



United States Department of Agriculture



## Seed Mixes for Western Montana

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Looking for general seed mix suggestions? The Natural Resources Conservation Service (NRCS) in Ronan and the Lake County Conservation District (LCCD) have put together some general seed mixes which are highlighted in this document. There are seed mix suggestions for irrigated and dryland pastures as well as for wildlife and other management goals. Seeding rates shown are based on decades of research at USDA Plant Materials Centers. If you have questions, or would like a more customized mix give us a call anytime and we would be happy to provide you a mix most suited to your goals.



# General Sprinkler Irrigated Mixes

These are some general mixes for sprinkler irrigated pastures. Feel free to add or swap some of the species listed below. Diversity of species is generally recommended as long as the pasture is rotationally grazed so that livestock do not have the opportunity to selectively over-graze favored species.



Birdsfoot trefoil

## Basic Sprinkler Irrigated Mix:

For a basic, inexpensive sprinkler irrigated pasture this mix is hard to beat. This mix is productive and palatable.

Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Needed in Mixture	Notes
Orchardgrass (potomac)	3	40%	1.20	
Meadow brome	10	35%	3.50	
Red clover (medium)	5	15%	0.75	Inoculate
Birdsfoot trefoil	5	10%	0.50	Inoculate
TOTAL		100%	5.95	



Cicer milkvetch

## Diverse Sprinkler-Irrigated Mix:

Diversity of forage can benefit production and livestock performance. This mix includes three high producing irrigated grasses and a great mixture of legumes including two non-bloating varieties (cicer milkvetch and birdsfoot trefoil).



Diverse pasture mix

Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Needed in Mixture	Notes
Orchardgrass (potomac)	3	25%	0.75	
Meadow brome	10	20%	2.00	
Tall fescue (endophyte free)	6	15%	0.90	
Perennial ryegrass	6	10%	0.60	
Red clover (medium)	5	10%	0.50	Inoculate
Alsike clover	4	5%	0.20	Inoculate
Cicer milkvetch	8	5%	0.40	Inoculate
Birdsfoot trefoil	5	10%	0.50	Inoculate
TOTAL		100%	5.85	

## Flood Irrigated or Wet Meadow Mix:

For flood irrigated pastures or pastures with high water tables these species all compete and produce well. This mix is an inexpensive option to provide quality forage production.

Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Needed in Mixture	Notes
Tall fescue (endophyte free)	6	35%	2.10	
Garrison creeping foxtail	10	20%	2.00	
Timothy	2	15%	0.30	
Red clover (medium)	5	10%	0.50	Inoculate
Alsike clover	4	10%	0.40	Inoculate
Birdsfoot trefoil	5	10%	0.50	Inoculate
TOTAL		100%	5.8	



Garrison creeping foxtail

# Dryland Pasture Mixes: Hard Use Areas

Dryland pasture mixes can be highly site-specific depending on management goals, soils, and precipitation. Contact us for a site-specific mix to meet your goals. Generally, in Lake County, we encounter several types of dryland pastures:

1. Heavy spring use pastures (such as calving pastures) and/or pastures that take a lot of grazing abuse throughout the season.
2. Dryland pastures that are managed to optimize production for grazing and hay production.

For heavy use pastures and those that need to “take some abuse” such as early spring use and overall heavier grazing pressure we usually recommend seeding plant species that are more aggressive, easier to establish and form a more stable sod. These are crested wheatgrass and smooth brome. For the most part these species do not produce maximum potential site yields nor have a lot of forage quality but can withstand heavier grazing pressure.



## Dryland Pasture Mix - Hard Use Area (Calving Pasture/Spring Use Area): Option 1

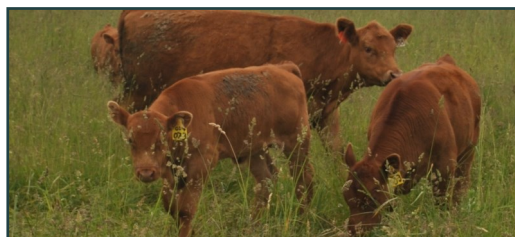
In drier areas ( $\leq 14''$  precipitation) crested wheatgrass is a good choice for plantings that need to take some abuse. Crested can survive heavier grazing pressure and spring/early summer use while also stabilizing soils. Expect reasonable amounts of productivity (1,500 lbs. to 2,500 lbs. /acre), but the downside is that crested wheatgrass forage quality is lower than other options and its value to wildlife is also relative poor. Crested provides poor fall grazing. The take home is that crested wheatgrass is easier to establish and persistent and forms a stable sod which is more resistant to hoof traffic and heavy grazing than other grass species, but lacks top end production and palatability potentials.

Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Needed in Mixture	Notes
Crested wheatgrass	5	75%	3.75	
Alfalfa	5	25%	1.25	Inoculate
TOTAL		100%	5	



## Dryland Pasture Mix - Hard Use Area (Calving Pasture/Spring Use Area): Option 2

Like crested, smooth brome can take some abuse. It shines for durability and ease of establishment but has poor re-growth characteristics, lower yields and reduced forage quality as compared to other options. Smooth brome also is generally less valued for wildlife plantings. Smooth brome provides poor fall grazing. Productivity is similar to that of crested wheatgrass (1,500 to 2,500 lbs. /acre) but smooth brome does better in slightly higher precipitation zones (14" to 16").



Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Needed in Mixture	Notes
Smooth brome	8	75%	6.00	
Alfalfa	5	25%	1.25	Inoculate
TOTAL		100%	7.25	



# Dryland Pasture Mixes: Wildlife Friendly

For pastures that are rotationally grazed and not 'over-grazed', species that are higher producing, more palatable but are less able to withstand heavy abuse are recommend. These species include pubescent wheatgrass, intermediate wheatgrass, thickspike wheatgrass, wildryes, tall wheatgrass and native species along with legumes such as alfalfa and the non-bloating cicer milkvetch.

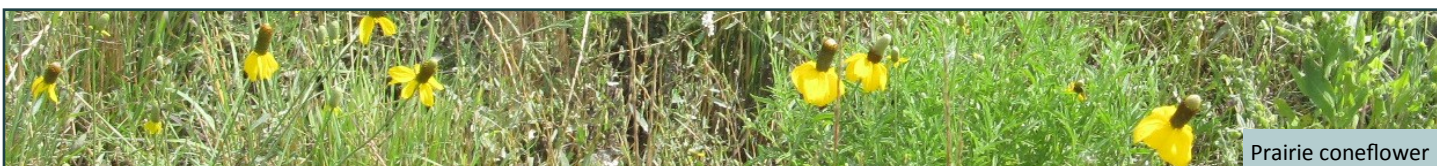
## Dryland Pasture Mix - Grazing and Hayland High Producer:

This mix features two highly productive and palatable wheatgrasses. Under optimal management and site conditions one should be able to produce yields of approximately 2,000 to 4,000 lbs./ac. Tips: Defer grazing until mid-July and do not overgraze, leave 4" to 6" of stubble height at all times. Makes good fall pasture and can be hayed every other year while still maintaining productivity.



Pubescent wheatgrass pasture

Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Needed in Mixture	Notes
Pubescent wheatgrass	10	35%	3.50	
Intermediate wheatgrass	10	30%	3.50	
Cicer milkvetch	8	15%	1.20	Inoculate
Alfalfa	5	15%	0.75	Inoculate
<b>TOTAL</b>		<b>100%</b>	<b>8.95</b>	

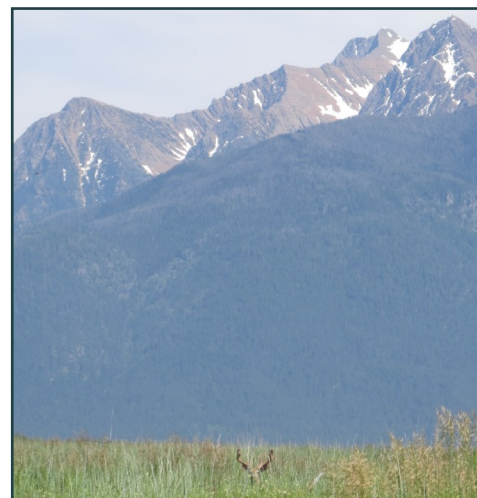


Prairie coneflower

## Dryland Pasture Mix - Grazing with High Diversity:

This mix can maximize production, palatability, diversity and provide some additional wildlife habitat! This mix features well-producing and palatable pubescent and intermediate wheatgrasses as well as basin wildrye. Legumes including alfalfa and the non-bloating cicer milkvetch add diversity, productivity and nitrogen-fixing benefits. Several flowering forb species that have done very well in our area are included as well. Small burnet is an exciting plant that has shown great promise in its palatability and ease of establishment. Both blue flax and prairie coneflower are the easiest to establish and most persistent wildflowers in local field trials. Adding these species to a mix only costs a small amount of money per acre but can provide some additional grazing diversity and wildlife habitat. In addition, the forb chicory is also an option (add .1 to .25 lbs./acre). Chicory is palatable, but can be a bit aggressive and some view it as a 'weedy' species so tread with caution but chicory does offer some worthwhile benefits. This mix should produce more than either smooth brome or crested wheatgrass in our area and is of higher palatability. The downside of this mix is that it does not tolerate over-grazing or repeated early spring grazing. 4" to 6" of residue should always be maintained.

Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Need- ed in Mixture	Notes
Pubescent wheatgrass	10	30%	3.00	
Intermediate wheatgrass	10	25%	2.50	
Tall wheatgrass	10	10%	1.00	
Basin wildrye	6	10%	0.60	
Alfalfa (dryland variety)	5	10%	0.50	Inoculate
Cicer milkvetch	8	10%	0.80	Inoculate
Small burnet	15	5%	0.75	
Blue flax	3	5%	0.15	
Prairie coneflower	2	5%	0.10	
<b>TOTAL</b>		<b>110%</b>	<b>9.4</b>	



# Legume Interseedings: Wildlife Friendly

Legumes add nitrogen to pastures to increase fertility and grass production. They also add grazing diversity and increased season-long forage production. Clovers and alfalfa are 'bloating' legumes, but in a mix the risk of bloat is greatly minimized. Clovers readily establish and are inexpensive. Birdsfoot trefoil and cicer milkvetch are non-bloating legumes and both have shown up well in local field trials. We continue to research legume inter-seeding in our local area, call for more info.



Blue flax

## Legume Interseeding (Irrigated Pastures):

The Lake County legume inter-seeding field trials have been largely successful. Legumes have been established in existing irrigated pastures through both no-till drill and broadcast seeding. Our trials are ongoing, but birdsfoot trefoil and cicer milkvetch have both shown well. If you already have clovers or are extremely fearful of bloat, try adding just the non-bloating legumes. Our 'Legume Inter-seeding' publication (available on-line or at our office) outlines all of the legumes used in our studies as well as methods and results. These legumes are also great for wildlife and pollinators.

Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Needed in Mixture	Notes
Red clover	5	20%	1.00	Inoculate
Alsike clover	4	19%	0.75	Inoculate
Ladino white clover	4	13%	0.50	Inoculate
Cicer milkvetch	8	13%	1.00	Inoculate
Alfalfa	5	15%	0.75	Inoculate
Birdsfoot trefoil	5	20%	1.00	Inoculate
TOTAL		100%	5.00	



## Dryland Pasture Forb and Legume Interseeding:

Interseeding into existing dryland pastures is no easy task! Existing competition can make establishment very difficult. This mix includes species that have provided the best results in the Lake County field trials. All of these species are palatable to livestock and very wildlife-friendly. Creating some disturbance in the existing pasture before seeding (heavy fall and/or spring grazing, winter feeding or heavy harrowing) is recommend. Fall-seeding in late October thru early December will likely yield better results for this mix. Be realistic with expectations for success and results may vary greatly.



Maximilian Sunflower

Plant Species	LBS/Acre (pure stand)	Percent of Mixture	LBS/Acre Needed in Mixture	Notes
Alfalfa	5	20%	1	Inoculate
Prairie coneflower	1.2	15%	0.18	
Yarrow	0.5	10%	0.05	
Lewis flax	3	15%	0.45	
Small burnet	20	20%	4	
Chicory	2	5%	0.1	
Maximilian sunflower	1	10%	0.1	
Cicer milkvetch	7	25%	1.75	Inoculate
TOTAL		120%	7.63	



**Notes**

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Lake County  
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District