

Table 3-I. Recommended Seeding Rates for Forages in Montana.

Forage Species	Irrigated or > 18-inch Precipitation								Dryland or < 18-inch Precipitation							
	6-inch rows		12-inch rows		24-inch rows		36-inch rows		6-inch rows		12-inch rows		24-inch rows		36-inch rows	
	Seeding Rate	Seeds per linear foot	Seeding Rate	Seeds per linear foot	Seeding Rate	Seeds per linear foot	Seeding Rate	Seeds per linear foot	Seeding Rate	Seeds per linear foot	Seeding Rate	Seeds per linear foot	Seeding Rate	Seeds per linear foot	Seeding Rate	Seeds per linear foot
	(lb/A)	foot of row	(lb/A)	foot of row	(lb/A)	foot of row	(lb/A)	foot of row	(lb/A)	foot of row	(lb/A)	foot of row	(lb/A)	foot of row	(lb/A)	foot of row
GRASSES																
Big bluegrass	-	-	-	-	-	-	-	-	3	32	3	63	1.5	63	1	63
Kentucky bluegrass	3	58	3	117	1.5	117	1	117	-	-	-	-	-	-	-	-
Little bluestem	-	-	-	-	-	-	-	-	4	12	4	24	2	24	1	24
Sand bluestem	10	15	10	29	5	29	3	29	7	10	7	20	3.5	20	2	20
Meadow bromegrass	10	11	10	21	5	21	3	21	7	8	7	15	3.5	15	2	15
Mountain bromegrass	14	15	14	29	7	29	5	29	10	11	10	21	5	21	3	21
Smooth bromegrass	7	10	7	20	3.5	20	2	20	5	7	5	14	2.5	14	2	14
Reed canarygrass	4	23	4	46	2	46	1	46	-	-	-	-	-	-	-	-
Hard fescue	-	-	-	-	-	-	-	-	3	20	3	39	1.5	39	1	39
Idaho fescue	-	-	-	-	-	-	-	-	3	17	3	34	1.5	34	1	34
Rough fescue	-	-	-	-	-	-	-	-	5	12	5	23	2.5	23	2	23
Tall fescue	6	16	6	32	3	32	2	32	5	13	5	26	2.5	26	2	26
Creeping foxtail	3	26	3	52	1.5	52	1	52	-	-	-	-	-	-	-	-
Meadow foxtail	4	42	4	83	2	83	1	83	-	-	-	-	-	-	-	-
Blue grama	-	-	-	-	-	-	-	-	3	29	3	57	1.5	57	1	57
Needle and thread	-	-	-	-	-	-	-	-	7	9	7	18	3.5	18	2	18
Green needlegrass	8	13	8	26	4	26	3	26	6	10	6	19	3	19	2	19
Orchardgrass	4	23	4	45	2	45	1	45	3	12	3	24	1.5	34	1	34
Indian ricegrass	-	-	-	-	-	-	-	-	6	11	6	21	3	21	2	21
Alkali sacaton	3	61	3	121	1.5	121	1	121	2	40	2	80	1	80	0.7	80
Inland saltgrass	-	-	-	-	-	-	-	-	3	17	3	34	1.5	34	1	34
Prairie sandreed	-	-	-	-	-	-	-	-	4	13	4	25	2	25	1	25
Timothy	4	57	4	113	2	113	1	113	3	43	3	85	1.5	85	1	85
Beardless wheatgrass	-	-	-	-	-	-	-	-	6	10	6	19	3	19	2	19
Bluebunch wheatgrass	-	-	-	-	-	-	-	-	7	12	7	23	3.5	22	2	22
Crested wheatgrass, fairway	-	-	-	-	-	-	-	-	4	9	4	18	2	18	1	18
Crested wheatgrass, standard	-	-	-	-	-	-	-	-	5	11	5	22	2.5	22	2	22
Intermediate wheatgrass	9	11	9	21	4.5	21	3	21	7	8	7	16	3.5	16	2	16
Pubescent wheatgrass	9	10	9	19	4.5	19	3	19	7	8	7	15	3.5	15	2	15
Siberian wheatgrass	-	-	-	-	-	-	-	-	6	12	6	23	3	23	2	23
Slender wheatgrass	-	-	-	-	-	-	-	-	6	10	6	19	3	19	2	19
Streambank wheatgrass	-	-	-	-	-	-	-	-	5	10	5	20	2.5	20	2	20
Tall wheatgrass	13	12	13	24	6.5	24	4	24	10	9	10	18	5	18	3	18
Thickspike wheatgrass	-	-	-	-	-	-	-	-	5	9	5	18	2.5	18	2	18
Western wheatgrass	8	10	8	20	4	20	3	20	6	8	6	15	3	15	2	15
Altai wildrye	-	-	-	-	-	-	-	-	12	11	12	22	6	22	4	22
Basin wildrye	-	-	-	-	-	-	-	-	6	10	6	20	3	20	2	20
Beardless wildrye	6	12	6	24	3	24	2	24	5	10	5	20	2.5	20	1.7	20
Russian wildrye	-	-	-	-	-	-	-	-	6	12	6	23	3	23	2	23
LEGUMES																
Alfalfa	6	14	6	28	3	28	2	28	5	12	5	23	2.5	23	2	23
Alsike clover	4	32	4	64	2	64	1	64	-	-	-	-	-	-	-	-
Ladino or white clover	3	28	3	55	1.5	55	1	55	-	-	-	-	-	-	-	-
Red clover	6	19	6	38	3	38	2	38	-	-	-	-	-	-	-	-
White Dutch clover	3	28	3	55	1.5	55	1	55	-	-	-	-	-	-	-	-
Cicer milkvetch	8	14	8	27	4	27	3	27	7	12	7	23	3.5	23	2.3	23
Sainfoin	45	16	45	31	22.5	31	15	31	34	12	34	23	17	23	11	23
Sweetclover, yellow or white	6	18	6	36	3	36	2	36	4	12	4	24	2	24	1	24
Birdsfoot trefoil	5	27	5	54	2.5	54	2	54	-	-	-	-	-	-	-	-

From Montana Interagency Plant Materials Handbook, EB69 <http://www.animalrangeextension.montana.edu/articles/forage/Chtp3/3-TOC.htm>

How to use this chart: 1) these are recommended seeding rates for Pure Live Seed per acre, 2) run drill at desired speed on hard surface, 3) count seed in several replicate square feet or lineal feet to assure proper planting rates in table above (for broadcast seedings, the 12-inch rates are equivalent to seeds per square feet).

Example: for big bluegrass on dryland, a successful seeding will deliver about 32 seeds (PLS) per linear foot of row on 6-inch rows, or 63 seeds per linear foot of row on 12-inch rows.

For mixed stands ("seed mix"), plant equal **seed numbers** (not pounds) per square foot.

* Includes subirrigated, waterspreading systems and land with limited irrigation water

Table 3-1a. Recommended Seeding Rates for Forages in Montana.

Forage Species	Irrigated or > 18-inch Precipitation							
	6-inch rows		12-inch rows		24-inch rows		36-inch rows	
	Seeding	Seeds	Seeding	Seeds	Seeding	Seeds	Seeding	Seeds
	Rate (lb/A)	per linear foot of row	Rate (lb/A)	per linear foot of row	Rate (lb/A)	per linear foot of row	Rate (lb/A)	per linear foot of row
GRASSES								
Kentucky bluegrass	3	58	3	117	1.5	117	1	117
Sand bluestem	10	15	10	29	5	29	3	29
Meadow bromegrass	10	11	10	21	5	21	3	21
Mountain bromegrass	14	15	14	29	7	29	5	29
Smooth bromegrass	7	10	7	20	3.5	20	2	20
Reed canarygrass	4	23	4	46	2	46	1	46
Tall fescue	6	16	6	32	3	32	2	32
Creeping foxtail	3	26	3	52	1.5	52	1	52
Meadow foxtail	4	42	4	83	2	83	1	83
Green needlegrass	8	13	8	26	4	26	3	26
Orchardgrass	4	23	4	45	2	45	1	45
Alkali sacaton	3	61	3	121	1.5	121	1	121
Timothy	4	57	4	113	2	113	1	113
Intermediate wheatgrass	9	11	9	21	4.5	21	3	21
Pubescent wheatgrass	9	10	9	19	4.5	19	3	19
Tall wheatgrass	13	12	13	24	6.5	24	4	24
Western wheatgrass	8	10	8	20	4	20	3	20
Beardless wildrye	6	12	6	24	3	24	2	24
LEGUMES								
Alfalfa	6	14	6	28	3	28	2	28
Alsike clover	4	32	4	64	2	64	1	64
Ladino or white clover	3	28	3	55	1.5	55	1	55
Red clover	6	19	6	38	3	38	2	38
White Dutch clover	3	28	3	55	1.5	55	1	55
Cicer milkvetch	8	14	8	27	4	27	3	27
Sainfoin	45	16	45	31	22.5	31	15	31
Sweetclover , yellow or white	6	18	6	36	3	36	2	36
Birdsfoot trefoil	5	27	5	54	2.5	54	2	54

From *Montana Interagency Plant Materials Handbook*, EB69

<http://www.animalrangeextension.montana.edu/articles/forage/Chpt3/3-TOC.htm>

How to use this chart: 1) these are recommended seeding rates for Pure Live Seed per acre, 2) run drill at desired speed on hard surface, 3) count seeds in several replicate square or linear feet to assure proper planting rates in table above (for broadcast seedings, the 12-inch rates are equivalent to seeds per square foot).

Example: for meadow bromegrass in an irrigated pasture, a successful seeding will deliver about 11 seeds (PLS) per linear foot of row on 6-inch rows, or 21 seeds per linear foot of row on 12-inch rows. For mixed stands ("seed mix"), plant equal **seed numbers** (not pounds) per square foot.

* Includes subirrigated, waterspreading systems and land with limited irrigation water.

Table 3-lb. Recommended Seeding Rates for Forages in Montana.

Forage Species	Dryland or < 18-inch Precipitation							
	6-inch rows		12-inch rows		24-inch rows		36-inch rows	
	Seeding	Seeds	Seeding	Seeds	Seeding	Seeds	Seeding	Seeds
	Rate (lb/A)	per linear foot of row	Rate (lb/A)	per linear foot of row	Rate (lb/A)	per linear foot of row	Rate (lb/A)	per linear foot of row
GRASSES								
Big bluegrass	3	32	3	63	1.5	63	1	63
Little bluestem	4	12	4	24	2	24	1	24
Sand bluestem	7	10	7	20	3.5	20	2	20
Meadow bromegrass	7	8	7	15	3.5	15	2	15
Mountain bromegrass	10	11	10	21	5	21	3	21
Smooth bromegrass	5	7	5	14	2.5	14	2	14
Hard fescue	3	20	3	39	1.5	39	1	39
Idaho fescue	3	17	3	34	1.5	34	1	34
Rough fescue	5	12	5	23	2.5	23	2	23
Tall fescue	5	13	5	26	2.5	26	2	26
Blue grama	3	29	3	57	1.5	57	1	57
Needle and thread	7	9	7	18	3.5	18	2	18
Green needlegrass	6	10	6	19	3	19	2	19
Orchardgrass	3	12	3	24	1.5	34	1	34
Indian ricegrass	6	11	6	21	3	21	2	21
Alkali sacaton	2	40	2	80	1	80	0.7	80
Inland saltgrass	3	17	3	34	1.5	34	1	34
Prairie sandreed	4	13	4	25	2	25	1	25
Timothy	3	43	3	85	1.5	85	1	85
Beardless wheatgrass	6	10	6	19	3	19	2	19
Bluebunch wheatgrass	7	12	7	23	3.5	22	2	22
Crested wheatgrass, fairway	4	9	4	18	2	18	1	18
Crested wheatgrass, standard	5	11	5	22	2.5	22	2	22
Intermediate wheatgrass	7	8	7	16	3.5	16	2	16
Pubescent wheatgrass	7	8	7	15	3.5	15	2	15
Siberian wheatgrass	6	12	6	23	3	23	2	23
Slender wheatgrass	6	10	6	19	3	19	2	19
Streambank wheatgrass	5	10	5	20	2.5	20	2	20
Tall wheatgrass	10	9	10	18	5	18	3	18
Thickspike wheatgrass	5	9	5	18	2.5	18	2	18
Western wheatgrass	6	8	6	15	3	15	2	15
Altai wildrye	12	11	12	22	6	22	4	22
Basin wildrye	6	10	6	20	3	20	2	20
Beardless wildrye	5	10	5	20	2.5	20	1.7	20
Russian wildrye	6	12	6	23	3	23	2	23
LEGUMES								
Alfalfa	5	12	5	23	2.5	23	2	23
Cicer milkvetch	7	12	7	23	3.5	23	2.3	23
Sainfoin	34	12	34	23	17	23	11	23
Sweetclover, yellow or white	4	12	4	24	2	24	1	24

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Example: for big bluegrass on dryland, a successful seeding will deliver about 32 seeds (PLS) per linear foot of row on 6-inch rows, or 63 seeds per linear foot of row on 12-inch rows.

For mixed stands ("seed mix"), plant equal **seed numbers** (not pounds) per square foot.