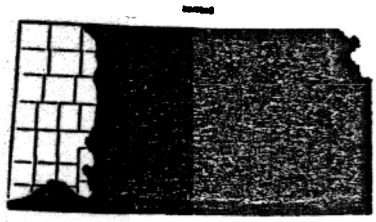
LOESS BREAKS

KANSAS RANGE SITE DESCRIPTION



1 Location of Site:

Land Resource Area 72
Central High Table Land

2. Climate:

See climate for LRA 72
(Filed in the front of Section II-E)

3. Topography:

This site includes narrow ridges and divides with steep slopes of the loess hills. The slopes of this site range from 25 percent to near vertical. The steep side slopes are broken with series of short and shallow slope slips, referred to as "terracettes" or "catsteps."

4. Soils and Hydrological Characteristics:

a. The soils on this site are deep but have thin, calcareous, silty surface layers. The silty subsoils are calcareous and relatively low in inherent fertility but generally have a $CaCO_3$ equivalent of less than 15 percent. The surfaces have broken sod and are generally unstabilized.

b. The soil that characterizes this site is Colby silt loam, 25-50 percent slopes.

c. The soils on this site are highly susceptible to both wind and water erosion when void of vegetative protection.

5. Climax Vegetation:

a. The natural potential vegetation of this site is a mixed grass prairie. Big bluestem, little bluestem, sideoats grama, and western wheatgrass or green needlegrass generally make up 65 to 70 percent of forage produced in this condition. This site generally occurs in an area where plants such as green needlegrass and needleandthread start to replace mostly western wheatgrass.

b. Guidelines for Determining Range Condition:

(Percentage of total production by weight)

Grasses and Grasslike - 90 Percent			Forbs - 5 Percent		Shrubs and Cacti - 5 Percent	
	15	big bluestem		aromatic aster		buckbrush
60	50	little bluestem		blacksamson		leadplant
	10	sideoats grama		catclaw sensitivebriar		sand sagebrush
	5	switchgrass		dotted gayfeather	5	silverscale saltbush
				falsetarragan sagewort		winterfat
	10	green needlegrass	5	heath aster		yucca
10	5	needleandthread		serrateleaf eveningprimrose		
	10	western wheatgrass		slimflower scurfpea		
				stiffstem flax		
				stemless tetraneuris		
				upright prairieconeflower		
				western ragweed		
	10	blue grama				
	5	buffalograss		Astragalus species		
15	5	hairy grama		lambert crazyweed		
	5	plains muhly	T	nineanther dalea		
				purple prairieclover		
				skeletonplant		
		sand dropseed				
5		tall dropseed				
		perennial threeawn				

c. Invaders common to this site are annual bromes, annual broomweed broom snakeweed, fall witchgrass, prairie threeawn, silver bluestem, western salsify, and common sunflower.

6. Management Implications:

This site occurs on the narrow ridges or divides and steep slopes of the loess breaks of northwestern Kansas.

The site is generally not a preferred grazing area because of the steepness of the slopes. Adjacent sites are much flatter and generally receive the majority of the grazing pressure. When excessive grazing does occur, erosion is greatly accelerated.

With excessive overgrazing, little bluestem, big bluestem, and sideoats grama are generally reduced making the way for dropseeds, threeawns, and hairy grama to increase. Buffalograss is only a minor component of this site but may cover the more level portions of the terracettes as excessive grazing occurs.

Grazing management that includes proper stocking for the entire grazing unit is usually all that this site needs to improve or maintain its present condition. Where more rapid improvement is desired, the use of timely rest or a planned grazing system is desirable.

Concentrated grazing combined with needed rest periods can be very beneficial in improving forage utilization.

7 Wildlife Considerations:

When maintained in good to excellent condition, this site is used by a wide variety of animals for escape cover. The southern exposure of this site often provides protection from cold winter winds for birds, mammals, insects, and reptiles.

Animals, such as the coyote and fox, often prefer this site for denning and loafing as it affords easy denning and visual protection.

8. Other Uses and Values:

The use of this site is restricted to limited grazing and wildlife cover because of the steepness of slope and the potential erodibility of the soil.

9 Herbage Production Guidelines:

The following guidelines are based on available clipping data when this site is in excellent condition. Vigor of principal forage species, time of burning, if fire is used, as well as growing conditions, influence annual herbage production.

	Total Air Dry Herbage	
Growing Conditions	Pounds/Acre	Kilograms/Hectare
Favorable	2,400-3,000	2,700-3,400
Normal	1,400-2,400	1,600-2,700
Unfavorable	800-1,400	900-1,600

10. Guide to Initial Stocking Rates: 1/

Range Condition	Percent Climax Vegetation	Acres/AU Yearlong	AU Months Per Acre	Hectares/AU Yearlong	AUM's per Hectare
Excellent	76-100	25-35	.4	10-14	1.0
Good	51-75	35-50	.3	14-20	.75
Fair	26-50	50-80	.2	20-30	.50
Poor	0-25	80+	.1	30+	.25

These guidelines are considered safe initial stocking rates from which a sound management program can be built. Grazing only during the dormant season or use of a specialized grazing program will usually allow a substantial increase in the stocking rates shown.

1/ The estimated safe stocking rates on this site are somewhat reduced compared to other sites of similar production because of the steepness of slope.

11. Relative Preference of Plant Species:

Preferences of plant species by classes of livestock and uses by wildlife will vary from year to year and season to season. The table below is what might be expected under average climatic conditions and good management.

Forage Preferences

H = High
M = Medium
L = Low

Wildlife Preferred Uses

C = Cover
F = Food
N = Nesting

Plant Species	Animal Species		
	Cattle	Deer	Pheasant
big bluestem	H	C	C,N
blue grama	H	---	---
buffalograss	H	---	---
dotted gayfeather	M	F	---
green needlegrass	H	---	C
hairy grama	M	---	---
heath aster	H	F	F
leadplant	H	F	C,F
little bluestem	H	C	C,N
perennial threeawn	L	---	---
plains muhly	H	---	---
purple prairieclover	M	F	
sand dropseed	M		
sideoats grama	H	---	---
slimflower scurfpea	L	F	F
upright prairieconeflower	M	F	F
western ragweed	M	F	F
western wheatgrass	H	F	C,F

Reference:

Anderson, Kling L. and Clenton E. Owensby. 1969 Common Names of a Selected List of Plants. Kansas State University Tech. Bul. 117.