



United States Department of Agriculture
Natural Resources Conservation Service

Plant Enhancement Activity – ANM03-Incorporate Native Grasses and/or Legumes into 15% or more of the forage base



Enhancement Description:

Establish native grasses and/or incorporate legumes into 15% or more of the forage acres using adapted species and varieties, appropriate seeding rates, and timing of seeding.

Land Use Applicability: This enhancement is applicable to pastureland.

Benefits

Enhancing existing pasture by incorporating

establishing native grasses and legumes can:

1. Improve forage quality and quantity
2. Build soil fertility (legumes fix nitrogen in the soil), increase organic matter
3. Increase plant diversity and promote wildlife habitat
4. Provide forage during seasonal slump periods
5. Extend the grazing season
6. Food source for pollinating insects

Criteria for establishing Native Grasses and/or incorporating Legumes into 15% or more of the forage acres

1. A written grazing management plan that outlines specific goals and objectives.
2. Utilize adapted species, seeding rates and seeding dates according to local NRCS practice standards.
3. Prepare site to reduce competition for native grass establishment in accordance with state-specific recommendations.
4. Prepare site for incorporating legumes into existing forages, or establishing legume fields in accordance with state-specific recommendations
5. Determine species composition before and after seeding. Species composition must be 15% or more of native grasses and/or legumes.
6. If legumes are incorporated, a current-year soil test is required. Apply lime and fertilizer according to soil test recommendation.
7. Apply appropriate inoculant before planting legumes.

Documentation Requirements for establishing Native Grasses and/or incorporating Legumes into 15% or more of the forage acres

- A written planting specifications plan that meets the criteria identifying:
 - Plant species to be seeded



United States Department of Agriculture
Natural Resources Conservation Service

- Seeding rates and dates
- Activities to control plant competition
- Site preparations and planting method
- Amounts of fertilizer and lime to be applied
- Map showing locations of planting

ANM03 – OR Incorporate Native Grasses and/or Legumes into 15% or more of the forage base

Species composition will be based on pure live seed in the specified mixture.

The native grass seeding enhancement will be done on entire pastures using only native grass species with legumes in the mix to allow for appropriate grazing management and stand maintenance.

The criteria and references listed here are to be used in Oregon and are in addition to those listed on the national activity sheet.

Criteria for Incorporating Native Grasses and/or Legumes into 15% or more of the forage base

1. Proper grazing management is critical to maintenance of native seedings in pasture settings. The grazing management plan for areas seeded to native grass species will include:
 - A deferment from spring grazing (until after seed set) at least one year out of three years.
 - Minimum stubble heights will be 4-6 inches in all years.
 - No nitrogen fertilizer applications are allowed.
2. Adapted species, seeding rates, and seeding dates for use in Oregon (see tables at end of this document). These seeding recommendations assume that the seedbed is clean, firm, and weed-free and that the seeding is performed with a drill. Broadcast seedings will require twice as much seed.
3. Native grass with legume seedings will be performed on at least 20% of the pasture acres to account for the lower productivity of native species compared with existing tame forage species.
4. Pastures that are seeded with legumes in the mix will be fertilized according to soil test results in order to maintain the legume component in the forage base.
5. Legume interseedings will be performed on all pasture acres. Additional requirements include:
 - Stressing the existing vegetation the growing season prior to seeding. This can be done using heavy grazing (1"-2" remaining stubble) with no supplemental irrigation.
 - Use a drill to maximize seed-soil contact. Seed placement will be ¼" to ½" deep.
 - Apply irrigation after seeding (when done in late summer) to promote legume establishment.
 - Do not graze interseeded areas until legumes are firmly established (not easily pulled out of the ground). This may be up to 1 – 2 growing seasons following the interseeding.

Drilled Seeding Mix

for
CSP Enhancement ANM03 - Interseeding Pasture with
legumes
Western Oregon
Eastern Oregon – Irrigated

Species (select only one species)	PLS lbs/acre	Bloat Potential
Alfalfa	4	Yes
Clover	4	Yes
Sainfoin	2	No
Birdsfoot Trefoil	2	No

Approximate cost: \$20 – \$80 per acre for seed
Seeding Dates for Irrigated : August 1 – 15
Seeding dates for non-irrigated: November 15 – December 15
(when soil is dry enough to support equipment and temperatures are cool enough (less than 40°F) for dormant seeding)

Drilled Seeding Mix

for
CSP Enhancement ANM03 - Native Pasture
seeding
Western Oregon Upland Areas

Species	PLS lbs/acre in Mix
Wildrye, Blue	3
Wheatgrass, Slender	2
Oatgrass, California	3
Alfalfa	1

Approximate cost: \$140 – \$160 per acre for seed
Seeding Dates: March 15 – April 15

Drilled Seeding Mix

for
CSP Enhancement ANM03 - Native Pasture
seeding
Western Oregon Wet Areas

Species	PLS lbs/acre in Mix
Bentgrass, Spike	1
Bluegrass, Pine	0.5
Barley, Meadow	1
Oatgrass, California	3
Clover, White	1

Approximate cost: \$130 – \$150 per acre for seed
Seeding Dates: November 15 – December 15
(when soil is dry enough to support equipment and temperatures are cool enough (less than 40°F) for dormant seeding.)

References

- Oregon – Washington Guide for Conservation Seedings and Plantings*, 2000, USDA-NRCS
Plant Fact Sheets and Guides - <http://plant-materials.nrcs.usda.gov/intranet/pfs.htm>
Brummer, J.E. 2009. Interseeding of Pastures and Hayfields, presented at Idaho Alfalfa and Forage Conference, February 2-3, 2009 http://www.idahohay.com/Brummer_Interseeding%20Idaho%202009.pdf
Barnhart, S.K. 2004. Interseeding and No-till Pasture Renovation. Iowa State University Extension PM 1097 <http://www.extension.iastate.edu/Publications/PM1097.pdf>
Johnson, K.D., et al. 2007. Improving Pastures by Renovation. Purdue University, Cooperative Extension Service. AY-251 <http://www.agry.purdue.edu/Ext/forages/publications/ay251.htm>