

# Instructions

## **Pasture Condition Score Sheet**

**NE-ESC-13**

### Instructions for use of NE-ESC-13

A well-managed pasture is one whose productivity (plant and animal) is optimized while doing no harm to soil, water and air quality. Pasture condition scoring is a systematic way to check how well a pasture is being managed. A well managed, properly sited pasture will have a good to excellent overall pasture condition score. By rating key indicators common to all pastures we can evaluate condition and identify the primary reasons for a low condition score. Conditions that typically express themselves as pasture resource concerns are poor plant growth, weedy species invasion, poor animal performance, visible soil loss, increased runoff, and impaired water quality. Pasture condition scoring involves the visual evaluation of 8 indicators, listed and described below, which rate pasture condition. In the "Pasture Condition Score Sheet", each indicator has five conditions described for it, ranging from very poor to excellent. This objectively ranks the extent of any problem(s).

### PASTURE CONDITION INDICATOR DESCRIPTIONS

**Percent Desirable Plants:** This indicator determines if the pasture has desirable plant species that are readily consumed, persistent, and provide high tonnage and quality for a significant part of the growing season. Some grazing-resistant intermediate species, such as Kentucky bluegrass, provide high quality forage, but often in amounts considerable less than other adapted species would. They can be an indicator of a less than ideal grazing management history. Undesirable species are those which typically are not eaten (rejected) by most livestock or cause undesirable side effects when eaten, and crowd out more desirable species.

**Plant Cover:** The percentage of the soil surface covered by plants is important for pasture production and soil and water protection. A dense stand (high stem count) ensures, when properly grazed, high animal intake, and high sunlight interception for best forage growth. Bare, open spots allow for weed encroachment, increased water runoff during intense rains, and soil erosion.

**Plant Vigor:** Desirable species should be healthy and growing at their potential for the season when rated. If not, they will be replaced by weeds and low quality forage plants. If plant growth conditions really suffer, bare soil will begin to appear. Come things to consider when rating plant vigor are color, size of plants, rate of regrowth following harvest, and productivity.

**Plant Diversity:** Plant diversity is the number of different forage species and functional groups that are well represented in a pasture grazed season long, or in a set of rotationally grazed pastures. Low species diversity results in unreliable supplies of grazed forage for livestock during the grazing season. Forage production and quality varies more widely through the grazing season due to changing weather and light conditions and insect and disease pressure. Having more than one species from more than one functional group (i.e. cool season grass, warm season grass, legume) maintains the most consistent forage supply during the grazing season.

**Percent Legume:** Legumes are important sources of nitrogen for pastures and improve the forage quality of a pasture mix when they comprise at least 20 percent (but less than 60% of bloat causing legumes) of total air-dry weight of forage. Deep-rooted legumes also provide grazing during hot dry periods in mid-summer.

**Uniformity of Use:** Check uniformity for use by observing animal grazing patterns. Uniform grazing results in all desirable and intermediate species being grazed to a similar (and acceptable) height. Spotty or patterned grazing appears uneven throughout a pasture with some plants or parts of paddocks grazing heavily and others lightly. Individual forage species are being selected for or against by the livestock based on their palatability and nutritional value. Selectivity is also affected by forage species' maturity differences, amount of forage available to livestock, and their length of stay in the paddock. Zone grazing occurs when one end of the pasture is heavily grazed and the other end is ungrazed or lightly grazed. Typical causes of zone grazing are distance to water, pasture shape, and pasture terrain.

**Plant Residue:** Plant residue, in various states of decay, provides additional surface cover and organic matter to the soil. However, too much standing dead material in the grass stand reduces the feed value of the forage consumed, reduces animal intake, and inhibits new plant shoot growth. Excessive amounts of standing dead material may cause the forage to be rejected by the grazing animal. Less than 25 percent of the standing forage mass should be dead or

dying leaves and stems. A buildup of thatch (mat of undecomposed residue) at the soil surface promotes fungal diseases and retards or prevents shoot and seedling emergence. This results in forage stand decline.

**Erosion:** Erosion increases as ground cover decreases. Evidence of sheet erosion in a pasture appears as small debris dams of plant residue that build up at obstructions or span between obstructions. Some soil aggregates or worm castings may also be washed into these debris dams. Rills are small, incised channels in the soil that run parallel to each other down slope. When rills appear, serious soil loss is occurring. Wind erosion occurs when heavier wind blown soil particles abrade exposed soil and cause dust to become airborne. Deposition of the heavier soil particles occurs downwind of obstructions such as fence lines, buildings, and vegetation. Often vegetative debris will be "windrowed" against obstructions. Pedestaling can indicate either wind or water erosion. Sheet, rill, and wind erosion generally will increase as plant cover (Indicator 2) decreases. Ground cover also affects gully and riparian area erosion because of its effect on runoff. In addition, livestock hoof action may contribute substantially to these conditions.

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