Native Grass Forage Workshop: Economics

Knoxville, TN June 22-23, 2015

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UT Beef and Forage Center

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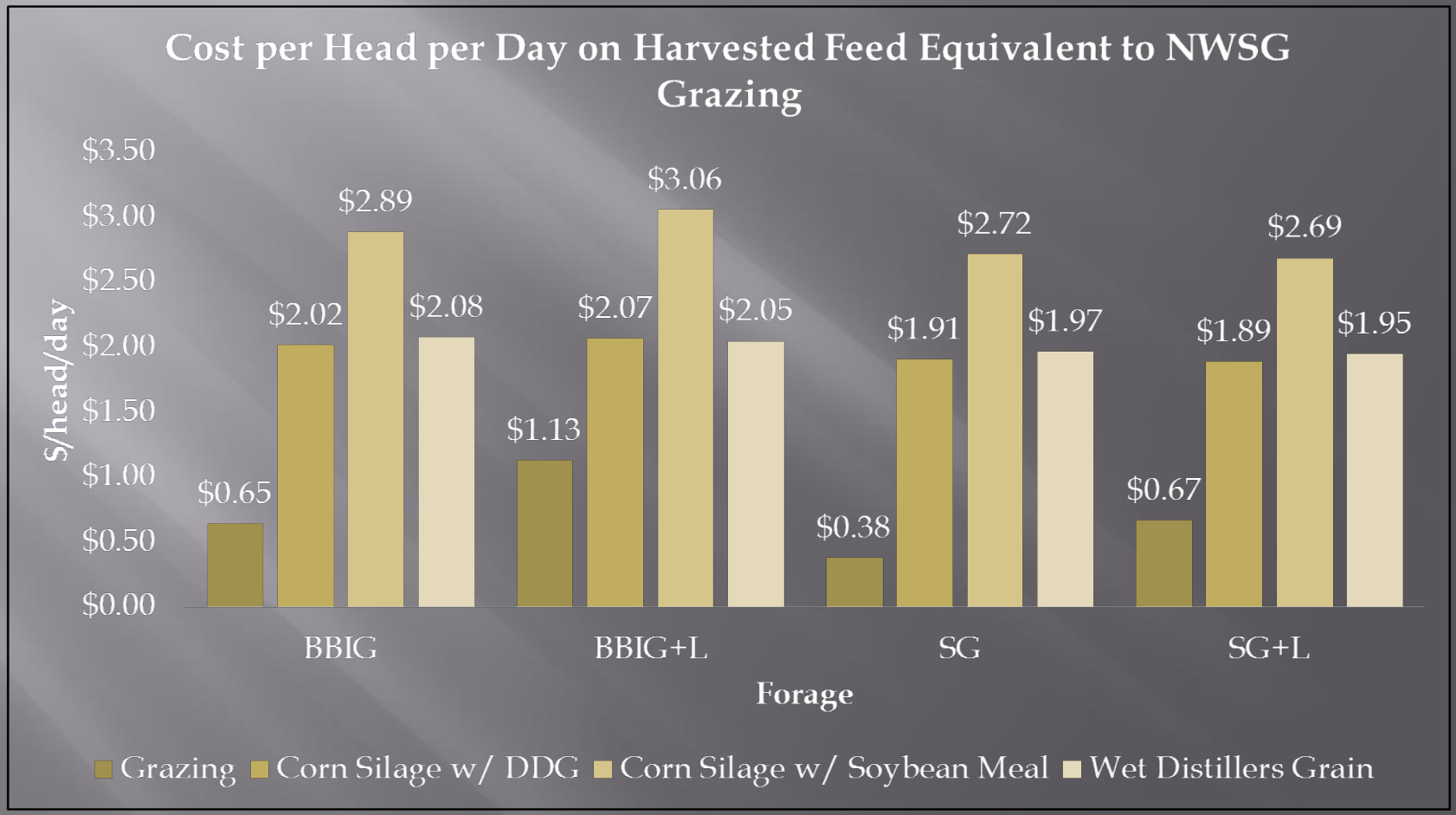
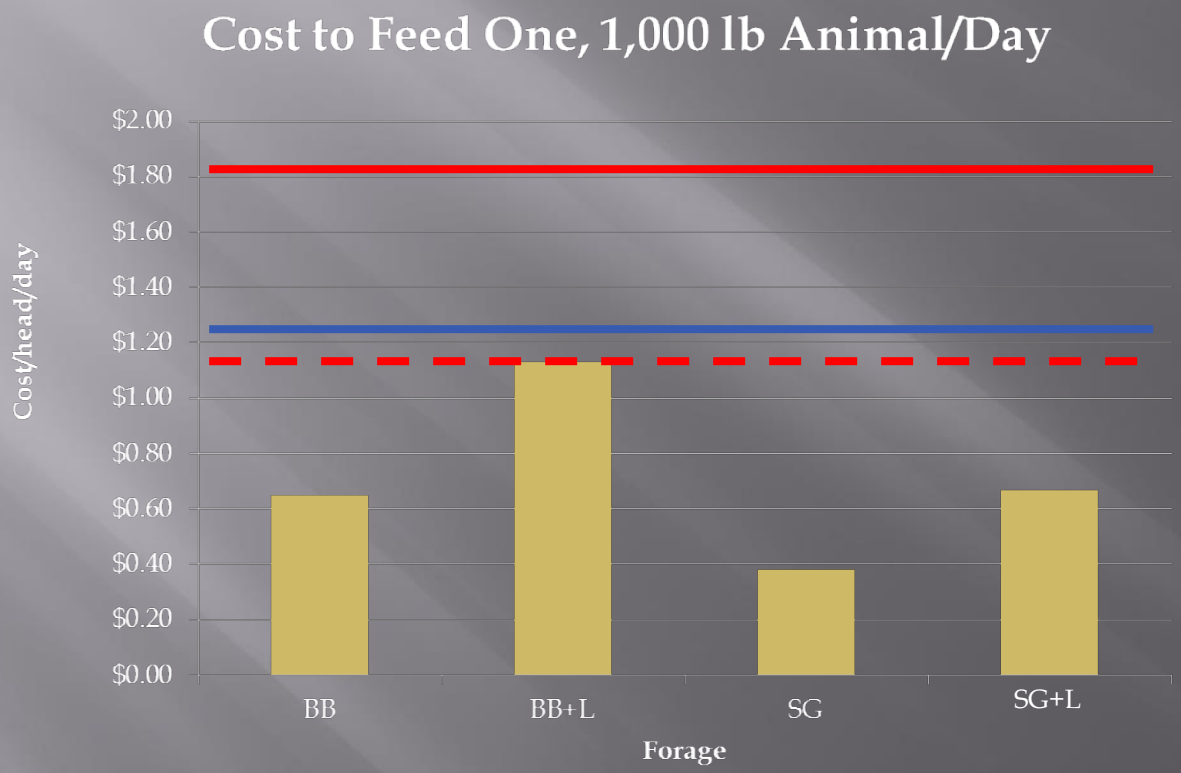
Bred Dairy Heifers



Lowe et. Al. 2016. J. Dairy Science 99:1-10

Grass vs. Contracts and Purchased Feed



High feed range

Contract price

Low feed range

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Grazing Beef Steers

Expected beef yield (lb/acre) and net returns ($/acre) by grass species and location		
NWSG†	Beef Yield	Net Returns
West TN		
SG	291[b]	$186.61[b]
BBIG	210[a]	$77.88[a]
EG	267[a,b]	$139.41[a,b]
Middle TN		
SG	503[d]	$431.28[d]
BBIG	391[c]	$391.39[c]

† BBIG=Big Bluestem and Indiangrass; SG=Switchgrass; EG=Eastern Gamagrass
[a,b] If letter is the same across treatment and location then beef are not different at the 0.05 level.

Lowe et al. 2015. Agronomy J. 107:1733-1740

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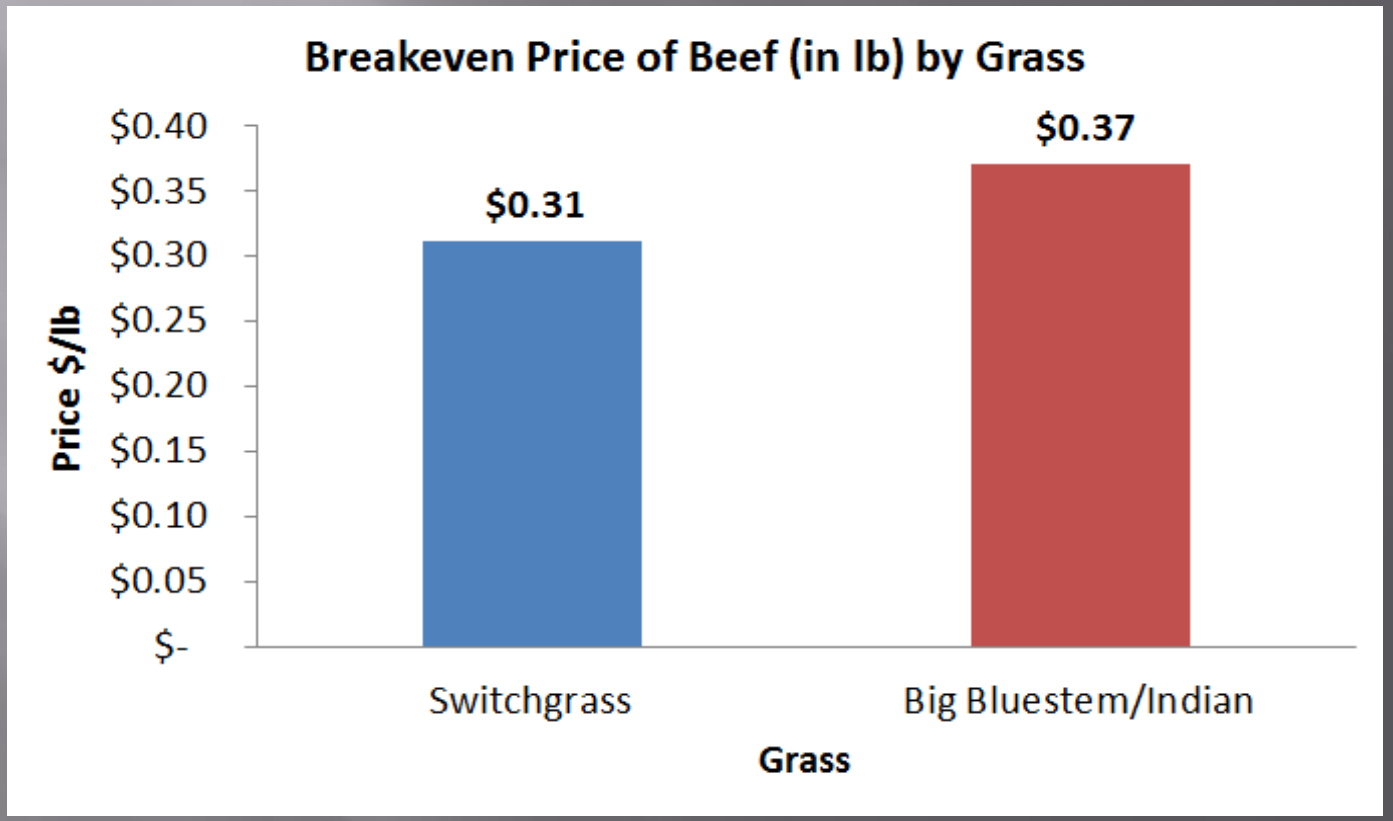
Grazing Steers



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Beef Prices

- Sell May 15th vs. graze NWSG 90-d, sell Aug 15th
- Price of beef is important to consider

Average Price (per cwt) from 2007-2012 by Month and Weight

Weight	May	June	July	August
500-600	$124.89	$121.34	$117.02	$117.62
600-700	$117.12	$114.71	$112.24	$112.55
700-800	$110.81	$109.17	$107.42	$108.10

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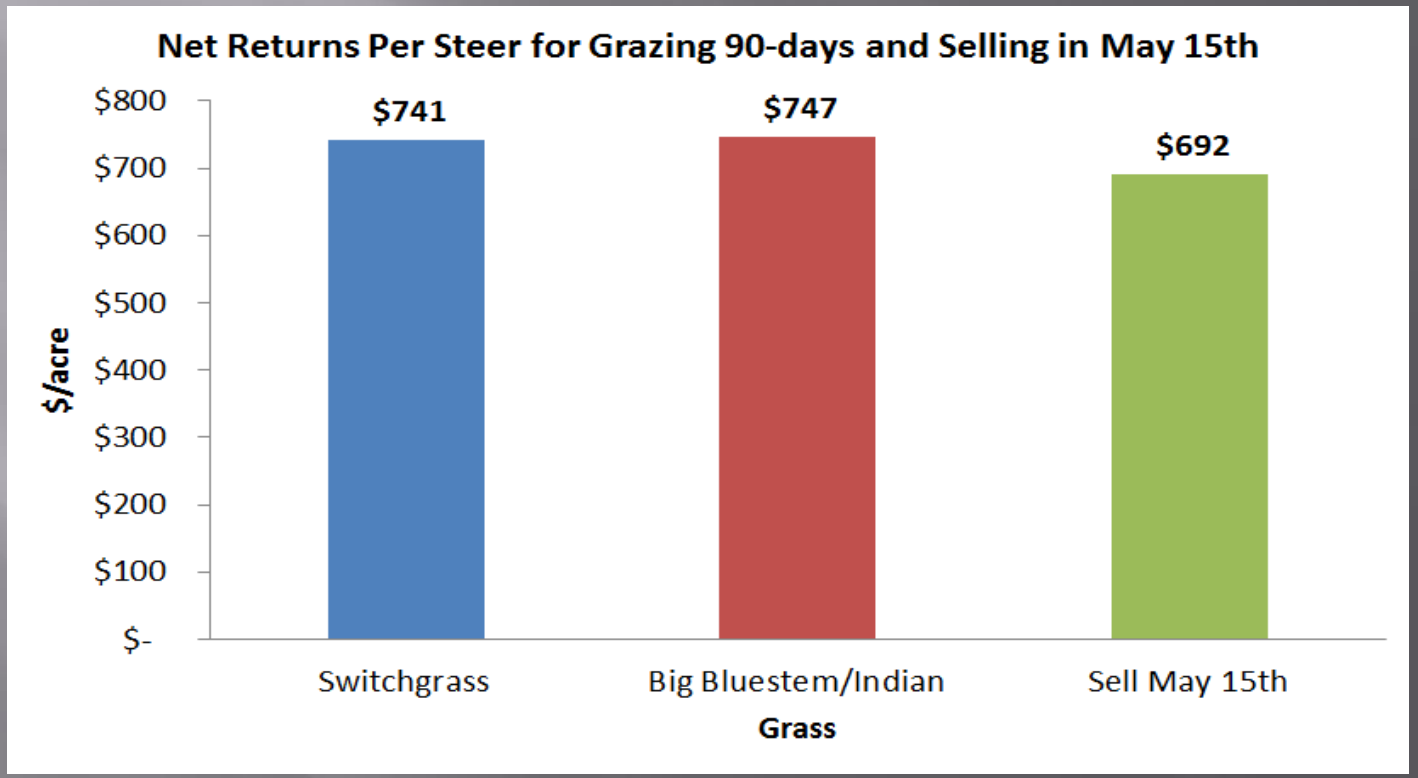
Steer – Results



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Model Production Inputs

Table 1. January 2011 seed, herbicide, fertilizer and other associated input costs used in this publication for forage production. Rates are based on current recommended application rates.

Input	Cost[1]	Big bluestem/ indiangrass Rates	Bermudagrass Rates	Sudan-Sorghum Rates
Big bluestem seed	$ 7 lb PLS	4 lb / acre	--	--
Indiangrass seed	$ 10 lb PLS	4 lb / acre	--	--
Bermudagrass seed	$ 10.75 lb PLS	--	7 lb / acre	--
Sudan-sorghum hybrid seed	$ 1.25 lb PLS	--	--	20 lb / acre
Urea + urease inhibitor	$ 352 T	30 lb / N establishment 60 lbs / N production	60 lb / N establishment 240 lb / N production	120 lb / N production
DAP (P_2O_5)	$ 502 T	30 lb / P establishment and production	40 lb / P establishment 60 lb / P production	30 lb / P production
Muriate of potash (K_2O)	$ 542 T	30 lb / K establishment and production	40 lb / K establishment 80 lb / K production	60 lb / K production
Lime	$ 30 T	Not applied	2.0 T establishment 0.67 T production	0.50 T production
Glyphosate	$ 0.25 oz	80 oz	Not applied	Not applied
Imazapic	$ 2.25 oz	4 oz	Not applied	Not applied
2,4-D Amine	$ 0.62 oz	Not applied	Not applied	32 oz
Gramoxone Max	$ 0.85 oz	Not applied	24 oz	24 oz
Cimarron	$22.90 oz	Not applied	0.20 oz	Not applied
Surfactants	$ 0.10 oz	Not applied	8 oz	8 oz
Diesel	$3.75 gal			

[1] PLS: pure live seed

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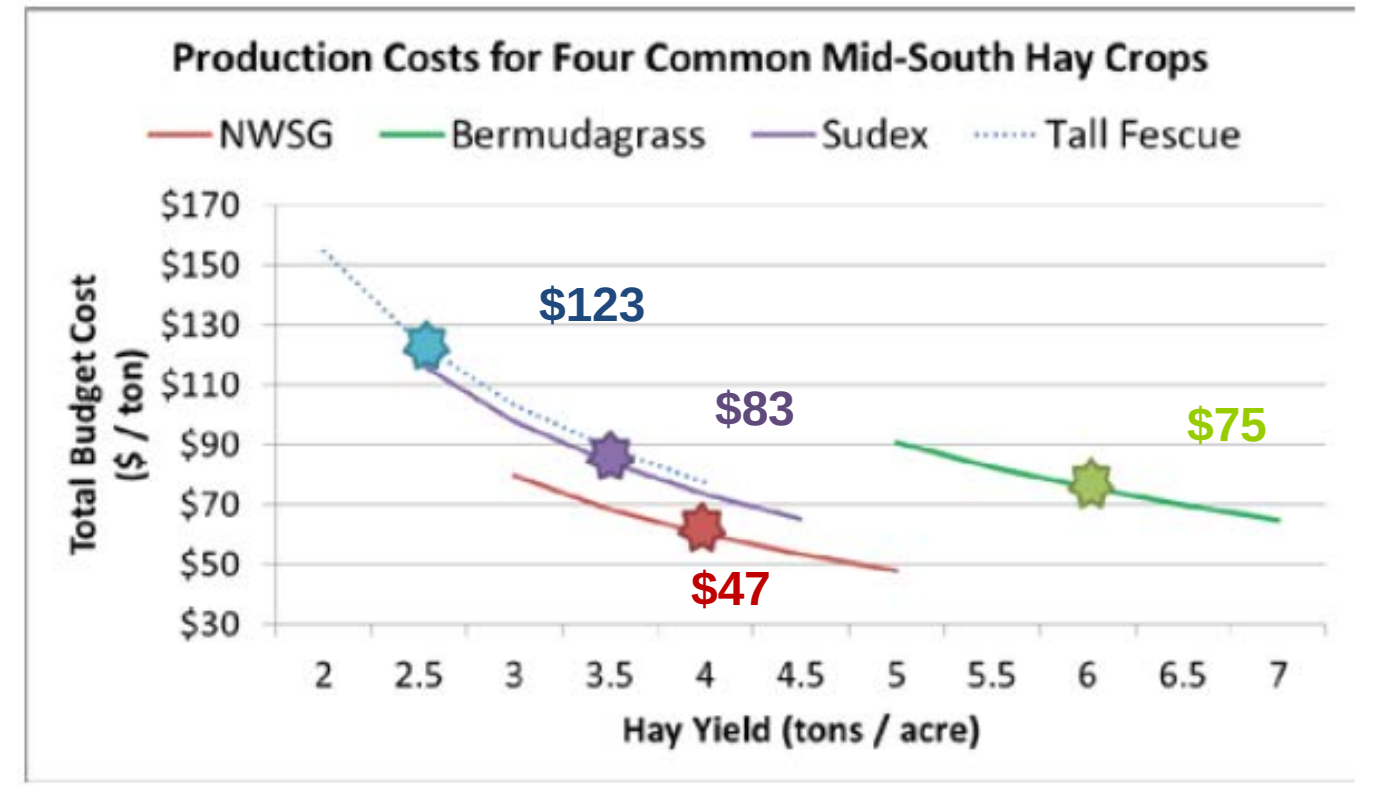
Cost of Hay Production



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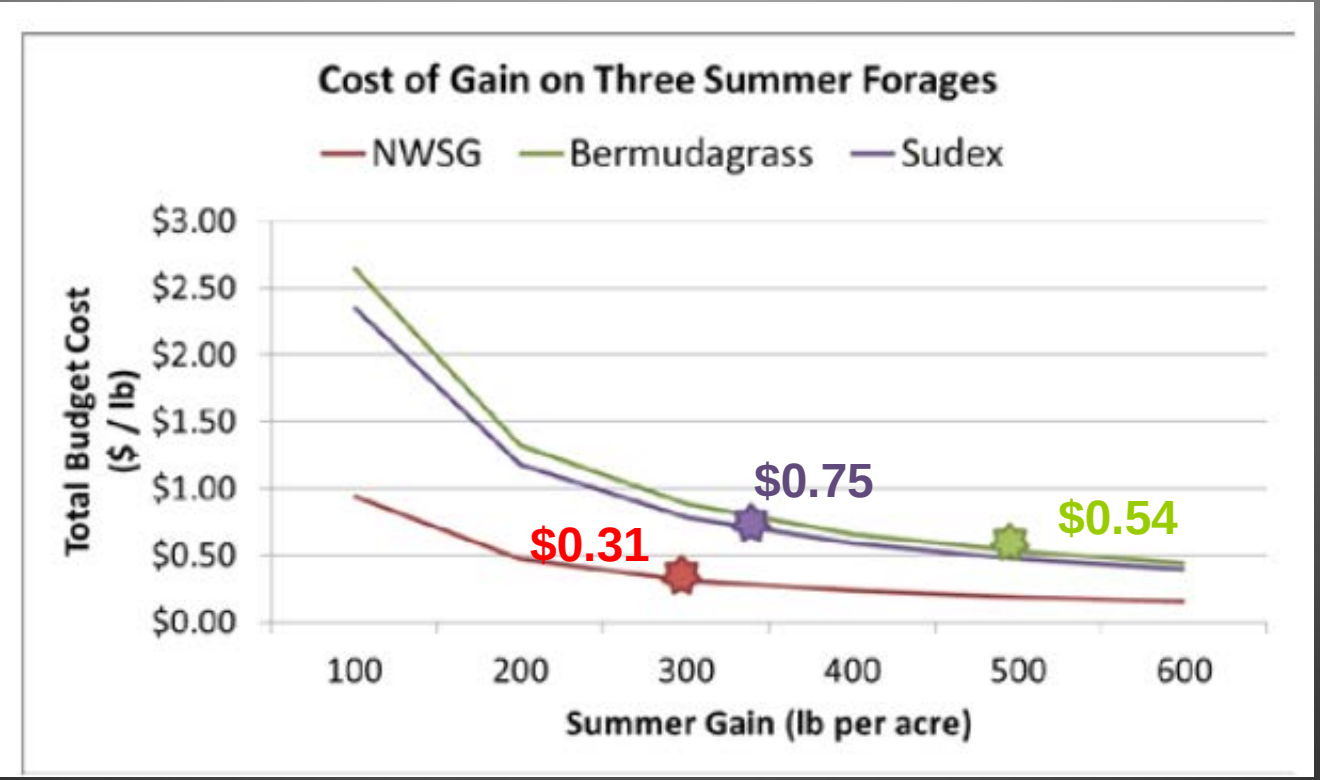
Cost of Grazing



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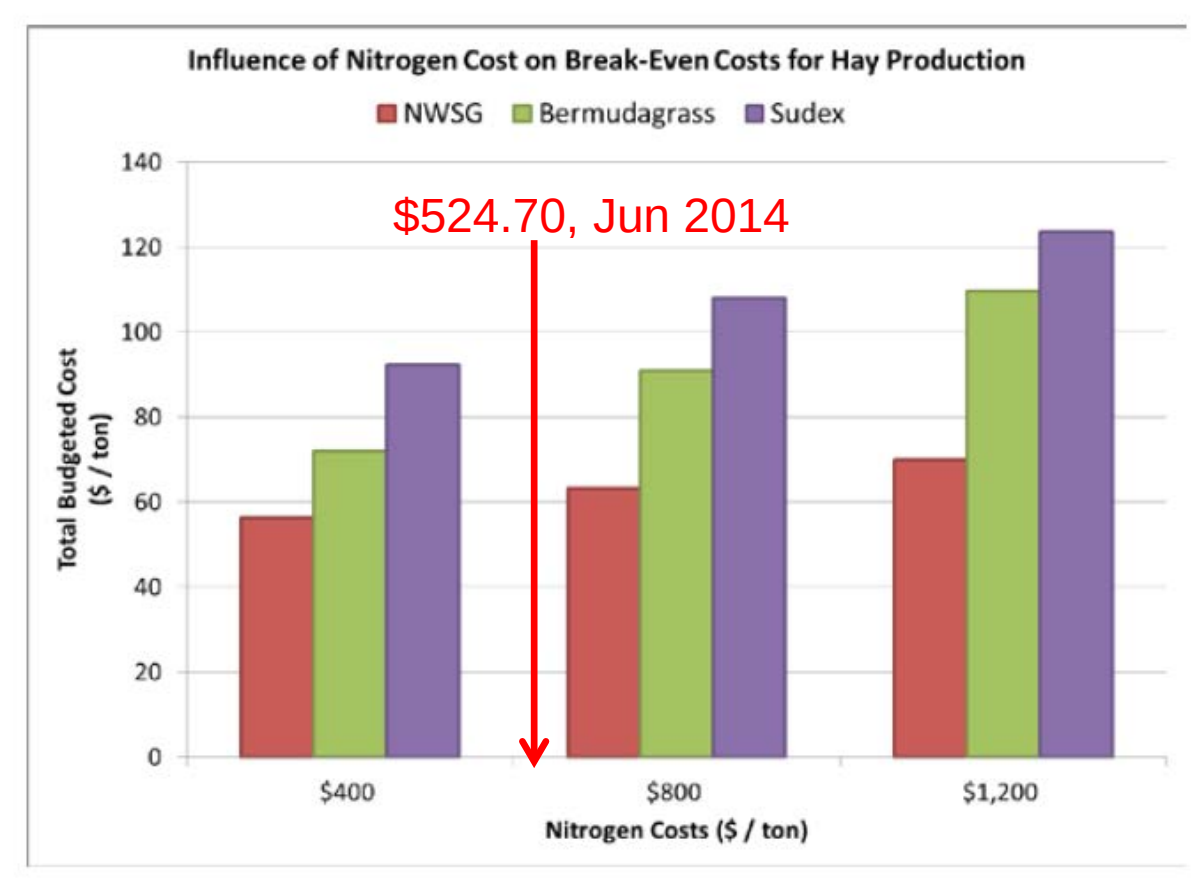
Nitrogen Impacts



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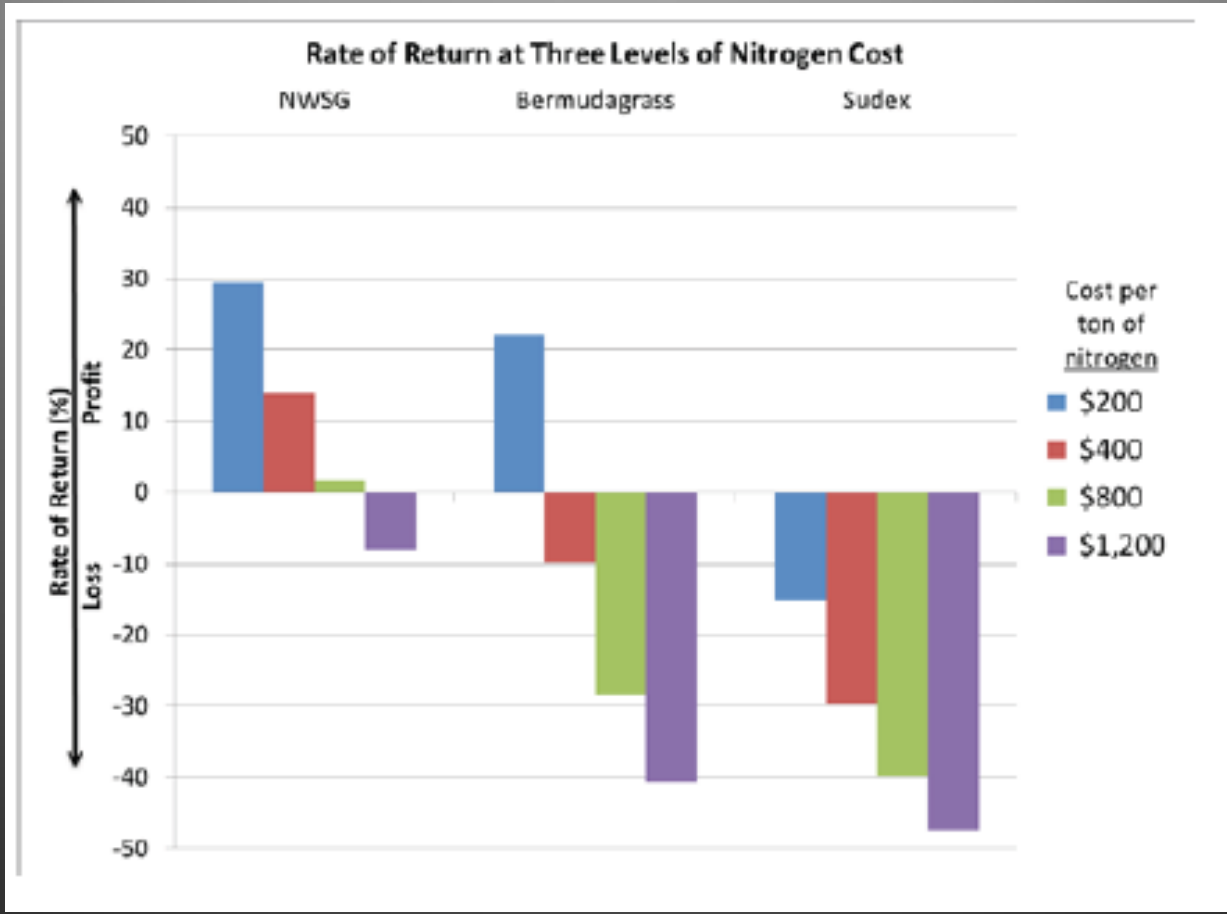
Rate of Return



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Conclusions

- NWSG are a cost-effective alternative for summer forage production
- Driven by high yield (4+ T) and low inputs
- N inputs/seed costs impact investment

Questions?

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