Natural Resources Conservation Service

CONSERVATION PRACTICE STANDARD

ANNUAL FORAGES FOR GRAZING SYSTEMS

CODE 810

(ac)

DEFINITION

Establish adapted and compatible species, varieties, or cultivars of annual forage species suitable for pasture or fodder.

PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Provide or increase forage supply during periods of low forage production or to extend the grazing season
- Provide temporary cover to reduce wind and water erosion and forage for sites where perennial forages will be reestablished
- Reduce excess nutrients from the soil
- Improve soil microbial life and soil aggregate stability

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to pasture and cropland where annual forages are planted as part of the grazing system forage budget. This practice does not apply to the establishment of annually planted and harvested grain, fiber, vegetable, or oilseed crops. This practice does not apply to forestland or grazed forestland.

CRITERIA

General Criteria Applicable to All Purposes

Use of this standard will comply with all applicable federal, state, and local laws and regulations.

All purposes (grazing/harvest/termination) will comply with other USDA policies where applicable, e.g., Risk Management Agency crop insurance requirements and/or any other interested parties.

Ensure that plants are not listed as noxious weeds or invasive species lists for the state.

All seed and planting materials shall be labeled and meet state seed quality law standards.

Plant species and their cultivars will be selected based upon:

- Site, weather, and soil conditions present at establishment.
- Animal nutritional requirements with no or limited anti-quality issues.
- Intended use,level of management, realistic yield estimates, maturity stage, season of use, and compatibility with other species.
- Resistance to herbicide carryover and disease/insects common to the site or location.

Seedbed preparation, species selection, seeding mixes, seeding rates, dates, depths, fertility requirements, site adaptation and planting methods will be consistent with the requirements in the IN NRCS Seeding Tool.

Seeding rates will be calculated on a pure live seed (PLS) basis and consistent with State and local criteria.

When planting legumes, use pre-inoculated seed, inoculum coated seed, or inoculate with the proper viable strain of rhizobia immediately before planting.

Apply all plant nutrients and, or soil amendments based on recommendations from a current soil test and as recommended by NRCS state guidance, land grant university and research institutes, extension agencies, or agency field trials.

When herbicides are used, follow all label requirements for use on forages and observe restrictions for livestock use whether grazed or harvested.

Exclude livestock until the plants are ready to be grazed.

Forage harvest will be according to Conservation Practice Standard (CPS) (511) Forage Harvest Management and grazing will be according to CPS (528) Prescribed Grazing. After grazing or forage harvest, ground cover, regrowth and field conditions will be left adequate for establishing the following year's crop or for seeding perennial forage where applicable, or subsequent harvests or grazing events.

CPS Conservation Crop Rotation (328), CPS Residue Management No-Till (329) and other appropriate crop management practices will be utilized to maintain adequate residue and growing cover to control sheet/rill, and wind erosion.

Additional Criteria to Provide or Increase Forage Supply During Periods of Low Forage Production or to Extend the Grazing Season.

Establish annual forage species that are most capable of providing dry matter demand for the livestock forage balance for the kind and class of the livestock to be fed for the desired period of time. Select plants that will produce forage for use during periods when other on-farm forage may not meet livestock needs.

Plant species and their cultivars will be selected based upon:

- Amount of forage needed for animal/forage balance;
- animal nutritional needs;
- grazing or harvesting intensity;
- height of grazing/harvesting and timing available to provide plants sufficient recovery as needed;
- species and timing of availability is based on forage shortages or gaps;
- and method and timing of harvest.

Additional Criteria to Provide Temporary Cover to Reduce Wind and Water Erosion and Forage for Sites Where Perennial Forages will be Reestablished.

Selected plants will provide adequate ground cover, canopy cover, stubble height and orientation, root mass and vegetative retardance to protect soil against wind and water erosion.

Fully terminate or control existing forage being replaced.

If multiple grazing or mechanical harvests are planned, stop grazing heights will be maintained according to IN FOTG Standard (528), and appropriate mowing heights and rest periods will be maintained according to IN FOTG Standard (511) Forage Harvest Management.

Additional Criteria to Reduce Excess Nutrients from Soil.

Annual soil testing according to Land Grant University recommendations will be utilized to determine the level of nutrients.

Specific species of plants that will provide adequate removal of the excess nutrient shall be used. Adequate residue cover or regrowth will be maintained to control erosion and minimize loss of nutrients after termination. Annual forage will be mechanically harvested and removed from the site.

Harvested forage will not be fed back on, or manure will not be applied back on, the same site from which forage was harvested to uphold the nutrient reduction.

Additional Criteria to Improve Soil Microbial Life and Soil Aggregate Stability.

Plant at least three plant species and two functional groups for added diversity. Monitor soil aggregate stability using approved NRCS assessment procedures to show that water stable aggregates are being increased and/or improved over the life of the rotation. Minimize disturbance, so that a STIR value does not exceed 20.

If grazed, manage the grazing in a manner to be beneficial for soil microbes and for improving soil organic matter. Manage grazing such that manure, and urine are evenly distributed across the field.

CONSIDERATIONS

Where multiple grazing or harvests are needed, select species that will tolerate such management.

If necessary, more than one year of annual forage may be needed to go along with satisfactorily killing existing perennial cover and control weeds to ensure that a proper site conditions for planting new perennial forage.

Where air quality concerns exist, site preparation techniques should be used that will minimize airborne particulate matter generation and transport.

Consider use of the following conservation practices, as applicable: (315) Herbaceous Weed Control, (590) Nutrient Management, (595) Pest Management Conservation System, and (342) Critical Area Seeding.

Consider soil condition, landscape position, and attributes such as pH, available water holding capacity, aspect, slope, drainage class, fertility level, salinity, depth, flooding and ponding, and levels of toxic elements that may be present.

Consider negative plant/animal interactions, and/or animal toxicity issues due to forages being utilized.

Use of heavy stemmed forages with high carbon to nitrogen ratios such as millets or sudangrass, or sorghum-sudangrass crosses are beneficial for both livestock forage and increases above and below ground organic materials.

Utilize annual forages that are a different functional group than crops used as part of a cropping system to increase crop diversity.

Herbicide resistant grain crops can also be planted, when reestablishing perennial forage.

PLANS AND SPECIFICATIONS

Plans and specifications will be prepared for the practice site. Plans will include the following:

- Field number and acres.
- Species of plant(s) to be established.
- Seed tags.

- Inoculants needed for legumes if planted.
- Termination method of existing perennial and annual vegetation where applicable and weed control method(s).
- Site preparation, seeding depths, rates and seeding dates.
- Type of seeding equipment and calibration prior to use.
- Planned rates and timing of nutrient application(s).
- Other information pertinent to establishing and managing the annual species to be established and prepare for establishing perennial vegetation where applicable (e.g. 528 – Prescribed Grazing; 511 – Forage Harvest Management).

Plans and specifications for the establishment and management of the species or species of plants to be established may be recorded in narrative form, on job sheets, or on other forms.

OPERATION AND MAINTENANCE

An operation and maintenance plan will be provided to and reviewed with the operator/landowner. The plan will include the following items and others as appropriate.

- Evaluate the annual forage crop to determine if it meets the planned purpose(s). If the annual forage crop does not meet the intended purpose(s) adjust the management, change the species of cover crop, or choose a different technology
- Invasion by undesirable plants will be controlled by cutting, using a selective herbicide, or by grazing management by manipulating livestock type, stocking rates, density, and duration of stay.

REFERENCES

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