Weaned Calf Growing Options

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Backgrounding

- Feedlots – daily slaughter/replacement
- Economics of backgrounding
- Feed resources
- Commodity prices
- Forage less expensive than grains/byproducts
- Calf-feeding to yearlings?

Myths – Greater Forage Gains

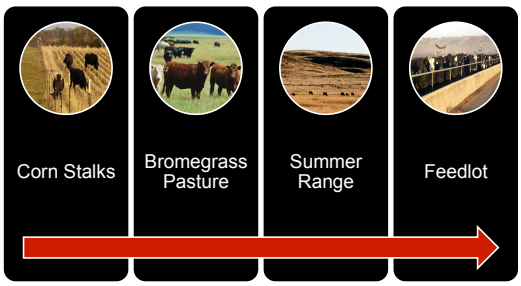
1. Forage gains are cheaper than feedlot gains, therefore, more forage
2. All Northern Plains steers can be marketed as yearlings in September

UNL Research

- Systems research since 1980
- 200 to 300 calves/year
- Spring-born, fall weaned

Beef Systems: Optimizing Forage Resources for Beef Production

Growing and Finishing System



Animal Performance

Item	Calf-fed	Yearling	Diff.
Initial BW, lbs	642[b]	526[c]	-116
FIWT, lbs[a]	642[c]	957[b]	315
Final BW, lbs	1282[c]	1365[b]	83
DMI, lbs/d	21.36[c]	30.55[b]	9.19
ADG, lbs/d	3.81[c]	4.53[b]	0.72
F:G	5.63[c]	6.76[b]	1 .13
DOF	168[b]	90[c]	-78
Total Feed, lbs	3592[b]	2754[c]	-838

[a] Feedlot initial weight
[bc] Means within row with different superscripts differ $P<0.05$

Summary

- Yearlings – 200 lb more gain
- 77% as much feedlot diet
- 58% as much feedlot diet (adjusted for gain)

Yearling, $2.50 and $6.50 Corn

	$2.50	$6.50
Steer cost, $	**747**	**747**
Winter		
Stalks, $	**48**	**48**
WCGF, $	**35**	**90**
Grass, $	**119**	**119**
Feedlot		
Feed, $	**142**	**334**
Profit, $	**35**	**58**

Increase Backgrounding Gains

1. Forage Quality
2. Time on Forage
3. Implants and Ionophores
4. Protein and(or) Energy Supplements

Data Pooled Across Five Years[1]

Item	Continuous brome	Brome, warm-season
Winter gain, lb/d	.68	.68
Summer gain lb/d	1.58	1.80
Feedlot gain, lb/d	3.59	3.59
Feed/gain	7.46	7.25
Fat depth, inches	.42	.42
Quality grade[2]	18.7	18.7

[1]Shain et al. (2005).
[2]20 = average Choice, 19 = low Choice, 18 = high Select.

Implants and Additives

- Implants
  ↑ ADG, 10 – 14%
  $15 - 20/$1
- Ionophores
  ↑ ADG, 7 – 10%
  $2 – 3/$1

Table 4. Intensive Versus Extensive Backgrounding

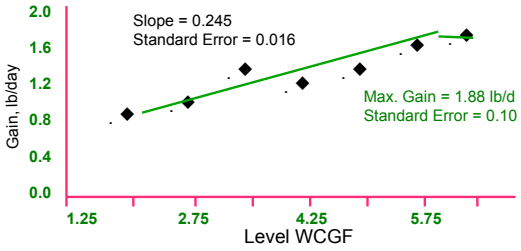
	Extensive[2]	Intensive[3]
Winter ADG, lb	1.66	1.96
Weight[4]	769	813
Grass ADG, lb	1.72	1.98
Date off grass	8/25	7/2
Weight[5]	986	968
Feedlot ADG, lb	4.27	3.96
Weight	1372	1371
DOF	90	102
Breakeven, $/cwt		
Winter	$118.5	$115.80
Grass	$105.70	$106.30
Feedlot	$108.30	$109.70

[1]Folmer et al. (2008); initial wts. 542 lb.
[2]5 lb Sweet Bran during stalk grazing, no implant or Rumensin.
[3]6 lb Sweet Bran during stalk grazing, implanted and fed Rumensin.
[4]Weight of stalks, [5]Weight of grass.

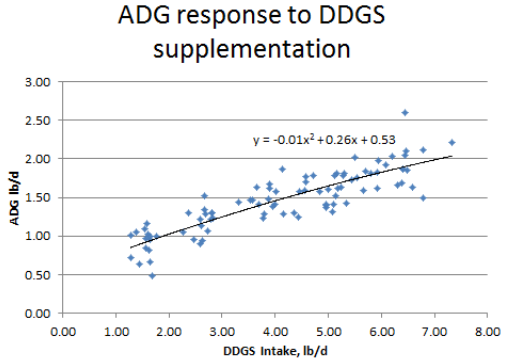
950 – 1000 lb Cattle Price, Changes from July

	August	September	October	November
Feeders[1]	- $.80	-2.80	-7.49	-5.87
Market[2]	- $1.77	-1.60	-1.75	+.78
Market[3]	-$1.98	-0.87	+0.32	+4.82

1Price change, $/cwt, from July price (' 06 – ' 10).
2Slaughter cattle price change after four month feeding (' 05 – ' 09).
3Slaughter cattle price change after four month feeding (' 06 – ' 10).



Daily gain of steers supplemented with wet corn gluten feed on cornstalks.



Steers Fed Corn/Soybean Based Supplement in Dry Lot or Grazing Range or Fed Dried Distillers Grains While Grazing Range[1]

	Treatment[2]		
	Drylot	Corn/SBM	DDG
Initial BW, lb	468	468	470
Final BW lb[3]	562	570	558
ADG, lb/day	1.51	1.65	1.42

[1]Stalker et al. (2006).
[2]Drylot-grass hay plus 4.2 lb supplement, Corn/SBM 6 lb/day on range and DDG 4.2 lb/day.
[3]Adjusted 4% for fill.

Wintering Costs of Gain[1]

System	$/lb gain
East NE drylot	$.90
Sandhills Ranch drylot	$.93
Sandhills range, corn, SBM, hay	$.82
Sandhills DDGS	$.65
Cornstalk grazing, WDGS	$.63

[1]Corn = $6/bu.; hay = $.049/lb DM; WDGS = $.10/lb DM; SBM = $.18/lb DM; mineral = $.04/day; East NE drylot yardage = $.40 day; Ranch drylot yardage = $. 30/day; range = $16.50/AUM, $.20/day yardage; stalks = $.14/day, $.30/day yardage.

DDG fits grass programs

- Summer DDG
  - Availability
  - Prices

DDG Nutrient Profile

DM	88%
CP	32%
UIP	65%
Fat	12.5%
NDF	37%

- Both UIP and fat contribute to improved cattle performance
  (MacDonald et al., 2006)

Materials and Methods

- 3 treatments
  - Fertilized (FERT)
    - 80 lb/ac
    - 4.0 AUM/ac
  - Supplemented (SUPP)
    - 0.6% of BW
    - 4.0 AUM/ac
  - Control (CONT)
    - 69% stocking rate
    - 2.75 AUM/ac

CONT | FERT | SUPP

CONT | SUPP | FERT

SUPP | FERT | CONT

- 3 replications per treatment

Cattle Performance 2005-2009

	CONT	FERT	SUPP	SEM	P-Value
Days	158	158	158		
Initial BW, lbs	718	716	713	12.78	0.96
End BW, lbs		959 [a]	954 [a]	1046 [b]	15.4 <0.01
ADG, lbs/d	1.53 [a]	1.51 [a]	2.11 [b]	.07	<0.01

Economic Analysis

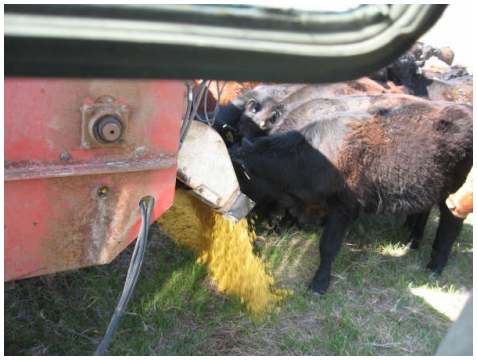
	CON	FERT	SUPP	SEM	P-value
Initial Steer Cost	$796.95[a]	$795.63[a]	$791.5[a]	4.8	0.51
Other costs	$51.30	$50.38	$50.28		
Land Cash Rent	$105.71	$69.65	$70.78		
DDGS			$59.14		
Fertilizer		$35.48			
Total Costs	$953.97[a]	$951.14[a]	$971.69[b]	5.0	<0.01
Total Revenue	$947.77[a]	$942.43[a]	$989.24[b]	8.8	<0.01

[a,b] Means without a common superscript differ (P<0.05)

Profitability

Treatment	CON	FERT	SUPP	SEM	P-value
Profit, $/hd	-6.20[a]	-8.71[a]	17.55[b]	7.4	<0.01
COG, $/lb gained	0.56[a]	0.57[a]	0.48[b]	0.01	<0.01
Breakeven, $/lb final wt	0.99[a]	1.00[a]	0.93[b]	0.01	<0.01

[a,b] Means without a common superscript differ (P<0.05)



Results

	Control	Supp.	SEM	P-value
Winter phase				
Initial BW, #	498	498	3	0.71
Ending BW, #	699	699	2	0.92
ADG, #	1.43	1.43	0.03	0.74
Summer phase				
Ending BW, #	915	1,023	5	< 0.01
ADG, #	1.37	2.03	0.03	< 0.01

	Control	Supp.	SEM	P-value
Feedlot phase				
Final BW, #	1,433	1,433	9	0.92
Days on Feed	130	106	1	<0.01
DMI, #	30.2	29.9	1	0.16
ADG, #	4.0	3.88	0.12	0.07
Gain to Feed	.29	.29	0.002	0.22

[1]Calculated from hot carcass weight, adjusted to a common dressing percentage (63.0%).

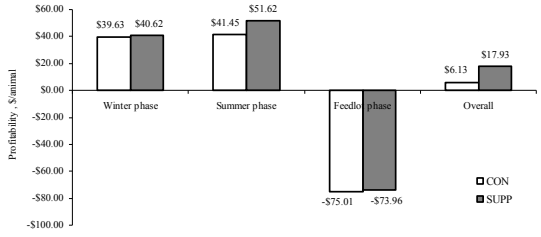


Figure 2. Profitability of each phase of production of yearling steers supplemented MDGS on grass. Means without a common superscript differ ($P < 0.05$). Winter phase profitability assessed over 145 d grazing cornstalk residue. Summer phase profitability assessed over 23 d grazing brome grass + 136 d grazing native range. Feedlot phase profitability assessed over 118 d in feedlot on common finishing diet. Overall profitability assessed over winter, summer, and feedlot phases. CON steers grazed native range during the summer with no supplementation. SUPP steers grazed native range during the summer with modified wet distillers grains with solubles supplementation at 0.6% BW.

Pasture vs Feedlot

680 lb (dm) MDGS - $68.00
760 lb (dm) Feedlot diet - $90.00
Feedlot yardage difference $10.52
Pasture yardage difference $16.04
17% less grass - $13.50
Net - $30.00

Distillers Grains Supplemented in Winter Summer or Both[1]

Winter ADG, lb	0.51	0.51	1.33	1.37
Grass ADG, lb	1.50	1.89	1.24	1.57
Weight diff.	-119	-112	--	--
	-89(25%)	-63(44%)		

[1]Gillespie et al. (unpublished); 454 lb spayed heifers.
[2]1.5 or 5 lb (DM) if wet distillers grains during stalk grazing. Zero or 0.6% BW modified distillers grains during grazing.

Summary – Above Average

1. Match cattle to system
2. Make effective use of grazed forage
3. Maximize use of grazed cornstalks
4. Use implants and ionophores
5. Make strategic use of byproducts: protein, energy, P
6. Optimize pasture management for good cattle gains
7. Sell high (best month to market)