Pasture and Hayland Planting

Nebraska Conservation Planning Sheet No. 13

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What is pasture and hayland planting?

This practice is establishing or re-establishing long-term stands of adapted species of perennial forage plants to be used for pasture or hay. This includes selecting adapted plant species, varieties, or mixtures; applying needed lime and fertilizer; preparing an adequate seedbed; proper planting; and good management during establishment.

How it helps

Pasture and hayland planting will introduce desired plant specie(s) to provide a better forage crop and will reduce soil erosion when land is converted from annual crops to a long-term perennial crop. In addition, it will provide the livestock producer with a needed supply of forage as pasture or hay. It will also provide wildlife benefits and improve water quality.

Where the practice applies

Pasture and hayland planting can be used to re-establish or renovate existing stands of perennial plants or to establish perennial plants on land being converted from other uses to pasture or hay production.

Where to get help

For assistance in selecting adapted plant species and varieties, as well as establishment techniques for planting pasture and hayland on your farm, contact the Natural Resources Conservation Service office.

Applying the practice

This practice is considered to be applied when the stand is established, prevents soil erosion, and begins supplying pasture and hay for the livestock operation.

Establishment Considerations

- Select plant species and varieties that have compatible growth characteristics, and are adapted to the soils and climate where they will be planted. Select varieties adapted to your area in Nebraska.

- Seed should be planted on a pure live seed (PLS) basis.
- Certified seed is recommended for the best results. Common seed tested in accordance with Nebraska seed law can be planted.

Recommended seeding mixture

Tract / Field # _____ Ac_____

Species/Variety	PLS lbs/ac
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Recommended seeding mixture

Tract / Field # _____ Ac_____

Species/Variety	PLS lbs/ac
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Recommended seeding mixture

Tract / Field # _____ Ac_____

Species/Variety	PLS lbs/ac
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

- Plan to complete seeding for warm and cool season grasses between November 1 and May 20. Complete late summer seeding for cool season grasses between August 10 and September 15. Under irrigation, cool season grasses and legumes can be planted from April 10 to September 30. **Check with NRCS for the best possible time to plant within these periods for your area.**
- Seedings should be protected from grazing until the stand is fully established. Weeds should be controlled by mowing at the proper height or spraying with selected herbicides.
- Apply needed fertilizer and lime based on a soil test. Lime and fertilizer are most effective when incorporated into the top 3 inches of soil. Lime should be applied 6 to 12 months ahead of seeding.
- Provide a firm smooth seedbed that is free of weeds and other vegetation. This can be done with tillage and/or labeled herbicides.
- When renovating existing pasture or hayland, begin preparation for the growing season by controlling perennial weeds with appropriate herbicides.
- For tilled seedbeds, prepare a firm seedbed. Check the seedbed prior to planting by walking across the field. If your footprint is less than a half inch deep, you have a firm seedbed. You may need to use a roller or cultipacker to get a firm seedbed.
- For no-till seeding, be sure you have a drill that will plant into an untilled soil surface.
- On fields being converted from annual crops, manage the previous crop residue to leave some surface cover for erosion control and seeding protection.
- Plant seed 1/4 to 1/2 inch deep on most soils. Plant 3/4 to 1 inch deep on sandy soils. Get uniform seed distribution and good seed to soil contact. A firm soil covering the seed reduces soil moisture loss.
- Use a grass drill with depth bands on disk openers and packer wheel. A cultipacker type seeder or a standard drill used on a firm seedbed with the grass-legume seed tubes pulled out of the down spouts can also be used.
- Inoculate legumes with the proper strain of inoculant or use preinoculated seed.
- Drilling is superior to broadcasting. If seed is broadcast, a harrow should be used to cover the seed. When seed is not covered, seeding rates need to be increased by 50 percent.
- The minimum seeding rate is 30 pure live seed per square foot for dryland pasture and hayland, and 60 pure live seed per square foot for irrigated pasture and hayland.
- When planting a mixture of bunch grass and sod grass, the mixture should not be more than 60 percent bunch grass.
- A barley or oats companion crop at 1/3 to 1/2 the normal seeding rate may be used with spring seeding to suppress weeds and reduce soil erosion. Graze or clip the companion crop when it reaches 8 to 10 inches of height or mechanically remove it in the boot stage. Do not harvest when the soil is wet.

Maintaining the practice

Established stands of pasture and hayland should be managed using the guidelines contained in the *Pasture and Hayland Management* conservation planning sheet.

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