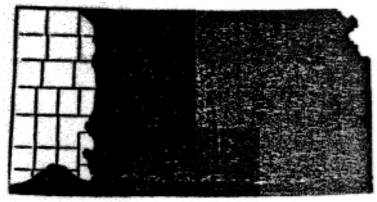
SALINE LOWLAND 1/

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 occurs on nearly level to gently sloping areas, in or adjacent to depressions, and along somewhat poorly drained water courses.

4. Soils and Hydrological Characteristics:

a. This site consists of deep, saline and saline-alkali soils with loamy to silty surfaces and subsoils. They have moderate to slow permeability and a high available water capacity. A water table, if present, usually occurs below 4 feet during the growing season.

b. Some of the soils which characterize this site are:

Bridgeport, saline	Colby, saline
Church	Ulysses, saline
1/	

c. The saline or saline-alkali condition of these soils affects the kind and amount of vegetation. Production is significantly reduced. Plants growing on this site are salt-tolerant species. The soils on this site are susceptible to wind and water erosion when unprotected.

5. Climax Vegetation:

a. The natural potential vegetation of this site is a mixed grass prairie with a large component of salt-tolerant species. Alkali sacaton, inland saltgrass, sideoats grama, and western wheatgrass are the major forage producers. Combined, they make up about 70 percent of the total production.

Tall species such as indiangrass and switchgrass are common on the less saline or alkali areas. Forbs and woody species are not as prominent on this site as they are on most associated sites.

1/ This site description should also be used for Saline subirrigated soils whose water tables have dropped below the root zone.

b. Guidelines for Determining Range Condition:

(Percentage of total production by weight)

Grasses and Grasslike - 95 percent			Forbs - 5 percent		Shrubs and Cacti - T
10		big bluestem indiangrass switchgrass	5	astragalus sp. heath aster maximilian sunflower purple prairieclover western ragweed	T aromatic sumac willow baccharis
55	25	alkali sacaton			
	10	sideoats grama			
	5	vinemesquite			
	30	western wheatgrass			
25		blue grama			
	10	buffalograss			
		hairy grama			
	20	inland saltgrass			
	5	perennial threeawns			
		sand dropseed			
	5	sedges			
5		alkali cordgrass			
		Canada wildrye			
		tall dropseed			

c. Invaders common to this site are alkali muhly, broom snakeweed, Japanese brome, kochia, little barley, russianthistle, tamarisk, and tumblegrass.

6. Management Implications:

This site generally occurs in somewhat poorly drained watercourses, mostly in the Whitewoman basin. This site is often associated with the saline, subirrigated and lakebed range site. There is limited cultivation of this site where it occurs in large blocks on a terrace position above natural lakes.

Being in the position that this site is located, it is usually close to livestock water. This has led to a history of overgrazing on much of the site. Continuous heavy grazing tends to reduce and eventually eliminate the less salt-tolerant species such as big bluestem, indiangrass, and sideoats grama. Alkali sacaton is the primary increaser, but it also may be partially replaced by inland saltgrass with continued overgrazing.

Willow baccharis, a shrub species, may appear to be a problem during extended wet cycles, but normally is reduced during drought cycles.

Grazing management that includes proper stocking and good grazing distribution is essential to maintain or improve this site. Planned grazing systems or scheduled deferments are effective in speeding up the recovery of this site. However, recovery will normally be slower on this site than on the non-saline sites.

7. Wildlife Considerations

This site provides good habitat for pheasants when properly managed. It may also be an important site for loafing and nesting of waterfowl where associated with natural lakes or potholes. It is important to manage for adequate escape and nesting cover to attract ground nesting birds to the associated lakes and potholes.

8. Other Uses and Values:

Except for very limited cultivation on the less saline portion of this site, its use is mostly limited to rangeland and associated wildlife species.

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	2,500-3,500	2,800-3,920
Normal	1,800-2,500	2,020-2,800
Unfavorable	1,100-1,800	1,230-2,020

10. Guide to Initial Stocking Rates:

Range Condition	Percent Climax Vegetation	Acres/AU Yearlong	AU Months Per Acre	Hectares/AU Yearlong	AUM's per Hectare
Excellent	76-100	18-22	.6	7-9	1.5
Good	51-75	22-26	.5	9-11	1.25
Fair	26-50	26-35	.4	11-14	1.0
Poor	0-25	35+	.3	14+	.75

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.

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	Wildlife Preferred Uses
H = High	C = Cover
M = Medium	F = Food
L = Low	N = Nesting

Plant Species	Animal Species	
	Cattle	Pheasant
alkali cordgrass	M	C,N
alkali sacaton	M	C
big bluestem	H	C,N
blue grama	H	--
buffalograss	H	--
heath aster	H	F
indiangrass	H	C,N
inland saltgrass	M	--
maximilian sunflower	H	C,F
purple prairieclover	H	F
sand dropseed	M	--
sedges	M	--
sideoats grama	H	C
switchgrass	H 1/	C,F,N
tall dropseed	M	C
vinemesquite	H	--
western ragweed	M	F
western wheatgrass	H	C,N

1/ Preferred during first half of growing season.

Reference:

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