

**DRAFT**  
Subject to Field Testing

December, 1997

## FORAGE SUITABILITY GROUP - WESTERN OREGON

Well Drained > 15% Slopes

**Number:** G005XY003OR

**MLRA:** A5 Siskiyou - Trinity Area

**Climate:** Average annual precipitation - Ranges 18 to 90 inches. Precipitation is low in summer but evenly distributed throughout the rest of the year. Average annual temperature - 7 to 13 degrees Centigrade. Average freeze-free-period - 170 to 200 days for Curry County, 140 to 235 days for Douglas County, 100 to 180 days for Jackson County, and 100 to 170 days for Josephine County.

**Vegetation:** The native vegetation is generally an overstory of trees and an understory comprised of shrubs and grasses. Generally the following tree species occur: Douglas fir, ponderosa pine, sugar pine, Pacific Madrone, California black oak, and Oregon white oak. The following plants may be found in the understory: poison oak, Western hazel, Pacific serviceberry, tall Oregon grape, common snowberry, and both annual and perennial grasses. Once cultivated for pasture or hay, the areas that have a low level or no management tend to show an increase in brushy species such as blackberry, wild rose, and Scotch broom. Also tansy ragwort and St. Johnswort may increase on sites with low level or no management.

### **Soil Suitability Group Description:**

**Soil Description:** These well drained soils are generally moderately deep to very deep. Brader, Dicecreek, Edenbower, Philomath, Nonpareil, McMulling and Witzel are shallow. These soils formed generally in alluvium, colluvium, and residuum derived from mixed sources. Textures are predominantly loams, silt loams, sandy and gravelly loams, gravelly silt and sandy loams, cobbly loams, silt loams, silty clay loam, silty clay, and clay. Rooting depth on most soils in this group is from 20 to > 60 inches, but Brader, Dicecreek, Langellain, Nonpareil, Philomath, McMullins, Reston, and Witzel have rooting depths from 12 to 20 inches. In summer irrigation is needed for maximum production of most crops.

**Landscape Position:** Alluvial fans, high stream terraces, hillslopes, ridges, and mountains.

**Depth to Seasonal Water Table:** More than 6 feet, but on Langellain the water table occurs at 0.5 to 2.0 feet from Dec to May.

**Available Water Holding Capacity:** 1 to 12 inches

**pH Range:** 4.5 - 7.3

**Frequency and Duration of Flooding:** Flooding does not occur on these soils.

**Frost Heave Potential:** None in Curry, Jackson, and Josephine Counties, low to Moderate in Douglas County.

**Degree of Stoniness:** Fragments > than 3 inches vary from 0 to 15% on all soils in this group except Witzel which will vary from 30 45 fragments > 3 inches.

**Trafficability Parameters:** Sticky and plastic when wet which restricts trafficability.

**Typical Soils:** See attached List

**Adapted Forage Species List:**

**Grazing Use:**

- |                     |                        |
|---------------------|------------------------|
| Tall Fescue         | Festuca arundinacea    |
| Orchardgrass        | Dactylis glomerata     |
| Annual Ryegrass     | Lolium multiflorum     |
| Perennial Ryegrass  | Lolium perenne         |
| Alfalfa             | Medicago sativa        |
| Red Clover          | Trifolium pratense     |
| White Clover        | Trifolium repens       |
| Birdsfoot Trefoil   | Lotus corniculatus     |
| Subterranean Clover | Trifolium subterraneum |

**Machine Harvest:**

- |              |                     |
|--------------|---------------------|
| Tall Fescue  | Festuca Arundinacea |
| Orchardgrass | Dactylis glomerata  |
| Alfalfa      | Medicago sativa     |
| Red Clover   | Trifolium pratense  |
| White Clover | Trifolium repens    |
| Smooth Brome | Bromus inermis      |

**Suggested Seeding Season:** Spring or Fall

**Production Estimates: Based on Animal Unit Months, and high level of management**

**Grazing Use:**

**Not irrigated** - 1 to 7

**Irrigated** - 9 to 13

**Machine Harvest:**

**Irrigated** - 2 to 3 tons/acre

**Not Irrigated** - 4 to 5 tons/acre

**Growth Curve: Pasture & Hayland - High Level Management**

Growth Curve Number: **05LXHN**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	10	15	20	25	15	5	0	0	5	5	0

Growth Curve Number: **05LXHI**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	5	15	15	20	20	10	5	0	5	5	0

**Growth Curve: Pasture & Hayland - Medium Level Management**

Growth Curve Number: **05LXMN**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	5	15	25	25	15	0	0	0	10	5	0

Growth Curve Number: **05LXMI**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	5	15	20	20	15	5	5	5	5	5	0

**Growth Curve: Pasture & Hayland - Low level Management**

Growth Curve Number: **05LXLN**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	10	15	25	30	10	0	0	0	5	5	0

Growth Curve Number: **05LXLI**

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	5	15	25	15	15	5	5	5	5	5	0

**Management:**

**Limitations:** These soils become sticky and plastic when wet, which restricts trafficability. Also they are susceptible to compaction when wet. Grazing and machine use should be restricted when soils are saturated. Steepness of slope decreases livestock movement and also affects machine movement. When degree of stoniness exceeds 15% it can restrict ease of movement of both livestock and machinery or prohibit it entirely. Stoniness can also lower production.

**Vegetation Management:** Move livestock by plant height. Move livestock onto a field when forage is at least 6 to 8 inches tall. Discontinue grazing when the average height of the pasture is down to 2 to 4 inches. Avoid grazing when soil is wet and before pasture stand is fully established. Remaining stubble height is the most important of these two measurements.

**Season of Use:** To avoid damage to plants and compaction of wet soils in the winter months caused by animals, any livestock on pasture should be removed when the soils are saturated, which generally occurs for long periods between November and March.

## **Facilitating Practices:**

**Cross-Fencing:** Cross fencing will help achieve higher forage yields and more uniform grazing use through more intensive management.

**Water Developments:** Water is critical to livestock gains and general health. Generally, the best source of water in a field is a trough with water piped from a well or a spring. If piped water is not available, allow only restricted access to rivers or streams. If livestock only have a small access area for watering, the amount of manure and sediment in the water will be minimized. Additionally, bank erosion problems will be minimized, and streamside vegetation will be protected, which will keep the water cooler.

**Minerals:** Salt should be provided in the field for livestock. The salt block or box should be up off the ground and under cover so it will not dissolve by rain or dew. Salt should be placed away from watering areas to reduce livestock concentration areas and encourage more uniform grazing.

**Clipping and Dragging:** Clip and drag pasture as often as required to encourage uniform grazing and pasture vigor. Clipping and dragging is best done after each grazing period and a minimum of twice annually.

**Fertilization:** Take soil samples to determine nutrient levels. An application of nitrogen in the spring is generally necessary for optimum forage production, but tests have shown that two applications one in fall and one in winter will optimize forage production. Fertilization will increase both the production and the nutritive value of the forage for livestock, but too much fertilizer can build up toxic level of certain minerals (such as nitrate and potassium) in forages.

**Weed Control:** Weed control can be accomplished mechanically, chemically, biologically, or with a combination of these methods. The recommendations for chemicals can change, so it is always best to contact the local county extension office.

**Hayland Management:** For maximum production and quality of forage, the grass should be cut just as the head emerges. The stubble height should be no lower than 2 to 3 inches. The best time to apply manure is just after harvest, because the nutrients can reach the soil more efficiently if excess foliage isn't in the way.

**Reseeding:** Reseeding should always be the last option. It is expensive, and takes a pasture out of production for most of a year. Additionally, the need to reseed is usually a symptom of a need to change livestock management practices. If management problems or a change in stocking rate or season of use are not addressed first, newly seeded pastures will soon look like the ones they replaced. Species selection is very important. If the species is not adapted to the site, the best seedbed preparation in the world will not make the seeding successful. Generally, a mix of one grass species and one legume is recommended. This cuts down on patch grazing of grasses caused by palatability differences. If multiple species are desired, make sure that the species of grass all have approximately the same growth schedule. It is very important to keep the animals off of a new seeding until well established. Otherwise, the new seedlings probably will be damaged or killed, and the time money invested in the seeding will be wasted.