average of 5000 lbs of dry matter that equal to most first cutting hay at a time when most cool season growth is shut down
- Strip grazing summer stockpile can allow fall stockpiling to take place, increasing the potential for extending grazing later into the winter and/or expanding fall stockpiled acreage



# Rethinking Stockpiling

- Essentially, we are stockpiling to “bridge the forage gap” not during winter dormancy, but summer dormancy
- So that later, we can bridge the winter dormancy gap



# Things to consider before trying Summer Stockpile

- Can you strip graze? - Will have better results with
- Shade and water – are they adequate?
- Do we need the hay that we are giving up? Is it cheaper to buy?
- We do need enough hay on hand for a long winter
  - Recommend 2 “normal years” worth on hand



*Questions?*

