

FORAGE SUITABILITY GROUP

Seasonally Wet

FSG No.: G106XY900NE

Major Land Resource Area: 106X -Nebraska and Kansas Loess-Drift Hills

Physiographic Features

The soils in this group are found on flood plains, stream terraces, and concave footslopes on uplands.

	<u>Minimum</u>	<u>Maximum</u>
Elevation (feet):	1000	1650
Slope (percent):	0	2
Flooding:		
Frequency:	None	Frequent
Duration:	None	Long
Ponding:		
Depth (inches):		
Frequency:	None	None
Duration:	None	None
Runoff Class:	Negligible	Very low

Climatic Features

Annual precipitation varies widely from year to year in MLRA 106. Average annual precipitation for all climate stations listed below is about 34 inches. About 71 percent of that occurs during the months of April through September. On average there are about 35 days with greater than .1 inches of precipitation during the same time frame. Annual precipitation and temperature increase from the north to the south in the MLRA.

Average annual snowfall ranges from 16 inches at Wamego, KS to 37 inches at Wahoo, NE. Snow cover at depths greater than 1 inch range from 10 days at Holton, KS to 42 days at Auburn, NE.

Average July temperatures are about 79 degrees F., and average January temperatures are about 25 degrees F. Recorded temperature extremes in the MLRA during the years 1961 to 1990 are a low of -31 at Waho, NE, and a high of 110 recorded at Auburn and Pawnee City in Nebraska and also at Centralia and Holton in Kansas. The MLRA lies mostly in USDA Plant Hardiness Zones 5a and 5b.

At Topeka, KS, the average annual wind speeds are about 9.7 MPH. The highest wind speeds occur during February through May. It is cloudy about 154 days a year. Average morning relative humidity in June is about 87 percent and average afternoon humidity is 62 percent.

At Lincoln, NE, the average annual wind speeds are about 10.1 MPH. The highest wind speeds occur during March and April. It is cloudy about 149 days a year. Average morning relative humidity in June is about 83 percent and average afternoon humidity is 58 percent.

The climate data listed in the tables below represent high and low ranges and averages for the climate stations and dates listed. For additional climate data access the National Water and Climate Center at <http://www.wcc.nrcs.usda.gov>.

PASTURE AND HAYLAND INTERPRETATIONS

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	From	To
Freeze-free period (28 deg)(days): (9 years in 10 at least)	162	201
Last Killing Freeze in Spring (28 deg): (1 year in 10 later than)	Apr 29	Apr 15
Last Frost in Spring (32 deg): (1 year in 10 later than)	May 10	Apr 22
First Frost in Fall (32 deg): (1 year in 10 earlier than)	Sep 20	Oct 15
First Killing Freeze in Fall (28 deg): (1 year in 10 earlier than)	Oct 01	Oct 26
Length of Growing Season (32 deg)(days): (9 years in 10 at least)	140	183
Growing Degree Days (40 deg):	5742	6961
Growing Degree Days (50 deg):	3881	4376
Annual Minimum Temperature:	-20	-10
Mean annual precipitation (inches):	30	39

Monthly precipitation (inches) and temperature (F):

2 years in 10:	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Precip. Less Than	0.25	0.24	0.85	1.36	2.58	1.84	1.69	1.79	1.52	0.83	0.49	0.35
Precip. More Than	1.99	1.61	3.94	4.95	6.62	8.42	6.02	5.71	6.87	5.10	3.62	2.69
Monthly Average:	0.81	0.92	2.38	3.03	4.47	5.00	3.74	4.06	4.18	2.81	1.72	1.19
Temp. Min.	10.8	15.7	27.1	39.6	50.7	60.4	65.5	62.4	52.8	40.3	28.3	15.8
Temp. Max.	39.2	44.7	56.8	68.9	77.4	85.7	91.3	89.4	81.3	70.9	55.5	42.3
Temp. Avg.	25.4	30.7	42.1	54.6	64.5	73.6	78.6	76.1	67.6	56.4	42.2	29.4

<u>Climate Station</u>	<u>Location</u>	<u>From</u>	<u>To</u>
KS1408	Centralia, KS	1961	1990
KS3759	Holton, KS	1961	1990
KS4559	Lawrence, KS	1961	1990
KS8563	Wamego, KS	1961	1990
NE0435	Auburn, NE	1961	1990
NE6570	Pawnee City, NE	1961	1990
NE8395	Syracuse, NE	1961	1990
NE8905	Wahoo, NE	1961	1990

Soil Interpretations

This group consists mostly of very poorly and poorly drained, medium to fine textured soils formed from alluvium and loess. Permeability is very slow to moderate.

Drainage Class:	Poorly drained	To	Somewhat poorly drained
Permeability Class: (0 - 40 inches)	Very slow	To	Moderate
Frost Action Class:	Low	To	High

Forage Growth Curves

Growth curves estimate the seasonal distribution of growth of the various forage crops. They indicate when the forages may be available for grazing or mechanical harvest.

Growth Curve Number: NE0602

Growth Curve Name: Cool-season grass

Growth Curve Description: Cool-season grass fertilized early - MLRAs 107, 106, 75, irrigated 73, 72

<u>Percent Production by Month</u>											
<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
0	0	5	10	35	30	5	5	10	0	0	0

Growth Curve Number: NE0603

Growth Curve Name: Warm-season grass

Growth Curve Description: Warm-season grass - statewide

<u>Percent Production by Month</u>											
<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
0	0	0	5	15	30	30	15	5	0	0	0

Soil Limitations

Wetness

- The over-riding limitation to this soil is wetness. It severely limits species selection.

Management Interpretations

Wetness

- When establishing new stands or renovating stands select species that are highly tolerant of wet soils. To reduce compaction exclude livestock and machinery when soils are wet.

FSG Documentation

Similar FSGs:

FSG ID

G106XY895NE

FSG Narrative

Saline/Sodic soils are saline and or sodic.

Inventory Data References:

Agriculture Handbook 296-Land Resource Regions and Major Land Resource Areas

Natural Resources Conservation Service (NRCS) National Water and Climate Center data

USDA Plant Hardiness Zone maps

National Soil Survey Information System (NASIS) database for soil surveys in Nebraska and Kansas counties in MLRA 106

Nebraska and Kansas NRCS Field Office Technical Guide

NRCS National Range and Pasture Handbook

Various Agricultural Research Service, Cooperative Extension Service, and NRCS research trials for plant adaptation and production.

State Correlation:

This site has been correlated with the following states:

KS

NE

Forage Suitability Group Approval:

Original Author: Tim Nordquist
Original Date: 3/8/01

Approval by:

State Range Management Specialist

Date

State Range Management Specialist

Date