PASTURE DEFINITIONS AND YIELD GUIDANCE
Revised Universal Soil Loss Equation (RUSLE2)

Evaluate each field separately and use your best judgment for the category the field falls into. Look at how the field is treated and document pasture condition on JS-Agron-24. For example, even though the system could be called rotational, the field(s) management is treated more like a continuous system during the most erosive periods (April-July) due to heavy stocking or animals remaining in fields too long- thus overgrazing and minimal recovery time and capabilities exist.

Evaluation of cool-season stands should occur from March 16 to July 15 or September 16 to December 15. The evaluation period for warm-season stands should occur from May 1 to October 31.

As a change from the RUSLE version 1 method of determining soil loss, you will need to look at the other fields on the farm to get an idea of management along with asking the producer several questions about how they treat the field. Document current management!

If "overuse" is selected as the type of current management, be aware and ask yourself: "How will the producer change his/her management to prevent this from occurring again on this field?" The conservation plan provided to the producer should detail what they need to do to comply with any sort of maintenance to keep the field from reverting back to its current condition of eroding at an excessive rate.

Refer to Table 1 of 528A standard and specification for guidance on grazing heights.

<u>GRAZE ROTATION (includes continuous hay fields)</u>

- 2 plus fields (some systems with 4 or less pastures may actually be treated like a "continuous grazing system")
- Access to water in all fields (without crossing another field to get to water)
- Animals rotated through the system
- Proper stocking rates or possibly under stocked
- Stubble maintained at proper grazing heights (20% or less spot grazed below recommended grazing heights)

<u>GRAZE ROTATION, HEAVY USE</u>

- 2 plus fields
- Access to water in all fields
- Animals rotated through the system
- Over stocked
- Stubble maintained below proper grazing heights (more than 20% spot grazed below recommended grazing heights)

<u>GRAZE CONTINUOUS, PROPER USE</u>

- Continuous grazing in one field, OR more than 1 field with the gates open, OR multiple fields with livestock in all fields; forage managed properly
- Stubble maintained at proper grazing heights (20% or less spot grazed below recommended grazing heights)
- Considered utilized properly or under utilized; proper stocking rates or under stocked
- Could be indicative of many hay fields

GRAZE CONTINUOUS, LIGHT OVERUSE

- Continuous grazing in one field, OR more than 1 field with the gates open, OR multiple fields with livestock in all fields.
- Some spot grazing starting to show up
- Could be slightly overstocked for current system.
- 21% to 30% of plants grazed shorter than recommended

GRAZE CONTINUOUS, MODERATE OVERUSE

- Continuous grazing in one field, OR more than 1 field with the gates open, OR multiple fields with livestock in all fields
- Moderate amount of spot grazing
- Could be slightly to moderately overstocked for current system
- 31% to 50% of plants shorter than recommended

GRAZE CONTINUOUS, SEVERE OVERUSE

- Continuous grazing in one field, OR more than 1 field with the gates open, OR multiple fields with livestock in all fields
- Severe spot grazing
- Could be moderately to severely overstocked for current system
- More than 50% of the plants are shorter than recommended

PASTURE RUSLE2 YIELDS

Base the determination of average annual yield on your best judgment. Look at plant vigor, stand density, fertility, and management to make a determination. Remember, we are calculating soil loss and not necessarily pasture condition. Weeds and brush do a good job of controlling soil erosion. Desirable species are not the only plants to consider when determining yield.

The following is a guide. Remember, cost share should be based on 5 year average history. Therefore, consider this if the year you look at the field happens to be an abnormally dry or wet year.

HIGH YIELD:

- Soil with yield potential (stand count, vigor, and health) greater than 6000 lbs/ac (3 tons/ac) with consideration given for field/forage/soil conditions.
- Producer takes soil sample every 3-4 years and applies lime and fertilizer accordingly.
- Good looking pasture during entire grazing season
- Best Pasture Suitability Group soils with average to high level of management.

MEDIUM YIELD:

- Soil with estimated yield potential (stand count, vigor, and health) from 4000 to 6000 lbs/ac (2 to 3 tons/ac) with consideration given for field/forage/soil conditions.
- Producer applies fertilizer/lime according to local dealer recommendations and has no regular application schedule.
- Average looking pasture during entire grazing season.

- Pasture Suitability Group soils with an average production level under average level of management.

LOW YIELD:

- Soil with estimated yield of less than 4000 lbs/ac (2 tons/ac) with consideration given for field/forage/soil conditions.
- Rarely ever applies any fertilizer/lime or severely mismanages applications
- Poor looking pasture during entire grazing season
- Pasture Suitability Group soil with low production potential even with high level of management.

RUSLE2 ADJUSTMENTS FOR PASTURES

These adjustments may be made within the RUSLE2 model to account for soil or site conditions that significantly affect soil loss. These adjustments are to be used sparingly and must be documented in the case file with actual field inventory data.

PERCENT (%) ROCK COVER

- Calculate the percentage of bare ground covered by rocks at the surface that are larger than 3/8" in size.
- Use a line transect method or other acceptable inventory method to determine rock cover
- Base this calculation on the period of April through July
- Rocks covered by ground or canopy cover should be ignored

YIELD LEVELS

- Estimate the percentage of yield increase or decrease due to plant composition; pasture/hayland yield modifications limited to only plus or minus 10 and 20 percent
- Use an inventory method to document the yield variation within high, medium, and low yield potential
- Consider effect of current growing conditions on the average yield
- Estimate the average annual yield for a five year period