
RANGELAND READINESS

SELECTION OF SITE. Select areas representative of major portions of the primary range. The primary range. The plant development station (Range Readiness Plot) may give data for several allotments which are relatively uniform in elevation, exposure, soils, vegetation and general climate. Accordingly, sample areas can be held to a minimum number if properly selected.

Variables in seasonal zones include:

1. **EXPOSURE.** Ten to fifteen days delay in plant development can be expected on north slopes compared to south slopes.
2. **ELEVATION.** Ten to fifteen days delay in plant development for each 1,000 feet rise in elevation is typical.

Plant development stations may be located at permanent range trend clusters if desired and convenient.

Range Readiness measurements are not needed for annual ranges grazed yearlong.

IDENTIFICATION OF SAMPLING AREAS. Locate the plots adjacent to roads if practical. Post the area with a readily visible metal tag or post, or painted boulder, consistent with local roadside zone standards.

Show location on the range allotment map or use a District map as an index map for all plots.

SAMPLING.

Selecting Indicator Plants. Three to five may be selected to include:

1. Principal forage plants.
2. Dominant species in type (may be a low value forage plant).
3. Grasses, forbs, and browse.

Number of Plants. Measure ten individual plants of each indicator species at random over an area of one to five or more acres.

If desired, drive a stake by an individual plant of one or more of the species to provide a continuous record of the same plant.

Frequency of Observations. Repeat measurements two or three times each spring from each plot. The first observation should be made about two weeks before usual opening date. The second observation should be made on or within a few days of when it is estimated range will be ready. Third observations will be necessary when second measurement does not give basis for final conclusion.

RECORDING MEASUREMENTS. Instructions in measurements and symbols to record are given in the expansion of this code. Data will be recorded on side two of form R5-2200-1, Grazing Permit Action and Actual Use Record. An example of a form is shown on page 8.

When readiness station applies to more than one allotment, record date of range readiness on all R5-2200-1's, but record plant measurements and observations on only one. Cross reference the sheets.

Growth Measurements.

1. Principal forage plants.
2. Dominant species in type (may be a low value forage plant).

Phenological State Legend.

1. <u>Grasses</u>	<u>Legend</u>
Boots beginning to form	BF
Boots mostly formed	B
Heads beginning to emerge	HE
Heads mostly emerged	H
Flowers beginning to open	O
Flowers mostly open	F
Seeds forming (milk stage)	SM
Seeds maturing (dough) or mature	SD

2. <u>Forbs</u>	<u>Legend</u>
Growth begining	G
Flowers in bud	B
Flower buds opening	O
Partial flower	FP
Full flower	F
Flowers faded	FF
Seeds formed	S

3. <u>Shrubs</u>	<u>Legend</u>
Leaf buds swelling	LS
Leaf buds beginning to open	LO
Partial Leaf	LP
Full leaf	L
Flowers buds opening	B
Partial flower	FP
Full flower	F
Fruit formed	S

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READINESS DATE.

1. When soil is firm enough in the general area that livestock will not cause trampling damage to soil and vegetation.
2. When phenological stage or growth of vegetation meets standards in Section "Readiness Standards of Selected Indicator Plants."

READINESS STANDARDS OF SELECTED INDICATOR PLANTS. Additional plants may be added to the list and standards revised by Forests upon concurrence of the R-5 Division of Range Management.

1. Grass and Grasslike Plants.

Indicator	Symbol	Common Name	Growth (inches)	Stage
Perennials				
<i>Agropyron specatum</i>	AGSP	Bluebunch wheatgrass	8"	HE
<i>Bromus carinatus</i>	BRCA	Mountain Brome	6"	HE
<i>Deschampsia caespitosa</i>	DECA	Tufted hairgrass	6"	HE
<i>Festuca idahoensis</i>	FEID	Idaho Fescue	3"	B
<i>Koeleria cristata</i>	KOCR	Junegrass	6"	HE
<i>Poa pratensis</i>	POPR	Bluegrass	6"	HE
<i>Poa sandbergii</i>	POSA	Sandberg bluegrass	3"	H
<i>Sitanion hystrix</i>	SIHY	Squirreltail	6"	H
<i>Carex filifolia</i>	CAFI	Shorthair Sedge	4"	SM
<i>Carex nebraskensis</i>	CANE	Nebraska Sedge	6"	F
Annuals				
<i>Avena barbata</i>	AVBA	Slender Wild Oats	4"	BF
<i>Avena fatua</i>	AVFA	Wild Oats	4"	BF
<i>Bromus mollis</i>	BRMO	Soft Chess	3"	B
<i>Bromus rigidus</i>	BRRI	Ripgut	4"	BF
<i>Festuca megalura</i>	FEME	Foxtail Fescue	4"	HE

2. Forbs.

Indicator	Symbol	Common Name	Growth (inches)	Stage
<i>Achillea lanulosa</i>	ACLA	Yarrow	4"	
<i>Balsamorhiza sagittata</i>	BASA	Balsamroot	Leaves 3/4 Developed	0
<i>Erodium cicutarium</i>	ERCI	Redstem Filaree	2"	0
<i>Hydrophyllum capitatum</i>	HYCA	Waterleaf	8"	FF
<i>Leptodactylon pungens</i>	LEPU	False Phlox		F-FF
<i>Lomatium</i> sp.	LOM	Biscuit Root	4"	S
<i>Lupinus</i> sp.	LUP	Lupine (perennials)	8"	B
<i>Pentstemon</i> sp.	PEN	Pentstemon		B
<i>Ranunculus alismaefolius</i>	RAAL	Buttercup	4"	S
<i>Ranunculus occidentalis</i>	RAOC	Western Buttercup	12"	FF
<i>Trifolium</i> sp.	TRI	Clover	4"	0
<i>Veratrum californicum</i>	VECA	False Hellebore	24"	
<i>Wyethia mollis</i>	WYMO	Mule-ears	Leaves 3/4 Developed	0

3. Shrubs and Deciduous Trees.

Indicator	Symbol	Common Name	Development	Stage
<i>Amelanchier alnifolia</i>	AMAL	Serviceberry	50% Developed	LP O
<i>Ceanothus cordulatus</i>	CECO	Whitehorn		L O
<i>Ceanothus cuneatus</i>	CECU	Wedgeleaf Ceanothus		L F
<i>Ceanothus integrifolius</i>	CEIN	Deerbrush	50-100% Dev.	LP-L O+
<i>Cercocarpus betuloides</i>	CEBE	Birchleaf Mahogany	50% Developed	LP B
<i>Prunus emarginata</i>	PREM	Bitter Cherry		LP O+
<i>Purshia tridentata</i>	PUTR	Botterbrush		LP O to F
<i>Quercus kelloggii</i>	QUKE	Black Oak	First Leaves 3/4 Developed	LP
<i>Quercus garryana</i>	QUGA	Garry Oak	First Leaves 3/4 Developed	LP
<i>Quercus garryana</i> var. <i>breweri</i>	QUGAB	Brewer Oak	First Leaves 3/4 Developed	LP
<i>Quercus garryana</i> var. <i>semota</i>	QUGAS	Shinn Oak	First Leaves 3/4 Developed	LP
<i>Symphoricarpos albus</i>	SYAL	Snowberry		LO B

4. Reseeded Species.

Indicator	Symbol	Common Name	Growth (inches)	Stage
<i>Agropyron intermedium</i>	AGIN	Intermediate Wheatgrass	8"	BF
<i>Frestuca arundinacea</i>	FEAR	Tall Fescue	8"	BF
<i>Phalaris tuberosa stenoptera</i>	PHTUS	Hardinggrass	8"	BF

ANNUAL GRASSLANDS. Range readiness is the date when available biomass (green forage plus residual dry matter) is sufficient to graze the allotted number of livestock. The soil should be dry enough to prevent significant trampling damage from livestock. Range readiness does not apply to annual grasslands grazed yearlong. Readiness measurements are relatively less important on annual grasslands than forage residue levels.

No standards are set for range readiness. Both the quantity of biomass needed and soil moisture are dependent upon local circumstances and require judgment.

Generally speaking, the biomass to be used should be above 100 pounds per acre (one air dry gram per square foot) and the biomass to be used per acre times the number of acres should be sufficient to carry the herd until more forage grows, that is, 100 lbs./per acre x 1,000 acres - 100,000 pounds or enough to carry 50 mature dry cows for about two months.