TECHNICAL NOTES

U.S. Department of Agriculture **Natural Resources Conservation Service**

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Use of Ryegrass (*Lolium spp.*) Seeding to Reduce Medusahead (*Taeniatherum Caput-Medusa*) and/or Barbed Goatgrass (*Aegilops spp*.)

PURPOSE:

Ryegrass is currently not listed in the eVeg Guide, and is not an approved species for NRCS vegetative practices. Its use requires a variance, approved by the Area Range Conservationist and approved by the State Range Conservationist. This technical note outlines the procedures for using this species, and the necessary planning and documentation required for variance approval.

Background

Fire is one of the primary tools for controlling medusahead grass (*Taeniatherum captut-medusae)* and/or barbed goatgrass (*Aegilops triuncialis*). Fire can be unpredictable and may result in undesirable outcomes, thus is not a realistic option under most conditions. Weed suppression through competition with another species can be a more viable approach. Planting of annual ryegrass is an alternative management strategy that can be considered for control of medusahead and/or barbed goatgrass.

Research indicates that annual ryegrass displays some ecological plasticity (the ability of one genotype to produce more than one phenotype when exposed to different environments) and may function differently in certain plant communities (i.e., some shrub lands and vernal pools). Use of the species should be considered a special circumstance and is subject to precision planning followed up with annual monitoring reported to the NRCS state range specialist. Implementation of seeding using ryegrass will be done in accordance with the Range Planting (550) conservation practice.

Planning Considerations

Early planning should take into account the likelihood of success. Listed below are the applicable conditions and prohibited use conditions for use of annual ryegrass to control medusahead grass and/or barbed goatgrass.

<u>Applicable Conditions where Ryegrass could be considered - all listed conditions must be met</u>:

- Land Use is upland range or dryland pasture where range planting could be applicable
- Medusahead exceeds 15% cover by composition *and* desirable species composition is not present

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- Ryegrass composes no more 10-30% of the seed mix by composition with other annual grasses and legumes
- Identified susceptible/sensitive habitats can be protected through establishing a buffer receiving no planting. Treatment buffer width should be established locally depending on site conditions. Planting of ryegrass shall not occur within 200 feet of vernal pools, wetlands or riparian areas
- The site will be managed in order to reduce likelihood of reinvasion of undesirable species
- Residual Dry Matter, including medusahead thatch, does not exceed 1,800 lbs./ac.

<u>Prohibited Use Conditions - where annual ryegrass shall not be planted:</u>

- Do not plant within or adjacent to burned areas, especially where chaparral and/or native perennial grasses exist or have recently existed.
- Do not plan within or adjacent to sensitive plant or habitat areas, including but not limited to:
    - Wetlands (vernal pools, riparian areas, flood plains, serpentine sites)
    - Elevations greater than 4,000'
    - Coastal Prairie
    - Shrublands and shrubland transition zones
- Do not include annual ryegrass as part of a restoration with a perennial seed mix
- Do not use in areas where annual ryegrass is unlikely to successfully germinate and/or become established such as MLRAs 22A, 22B, 30, and 31.
- Do not use as a single-species planting of annual ryegrass
- Do not use in areas that will not be grazed and/or will not be managed to resist reinvasion by the target undesirable species.

Planning and Monitoring Methods

1) Establish a baseline dataset for species composition using Line Point Intercept (LPI) method. May also include step-point assessment method.
2) Identify treatment alternatives
3) If seeding is the preferred method, select locally suitable species mix likely to succeed
4) Select a seeding method following the Range Planting (550) practice standard
5) Consult with the client regarding any avoidance areas or measures identified
6) Finalize the seeding plan with identified areas, seed mix, amounts, and seeding method
7) Implement the seeding plan
8) Monitor results using LPI method and report results back to the State Rangeland Management Specialist. May also include the step-point method.
9) Work with client and/or operator to adjust management as needed to achieve maximum benefit

Monitoring and Reporting Requirements

Annual monitoring of seeded areas should be done by the planner and landowner. Monitoring will provide information on success/failure and will be used to further the knowledge of

restoration efforts where Medusahead grass (*Taeniatherum captut-medusae)* and/or goatgrass (*Aegilops triuncialis*) have invaded rangelands.

Methods for monitoring shall include Line Point Intercept so that data is repeatable. Information on grazing management each year at the seeded site should be documented as well as patterns and amount of precipitation. Photos should be taken at the 0.0 end of the transect (both landscape view and a view looking down at the ground to show cover). Use a 3x3' quadrat to frame the ground-level photo.

Keep monitoring data in the Field Office file and share with the landowner and report to the State Rangeland Management Specialist to track success/failure of seeding.