

USDA, SCS
Section II-E
Technical Guide
Area 9, Texas

CLAY LOAM SLOPE
RANGE SITE DESCRIPTION
PE 42-48

R025X9579TX

Land Resource Area RP

Location Palo Pinto

Date 10/16/99

Approved: (BN)

1. PHYSIOGRAPHIC FEATURES: This site occurs on strongly sloping to steep slopes between a drainageway and a limestone capped ridgetop. Slopes range from 8 to 40 percent. Limestone fragments, 3 to 40 inches across, cover 15 to 40 percent of the surface. Elevations range from 900 to 1400 feet.
2. SOILS:
 - a. Soils of this site are deep, well drained, calcareous and developed over shale. The soils are fertile and receive additional water as runoff from adjacent ridgetops.
 - b. Major soil associated with the site is:

Set portion of Set-Palopinto complex, extremely stony clay, 8 to 40 percent slopes.
 - c. Specific site location:

Set series type location, northwest of Strawn on Don Crawford Ranch.
3. CLIMATE:

See field office climate description.
4. CLIMAX VEGETATION:
 - a. The climax plant community is an oak, ash savannah with a canopy of 15 to 25 percent. The understory is made up of tall and mid grasses dominated by big and little bluestem.

Relative Percentage of Total Plant Community
(air-dry weight)

<u>Grasses</u>	<u>75%</u>	<u>Woody Plants</u>	<u>20%</u>	<u>Forbs</u>	<u>5%</u>
big bluestem	10	live oak	15	maxmilian	
indiangrass	5	Texas oak		sunflower	
switchgrass	1	Texas ash		western ragweed	
little bluestem	25	cedar elm		heath aster'	
sideoats grama	15	juniper	5	bundleflowers	
vine-mesquite	10	hackberry		verbena	
silver bluestem		sumac species		trailing wildbean	
Texas wintergrass		bumelia		gaura	
tall dropseed		elbowbush		sensitivebriar	
meadow dropseed		greenbrier		gray goldaster	
Canada wildrye	10	shin oak		2 leaf senna	
low panicums		yucca		curlycup gumweed	
Texas bluegrass			gayfeather		
perennial threeawn			trailing ratany		
white tridens			sagewort		
gummy lovegrass			bluets		
			cedar sedge		
			mallow		

- b. As regression occurs because of overgrazing, big bluestem, indian-grass, switchgrass and most perennial forbs decrease. Plants such as little bluestem, sideoats grama, vine-mesquite, silver bluestem and Texas wintergrass will increase initially. Following continued heavy grazing these plants give way to other increasers and invaders such as hairy tridens, scribner panicum, hairy grama, annual lovegrass, hooded windmillgrass, Texas grama, buffalograss, gray goldaster, milkweeds, nightshade, croton, greenbrier, elbowbush, pricklypear, tasajillo, buckeye, lotebush, catclaw, whitebrush, juniper, mesquite and shin oak.
- c. Approximate total annual production in excellent condition ranges from 2000 to 4000 pounds of air-dry vegetation per acre, depending upon rainfall and growing conditions, about 90 percent of this is forage for livestock and wildlife.

In lower condition classes woody plants usually dominate the site. With a 40% tree canopy, as much as 1000 pounds of the total annual production will be by woody plants. Part of this production will be unpalatable to or out of reach of grazing animals. The heavily shaded areas are usually bare ground.

5. WILDLIFE ADAPTED TO THE SITE: The site is preferred habitat for deer. Turkey and squirrel from adjacent bottomlands frequent the site to feed on acorns and other mast. Songbirds and small animals feed, nest and raise their young on the site. Limited numbers of quail and dove occupy the site, but it is too steep and rough to be preferred.
6. ESTHETIC AND RELATED VALUES: A large variety of grasses, colorful flowers, deciduous and evergreen trees on steep, rough topography enhances the beauty of this terrain yearround.
7. HYDROLOGIC CHARACTERISTICS: Because of the rough, steep topography, in combination with large limestone fragments on the surface, runoff is rapid on the site. However, soil structure, plant cover and rock outcrop, greatly reduce erosion potential, thus causing the site to yield runoff which is relatively free of sediment.
8. GUIDE TO INITIAL STOCKING RATE:

<u>a. Condition class</u>	<u>Percent climax vegetation</u>	<u>Acres/AU/Yearlong</u>
Excellent	76 - 100	10 - 14
Good	51 - 75	12 - 18
Fair	26 - 50	16 - 26
Poor	0 - 25	26 - 38

b. Seeded Areas

	<u>Percent Stand</u>			
	<u>100-76</u>	<u>75-51</u>	<u>50-26</u>	<u>25-0</u>
Tall and mid grass mixture	10-12	12-16	15-22	24+

RELATIVE FORAGE QUALITY OF SPECIES ^{1/}

a. For Cattle:

<u>Primary</u> ^{2/}	<u>Secondary</u> ^{3/}	<u>Low Value</u> ^{4/}
big bluestem	little bluestem	woody plants
indiangrass	vine-mesquite	threeawns
switchgrass	silver bluestem	Texas grama
sideoats grama	Texas wintergrass	ragweed
maxmilian sunflower	Canada wildrye	gray goldaster
gaura	heath aster	gunweed
	bundleflowers	gayfeather
	wildbean	
	trailing ratany	

b. For Goats and Deer:

Primary^{2/}

live oak
Texas oak
cedar elm
hackberry
greenbrier
gaura
bumelia
trailing ratany
heath aster
bundleflowers
wildbeans

Secondary^{3/}

Texas ash
sumac species
elbowbush
shin oak
sedges (winter)
big bluestem
acorns
fall witchgrass
low panicums
sideoats grama

Low Value^{4/}

juniper
yucca
little bluestem
broomweed
mesquite
coneflower
most grasses
nightshade
ragweed
gunweed

c. For Turkey^{5/}

acorns
other mast and
fruit
panicum seed
ragweed

large seeded grasses
and forbs

gramas
threeawns
woody plants

^{1/} This plant rating system gives guidance on animal preference for plant species as well as indicating competition between kinds of animals for various plants. Grazing preference does not necessarily reflect a plant's ecological place in the climax plant community. Grazing preferences change depending upon the animal; upon plant palatability and nutritive value; stage of growth; season of use; relative abundance; availability and plant associations.

^{2/} These species generally decrease under prolonged heavy grazing use.

^{3/} These plants usually increase initially, then decrease under prolonged heavy grazing use.

^{4/} These plants continue to increase with prolonged heavy grazing use.

^{5/} For these species the terms primary, secondary and low value indicate animal preference only. They do not indicate plant response to feeding pressure; nor do they have any ecological significance.