

FIELD OFFICE TECHNICAL GUIDE: EASTERN TECHNICAL GUIDE
LOCATION:
AREA:
STATE: SOUTH DAKOTA

RANGE SITE DESCRIPTION

RANGE SITE NAME . : CLAYEY
RANGE SITE NUMBER : 102AY011SD
ORIGINAL DATE ... : 08/27/1979
REVISION DATE ... : 03/23/1992
AUTHOR'S INITIALS : CMS/DWS

* SOIL NARRATIVE:

THESE ARE DEEP UPLAND SOILS HAVING LOAM TO CLAY LOAM SURFACES AND SILTY CLAY TO CLAY SUBSOILS. SOMEWHAT RESTRICTIVE HORIZONS OF CLAYEY TEXTURE OCCUR AT DEPTHS OF LESS THAN 14 INCHES. DENSE RESTRICTIVE HORIZONS, IF THEY OCCUR AT ALL, ARE AT DEPTHS OF MORE THAN 14 INCHES. RUNOFF IS MEDIUM OR SLOW AND PERMEABILITY IS MODERATELY SLOW OR SLOW.

* LIST OF SOIL TAXONOMIC UNITS OR SOILS MAPPING UNITS FOR ALL SOILS INCLUDED IN THIS SITE:

ABERDEEN SILTY CLAY LOAM	CRESBARD SILT LOAM
DORAN CLAY LOAM	DOVRAY SILTY CLAY
HARMONY SILT LOAM	HATTIE CLAY LOAM
NUTLEY SILTY CLAY	PEEVER CLAY LOAM
SINAI SILTY CLAY	

RANGE SITE NAME: CLAYEY
RANGE SITE NUMBER: 102AY011SD

* LANDSCAPE FACTORS

PHYSIOGRAPHY:

ELEVATION/ASPECT:

LOW 1000 ft / HIGH 1800 ft /

PERCENT SLOPE:

LOW 0
HIGH 15

* CLIMATE FACTORS

FREEZE-FREE PERIOD (FFP): 0 TO 0 (DAYS)

FROST-FREE PERIOD: 130 TO 160 (DAYS)

MEAN ANNUAL PRECIPITATION (MAP): 21 TO 26 (INCHES)

MEAN ANNUAL AIR TEMPERATURE (MAAT): 32 TO 56 (F)

MEAN ANNUAL SOIL TEMPERATURE (MAST): 30 TO 58 (F)

MOISTURE AND TEMPERATURE DISTRIBUTION:

	-JAN-	-FEB-	-MAR-	-APR-	-MAY-	-JUN-	-JUL-	-AUG-	-SEP-	-OCT-	-NOV-	-DEC-
- PPT -												
HIGH	1.60	2.38	2.56	5.55	7.78	9.30	12.10	8.29	7.30	5.07	3.08	2.52
MEAN	0.39	0.46	0.82	2.04	2.90	4.05	2.58	2.74	2.15	1.35	0.66	0.45
LOW	0.00	0.00	0.00	0.13	0.10	0.67	0.09	0.35	0.04	0.00	0.00	0.00
- TEMP -												
HIGH	23	27	40	57	69	78	85	83	74	61	42	28
MEAN	12	16	29	45	56	66	72	70	60	48	32	18
LOW	2	6	19	32	44	54	58	56	47	35	21	8

RANGE SITE NAME: CLAYEY
 RANGE SITE NUMBER: 102AY011SD

* VEGETATION FACTORS - CLIMAX PLANT COMMUNITY

RANGE SITE DESCRIPTION NARRATIVE:

CLIMAX PLANT COVER IS A MIXTURE OF THE TALL AND MID GRASSES CHARACTERISTIC OF THE NORTHERN TRUE PRAIRIE. THE BLUESTEMS, BIG AND LITTLE, ARE IMPORTANT BUT USUALLY THEY ARE NO MORE ABUNDANT THAN THE COOL SEASON GRASSES. PORCUPINEGRASS, GREEN NEEDLEGRASS, AND WESTERN WHEATGRASS ARE THE MOST COMMON COOL SEASON SPECIES. THE GRAMAS, KENTUCKY BLUEGRASS AND SEDGES MAKE UP THE UNDERSTORY. FORBS ARE SELDOM ABUNDANT AND SHRUBS ARE OF MINOR IMPORTANCE.

PERCENT COVER:

GROUND COVER AND STRUCTURE:

	% CANOPY COVER (VERTICAL VIEW)	AVERAGE HEIGHT (FT)	% BASAL AREA COVER
GRASSES AND GRASSLIKES	80	3.00	60
FORBS	5	1.30	5
CRYPTOGAMS	0	0.00	0
SHRUBS	3	2.50	2
TREES	0	0.00	0

RANGE SITE NAME: CLAYEY
 RANGE SITE NUMBER: 102AY011SD

PLANT COMMUNITY COMPOSITION AND PRODUCTION:

Herbaceous

Grasses and grasslikes

National Symbol	Common Name	Grp	% Composition by weight	Group % Allowable
SCSC	LITTLE BLUESTEM	0	10 to 35	0 to 0
ANGE	BIG BLUESTEM	0	10 to 25	0 to 0
STSP2	PORCUPINEGRASS	1	0 to 0	5 to 30
STVI4	GREEN NEEDLEGRASS	1	0 to 0	5 to 30
AGSM	WESTERN WHEATGRASS	0	0 to 10	0 to 0
BOCU	SIDEOATS GRAMA	2	0 to 0	5 to 10
POPR	KENTUCKY BLUEGRASS	2	0 to 0	5 to 10
BOGR2	BLUE GRAMA	2	0 to 0	5 to 10
CAREX	SEDGES	2	0 to 0	5 to 10

Forbs

National Symbol	Common Name	Grp	% Composition by weight	Group % Allowable
ARLU	CUDWEED SAGEWORT	1	0 to 0	5 to 10
ARFR4	FRINGED SAGEWORT	1	0 to 0	5 to 10
ARCA12	GREEN SAGEWORT	1	0 to 0	5 to 10
ASER3	HEATH ASTER	1	0 to 0	5 to 10
BREU	FALSE BONESET	1	0 to 0	5 to 10
ACMI2	WESTERN YARROW	1	0 to 0	5 to 10

RANGE SITE NAME: CLAYEY
 RANGE SITE NUMBER: 102AY011SD

Shrubs

National Symbol	Common Name	Grp	% Composition by weight	Group % Allowable
AMCA5	LEADPLANT	1	0 to 0	0 to 5
ROWO	WILD ROSE	1	0 to 0	0 to 5
SYOC	WESTERN SNOWBERRY	1	0 to 0	0 to 5

Production

Grasses and grasslikes: 85 to 95 % of total
 Forbs: 5 to 10 % of total
 Shrubs: 0 to 5 % of total
 Trees: 0 to 0 % of total
 Lichen community: 0.00 lbs/acre (NOT ANNUAL PRODUCTION)
 Moss community: 0.00 lbs/acre

Cover

Lichen community: 0 % cover
 Moss community: 0 % cover

RANGE SITE NAME: CLAYEY
 RANGE SITE NUMBER: 102AY011SD

* PLANT GROWTH CURVES

ID	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NUMBER: SD0001	0	0	5	15	30	25	5	5	10	5	0	0
NAME: 100% COOL SEASON SPECIES												
DESC: 100% OF PRODUCTION PROVIDED BY COOL SEASON SPECIES												
NUMBER: SD0002	0	0	5	15	25	20	15	10	7	3	0	0
NAME: 75% COOL, 25% WARM												
DESC: 75% OF PRODUCTION FROM COOL SEASON PLANTS, 25% FROM WARM SEASON PLANT												
NUMBER: SD0003	0	0	5	15	20	20	20	10	7	3	0	0
NAME: 50% WARM, 50% COOL SEASON												
DESC: 50 % OF PRODUCTION FROM COOL SEASON PLANTS, 50% FROM WARM SEASON												
NUMBER: SD0004	0	0	5	5	15	25	30	10	7	3	0	0
NAME: 75% WARM, 25% COOL SEASON												
DESC: 75% OF FORAGE PRODUCED BY WARM SEASON PLANTS, 25% FROM COOL SEASON												
NUMBER: SD0005	0	0	0	0	10	35	30	20	5	0	0	0
NAME: 100% WARM SEASON PLANTS												
DESC: 100% OF PRODUCTION IS FROM WARM SEASON PLANTS												

* TOTAL ANNUAL PRODUCTION (EXCELLENT CONDITION)

FAVORABLE 3400 TO 4600 lbs/acre
 AVERAGE 2800 TO 3800 lbs/acre
 UNFAVORABLE 2000 TO 2700 lbs/acre

LIVESTOCK DATA

* ESTIMATED STOCKING RATE

EXCELLENT 0 TO 0 AC/AU OR 0.8760 TO 1.1250 AUM/AC
 GOOD 0 TO 0 AC/AU OR 0.6260 TO 0.8750 AUM/AC
 FAIR 0 TO 0 AC/AU OR 0.3760 TO 0.6250 AUM/AC
 POOR 0 TO 0 AC/AU OR 0.1250 TO 0.3750 AUM/AC

RANGE SITE NAME: CLAYEY
RANGE SITE NUMBER: 102AY011SD

* WILDLIFE SPECIES LIST:

WHITE TAILED DEER	PRAIRIE CHICKEN
SHARPTAILED GROUSE	PHEASANTS
DUCKS	GEESE
HUNGARIAN PARTRIDGE	

* RANGE SITE DEGRADATION:

WITH CONTINUED OVERUSE THE BLUESTEMS AND NEEDLEGRASSES DECREASE.
THESE GRASSES ARE REPLACED BY WESTERN WHEATGRASS OR BY SHORT
GRASSES. WITH MANY YEARS OF OVERUSE SHORT GRASSES AND WEEDY
FORBS OCCUPY THE SITE.

* TYPICAL LOCATION:

TO BE ENTERED LOCALLY.

