

	High Hay Cost	Low Hay Cost
Low Profit	<i>Low Stocking Rate</i>	#2
High Profit	#3	<i>High Stocking Rate</i>

Hay Feeding and Stocking Rate Details (#1)		
Hay Feeding Days	Stocking Rate (Cows per 100 Acres)	Hay Fed (tons)
150	57.0	163.0
120	49.8	114.5
90	41.5	71.5
60	33.7	38.5
30	28.0	16.1
0	23.6	0.0

Note: 1300 lb cows spring calving; 2.5% as-fed feed intake and 15% waste rate

Hay Feeding and Stocking Rate Details

Hay Feeding Days	Stocking Rate (Cows per 100 Acres)	Forage Utilization
150	57.0	69%
120	49.8	67%
90	41.5	61%
60	33.7	54%
30	28.0	50%
0	23.6	46%

Note: 1300 lb cows spring calving; 2.5% as-fed feed intake and 15% waste rate

Hay Feeding and Stocking Rate Details (#2)

Hay Feeding Days	Stocking Rate (Cows per 100 Acres)	Hay Fed (tons)
150	57.0	163.0
120	49.8	114.5
90	44.1	76.1
60	38.1	43.7
30	32.6	18.8
0	28.5	0.0

Note: 1300 lb cows spring calving; 2.5% as-fed feed intake and 15% waste rate

Hay Feeding and Stocking Rate Details

Hay Feeding Days	Stocking Rate (Cows per 100 Acres)	Forage Utilization
150	57.0	69%
120	49.8	67%
90	44.1	65%
60	38.1	61%
30	32.6	58%
0	28.5	56%

Note: 1300 lb cows spring calving; 2.5% as-fed feed intake and 15% waste rate

Forage Quality and Availability Adjustments

Hay Feeding Days	Weaning Rate	Weaning Weight
150	85.0%	525
120	86.0%	535
90	87.0%	545
60	87.5%	555
30	88.0%	565
0	88.0%	565

Note: Weaning rate and weaning weights adjusted to account for better forage quality and forage availability at lower stocking rates.

Net Hay Cost

Cost of hay less net nutrient value

→ \$50/ton

→ \$60/ton

→ \$70/ton

Net Hay Cost Example

Cost of hay	\$70/ton
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Net nutrient value	<u>-\$10/ton</u>
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Net Hay Cost	\$60/ton
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Additional Costs per Cow per Year 150 Days Hay Feeding				
Hay (net fertilizer)	2.86	ton	\$60.00	\$172
Mach/Labor (feeding)	2.86	ton	\$7.50	\$21
Labor (variable/cow)	1.0	hours	\$15.00	\$15
Mineral			\$30.00	\$30
Vet			\$20.00	\$20
Breeding			\$40.00	\$40
Marketing/Trucking			\$35.00	\$35
Other			\$17.00	\$17
Cow Depr/Interest			\$125.00	\$125
Total Specified Costs				\$475

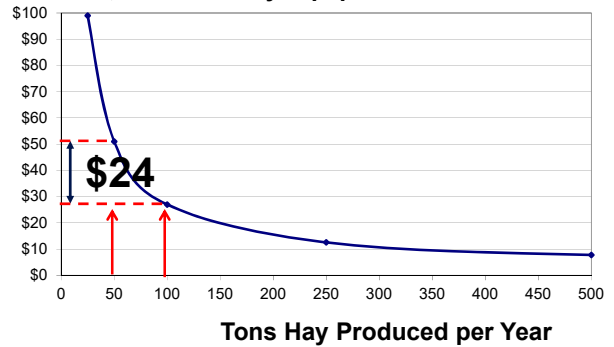
**Avg. Price
Steer/Heifer
525 lbs
\$1.40 / lb
85% Weaning Rate**

Most Profitable Hay Feeding Days

Net Hay Price	Hay Feeding Days
\$50/ton	90
\$60/ton	60-90
\$70/ton	30-60

Note: Net hay = hay price less net nutrient value. Assumes you can adjust stocking rate slightly based on general profitability.

Fixed Costs (Depreciation and Interest) per ton Hay Produced
\$60,000 Initial Hay Equipment Investment



Avoidable Hay Production Costs When Producing Less Hay

Cost Type	Low Cost (per ton)	High Cost (per ton)
Fertilizer (P, K, Lime)	\$12	\$21
Fertilizer (N) or Clover	\$4	\$8
Fuel	\$6	\$8
Repairs-Maintenance	\$5	\$8
Misc. Variable	\$3	\$6
Labor	\$7	\$9
Land	\$10	\$15
Variable Depreciation	\$3	\$5
Total Avoidable Costs	\$50	\$80

Note: Excludes fixed depreciation, interest, and other costs that do not change with production level.

**Producing Hay Use:
Avoidable Hay Costs**

Recommend \$60-70/ton

Most Profitable Hay Feeding Days

Net Hay Price	Hay Feeding Days
\$50/ton	90
\$60/ton	60-90
\$70/ton	30-60

Note: Net hay = hay price less net nutrient value.
Assumes you can adjust stocking rate slightly based on general profitability.

Profit Change Based on Hay Cost Compared to 150 Hay Feeding Days Base Comparison

Hay Feeding Days	Stocking Rate	\$50/ton Net Hay	\$60/ton Net Hay	\$70/ton Net Hay
150	57.0	-	-	-
120	49.8	\$1,100	\$1,600	\$2,100
90	44.1	\$2,000	\$2,900	\$3,700
60	38.1	\$2,100	\$3,300	\$4,500
30	32.6	\$1,800	\$3,200	\$4,700
0	28.5	\$1,200	\$2,900	\$4,500

Base Scenario: \$1.40/lb for steer/heifer 525 lbs; \$475 variable cost/cow; \$7.50/ton higher labor / machinery cost for feeding hay.

Profit Change Based on Hay Cost Compared to 150 Hay Feeding Days Base Comparison

Hay Feeding Days	Stocking Rate	\$50/ton Net Hay	\$60/ton Net Hay	\$70/ton Net Hay
150	57.0	-	-	-
120	49.8			\$2,100
90	44.1			\$3,700
60	38.1			\$4,500
30	32.6			\$4,700
0	28.5			\$4,500

Base Scenario: \$1.40/lb for steer/heifer 525 lbs; \$475 variable cost/cow; \$7.50/ton higher labor / machinery cost for feeding hay.

\$4500
\$118/cow

Profit Change Based on Hay Cost Compared to 150 Hay Feeding Days Base Comparison

Hay Feeding Days	Stocking Rate	\$50/ton Net Hay	\$60/ton Net Hay	\$70/ton Net Hay
150	57.0	-	-	-
120	49.8	\$1,100	\$1,600	\$2,100
90	41.5	\$1,300	\$2,200	\$3,100
60	33.7	\$700	\$1,900	\$3,200
30	28.0	\$100	\$1,600	\$3,000
0	23.6	-\$700	\$900	\$2,500

Base Scenario: \$1.40/lb for steer/heifer 525 lbs; \$475 variable cost/cow; \$7.50/ton higher labor / machinery cost for feeding hay.

Profit Change Based on Hay Cost Compared to 150 Hay Feeding Days Base Comparison

Hay Feeding Days	Stocking Rate	\$50/ton Net Hay	\$60/ton Net Hay	\$70/ton Net Hay
150		-	-	-
120				
90				
60				
30				
0				

Base Scenario: \$1.40/lb for steer/heifer 525 lbs; \$475 variable cost/cow; \$7.50/ton higher labor / machinery cost for feeding hay.

Caveat (1)

Results for Fescue Belt:

- NE: More hay feeding days
- West: Fewer hay feeding days

Caveat (2)

Cattle Market Assumption:

→ 525 lb steer/heifers; \$1.40/lb

\$.10/lb inc. (\$45 dec. cost)

≈ 20 hay feeding day increase

\$.10/lb dec. (\$45 inc. cost):

≈ 20 hay feeding day decrease

Caveat (3)

Assumed Same Forage Production:

→ All Stocking Rate Scenarios



Overstocking

Direct Consequences:

- Increased Soil Temp
- Reduced Water Infiltration

Lower Yields – late summer, fall, early spring

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