



Converting to Pasture or Hay— Forage Seeding Mixtures

SUMMARY

- **Renovation may require destroying existing vegetation and reseeding.**
- **Interseeding and frost seeding are options.**

This bulletin is part of a series to help CRP contract holders assess the land-use options available to them when the contracts expire.

Complete renovation involves the complete destruction of the existing CRP vegetation and reseeding a more desirable mixture of forage legumes and/or grasses. Where the existing CRP grass is satisfactory, less drastic methods of improving the productivity and nutritive value can be accomplished by interseeding or frost seeding. Seed recommendations for interseeding and frost seeding are referenced in Iowa State University Extension publications *Interseeding and No Till Pasture Renovation*, Pm 1097, and *Improving Pasture by Frost Seeding*, Pm 856.

The selection of grasses and legumes is influenced by factors such as average rainfall, soil drainage, erosion hazard, soil pH level, nutrient supply, intended use(s) of the stand, and the length of stand life that fits your needs. Different varieties are available of each type of grass or legume, each having slightly different

traits. A good variety should be a top yielder, have sufficient winterhardiness for your location, and be resistant to the array of plant diseases present in your fields.

Mixtures of legumes and grasses often give the best overall performance for pasture and multi-use hay/pasture meadows. Yields tend to be greater with mixtures than with either a grass or legume alone. Mixtures of two or three well-chosen legumes or grasses are usually more desirable than mixtures that include five or six. Each selected grass and legume in the mixture should have a specific purpose.

Table 1 provides a list of the most frequently used forage seed mixtures in Iowa. It contains mixtures for specific use situations and those most appropriate for sites where soil drainage or other characteristics may limit success.

Table 1. Forage Seed Mixture Recommendations (lbs. per acre)*

Hay Crops

Moderately to well drained, limed or nonacid, fertile soils

1. Alfalfa	12-15	2. Red clover	10-12
3. Alfalfa	8-10	4. Red Clover	8-10
<i>Smooth brome</i> grass	6-8	<i>Smooth brome</i> grass	5-6
<i>Orchard</i> grass	4-6	<i>Orchard</i> grass	3-4
<i>Reed canary</i> grass	6-8	<i>Timothy</i>	2-4
<i>Timothy</i>	3-4		

Imperfectly drained, slightly acid soils

5. Alfalfa	5-6	6. Red clover	6-8
Red clover	3-4	<i>Smooth brome</i> grass	6-8
<i>Smooth brome</i> grass	6-8	<i>Orchard</i> grass	4-6
<i>Orchard</i> grass	4-6	<i>Reed canary</i> grass	6-8
<i>Reed canary</i> grass	6-8	<i>Timothy</i>	4-5
<i>Timothy</i>	3-4		

*Italics indicate forage choices to complete the mixture. For example, for mixture #3, mix alfalfa with either smooth brome-grass, orchardgrass, reed canarygrass, or timothy.

(continued on back)

Reviewed and originally prepared by Stephen K. Barnhart, ISU Extension forage agronomist, and Laura Sternweis, ISU Extension communication specialist.

Table 1. continued

Poorly drained soils			
7. Red clover	5-7	8. Alsike clover	4
Alsike clover	2	<i>Reed canarygrass</i>	6-8
<i>Smooth bromegrass</i>	6-8	<i>Timothy</i>	4-5
<i>Reed canarygrass</i>	6-8	<i>Tall fescue*</i>	6-8
<i>Timothy</i>	3-4	<i>Red top</i>	4
9. Birdsfoot trefoil	5-6		
<i>Timothy</i>	2-4	10. <i>Smooth bromegrass</i>	15-20
Droughty soils			
11. Alfalfa	8-10	*Use only endophyte fungi free or novel endophyte varieties	
<i>Smooth bromegrass</i>	6-8		
<i>Orchardgrass</i>	4-6		
<i>Tall fescue*</i>	6-8		
For Rotation and Permanent Pastures			
Moderately to well-drained soils			
12. Alfalfa	6-8	13. Alfalfa	6-8
<i>Smooth bromegrass</i>	6-8	<i>Timothy</i>	2-4
<i>Orchardgrass</i>	4-6	<i>Smooth bromegrass</i>	4-6
<i>Tall fescue*</i>	6-8	<i>Orchardgrass</i>	3-4
14. <i>Smooth Bromegrass</i>	15-20		
For 12 and 13, you can substitute 4 lbs/A red clover for 1/2 the alfalfa seeding rate, or 6-8 lbs/A red clover in place of alfalfa.			
Imperfectly drained soils			
15. Red clover	6-8	16. Ladino clover	1/2-1
Ladino clover	1/2	<i>Orchardgrass</i>	6-8
<i>Orchardgrass</i>	4	<i>Smooth bromegrass</i>	8-10
<i>Tall fescue*</i>	6-8		
17. Birdsfoot trefoil	5	18. Birdsfoot trefoil	6
<i>Smooth bromegrass</i>	6-8	Kentucky bluegrass	4-6
<i>Timothy</i>	3-4		
19. <i>Smooth bromegrass</i>	15-20	20. <i>Tall fescue*</i>	10-15
21. <i>Smooth bromegrass</i>	10	22. <i>Switchgrass</i>	5-7 PLS
<i>Orchardgrass</i>	4		
		23. <i>Big bluestem</i>	10-12 PLS
Poorly drained soils			
24. Birdsfoot trefoil	5	25. Alsike clover	2-4
<i>Smooth bromegrass</i>	6	Ladino clover	1/2
<i>Timothy</i>	3-4	<i>Reed canarygrass</i>	8
		<i>Timothy</i>	3-4
26. <i>Reed canarygrass</i>	10	<i>Tall fescue*</i>	8
27. <i>Tall fescue*</i>	10-15	28. Ladino clover	1-2
		Kentucky bluegrass	6-8
29. <i>Switchgrass</i>	5-7 PLS		
Droughty soils			
30. Alfalfa	6-8		
<i>Smooth bromegrass</i>	6-8		
<i>Orchardgrass</i>	4-6		
<i>Tall fescue*</i>	6-8		
31. <i>Smooth bromegrass</i>	15-20		
32. <i>Tall fescue*</i>	10-15		
33. <i>Crownvetch</i>	8-10		
<i>Smooth bromegrass</i>	6-8		
Pasture For Horses			
34. Alfalfa	6-8		
Kentucky bluegrass	2		
<i>Smooth bromegrass</i>	6-8		
<i>Orchardgrass</i>	4-5		
35. Ladino clover	1/2		
Kentucky bluegrass	3-5		
<i>Timothy</i>	2-4		
<i>Orchardgrass</i>	6		
<i>Smooth bromegrass</i>	6		
36. Birdsfoot trefoil	6		
<i>Timothy</i>	3-4		
Pasture For Hogs			
37. Alfalfa	8		
Ladino clover	2		
38. Forage Rape	4-6		
Oats	1-2 Bu.		
Supplemental Pasture			
39. <i>Sudangrass</i>	25-30		
40. Oats	2-3 bu		
41. Hybrid Pearl Millet	30-35		
42. Winter rye	1 1/2 bu		
43. Foxtail/German Millet	20-25		
44. Forage Rape	4-6		
Oats	1-2 Bu.		
Grassed Waterways			
45. <i>Reed canarygrass</i>	8-12		
46. <i>Tall fescue*</i>	10-15		
47. <i>Smooth bromegrass</i>	15-20		

... and justice for all

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