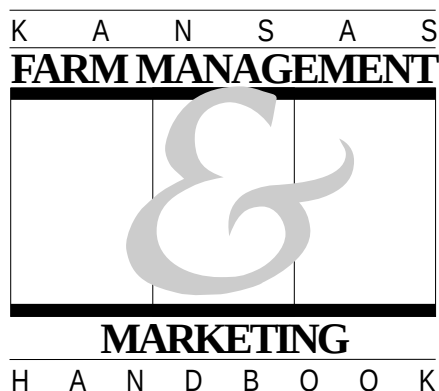




Dryland Cane Hay in Western Kansas (W-CH-F) Rotation

Department of Agricultural Economics

Manhattan, Kansas

Daniel M. O'Brien

Extension Agricultural Economist, NW

James D. Sartwelle, III

Extension Agricultural Economist, SW

Dryland "cane hay" is a popular winter feedstuff for cowherds in western Kansas. It typically will provide slightly less protein than alfalfa hay and as much energy as good quality prairie or alfalfa hay. Many different summer annual forages are included within this broad heading, each with unique growth and vegetative characteristics that allow them to fit into different forage systems.

Sudangrasses—Fine stems, tillers extensively when moisture permits and can regrow rapidly. Because of this, they are best suited to pasturing.

Hybrid Sudangrasses—Similar to "true" sudangrasses. They also can be grazed but when hayed will yield better than sudangrasses. Because of their regrowth ability, they can sometimes provide two cuttings when rainfall is plentiful in western Kansas.

Sorghum-Sudangrass Hybrids—High producing forage grasses which will out-yield hybrid sudangrasses on a per cutting basis, but will typically provide only one cutting annually. Under normal seeding rates more than 50 percent of their yield will come from the stems, making them better suited for green chop. At heavier seeding rates, the stems will be finer, making them a suitable hay crop.

Forage Sorghums—Are usually tall and mature late, having sweet and juicy stems and relatively small grain heads. Best suited as a silage crop but can be cut for hay, although their stems dry very slowly after cutting.

This guide estimates the costs and returns associated with a typical sorghum sudangrass hybrid planted at heavier seeding rates and harvested as a hay crop in western Kansas. For the best quality hay, harvest should occur before heads emerge or when the plants are 30 to 40 inches tall. A hay conditioner should be used to help speed drying of the stems.

Livestock Poisoning Potential

While not often a problem, the levels of both prussic acid and nitrates in summer annuals can be potentially high enough to be lethal to livestock. The content of these toxins in plants can be affected by variety, climate, soil fertility and plant maturity. Their presence should not deter producers from realizing the potential value of these summer annual forage crops. For more information concerning prussic acid and nitrate poisoning, contact your county extension office.

Cost Return Projections and Yield Levels

The following estimated budget includes three different yield levels. Production costs and yield levels for individual farms will vary considerable due to soil type/ land quality, weather, fertilizer and chemical rates, and the type and amount of farm machinery and irrigation equipment owned, and management. Budgeting at multiple yield levels can help producers examine the financial risk of a crop enterprise that is directly related to production risk as well as to compare the profitability of crop enterprises on farmland tracts with varying yield potentials.

Table 1. Factors Used for Cost-Return Budget

Item	Yield Level (tons)			
	2	2.75	3.50	
Fertilizer:				
N (Anhy.)	50	50	50	\$0.19/lb
N (Dry)	0	0	0	\$0.29/lb
P	0	0	0	\$0.27/lb
K	0	0	0	\$0.13/lb
Lime	0	0	0	\$0.01/lb
Seed (lbs/acre)	15	15	15	
Seed price, \$/lb	\$0.92	\$0.92	\$0.92	
Labor Hours	1.80	1.80	1.80	
Labor Price/Hour				\$9.00
Land Value/Acre*				\$490.00
Land Interest Rate				6.00%
Machinery Investment**				\$191.00
Machinery Life				10 yrs
Salvage value				35.00%
Interest Rate on Machinery				10.00%
Insurance Rate on Machinery				0.25%
Interest on Variable Costs				10.00%

*All land costs were computed, and then multiplied by a factor of 1.5 to account for fallow land.

**Investment required per crop and fallow acres.

COST-RETURN PROJECTION—DRYLAND CANE HAY—WESTERN KANSAS

	Yield Level (tons)			Your Farm
	2	2.75	3.5	
VARIABLE COSTS PER ACRE:				
1. Labor (1.8 hrs × \$9.00/hr)	\$16.20	\$16.20	\$16.20	
2. Seed (15.0 lbs × \$.92/lb)	13.80	13.80	13.80	
3. Herbicide and Insecticide				
4. Fertilizer and Lime (50 lbs N)	9.50	9.50	9.50	
5. Fuel and Oil	5.84	5.84	5.84	
6.				
7. Machinery and Equipment Repairs	23.20	23.20	23.20	
8.				
9. Crop Insurance				
10. Drying				
11. Custom Hire				
12. Crop Consulting				
13. Miscellaneous	5.00	5.00	5.00	
14. Interest on ½ Variable Costs¹ @ 10%	3.68	3.68	3.68	
A. TOTAL VARIABLE COSTS	\$77.21	\$77.21	\$77.21	
FIXED COSTS PER ACRE:				
15. Real Estate Taxes @ .5%	3.68	3.68	3.68	
16. Interest on Land (\$490/A × 1.5 × 6%)²	44.10	44.10	44.10	
17. Rent for Rented Land				
18. Depreciation on Crop Machinery	12.43	12.43	12.43	
19. Interest on Crop Machinery³ @ 10%	12.90	12.90	12.90	
20.				
21.				
22. Insurance-Machinery @ .25%	0.48	0.48	0.48	
B. TOTAL FIXED COSTS	\$73.58	\$73.58	\$73.58	
C. TOTAL COSTS (A + B)	\$150.80	\$150.80	\$150.80	
D. YIELD PER ACRE (Tons)	2.00	2.75	3.50	
E. PRICE PER TON	\$35.00	\$35.00	\$35.00	
F. NET GOVERNMENT PAYMENTS⁴				
G. RETURNS PER ACRE ((D×E)+F)	\$70.00	\$96.25	\$122.50	
H. RETURNS OVER VARIABLE COSTS (G-A)	\$ -7.21	\$19.04	\$45.29	
I. RETURNS OVER TOTAL COSTS (G-C)	\$-80.80	\$-54.55	\$-28.30	
J. VARIABLE COSTS PER TON (A ÷ D)	\$38.61	\$28.08	\$22.06	
K. FIXED COSTS PER TON (B ÷ D)	\$36.79	\$26.76	\$21.02	
L. TOTAL COSTS PER TON (C ÷ D)	\$75.40	\$54.83	\$43.08	
M. ASSET TURNOVER (G ÷ INVESTMENT)⁵	10.28%	14.13%	17.98%	
N. NET RETURN ON INVESTMENT ((I+14+16+19) ÷ INVESTMENT)⁵	-9.43%	-5.57%	-1.72%	

¹Assumes one-half variable costs times interest rate shown in Table 1.²Assumes interest rate shown in Table 1.³Assumes one-half the (original cost plus salvage value) at the interest rate shown in Table 1.⁴Net government payment equals yield per acre (D) times expected deficiency payment minus prorated cost of set-aside acres. Based on 15% flex acres and 5% ARP. The price used was a five-year average price. The twelve month national average price for the crop year. The 1995 farm program may have major changes.⁵Investment equals total value of all fixed assets shown in Table 1.**COOPERATIVE EXTENSION SERVICE, MANHATTAN, KANSAS**

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