Seeding Success:

The following items are important to the success of your seeding:

1. Type of herbicide applications used and their residual effects on grass and forb species.
2. Proper seedbed preparation.
3. Timing of seeding.
4. Correct seed placement (seed depth with seed-soil contact).
5. Seeding operation which matches seed mixture and seedbed conditions.
6. An adapted seed mixture
7. Adequate post-planting weed control.

Seedbed Preparation:

The ideal seedbed for a low-precipitation grass seeding has lots of "safe sites" for the seed to fall into. Seedbeds for dormant seedings may be loose, but seedbeds for spring seedings must be firm. Weeds will be controlled by using herbicides as per label instructions. **No weeds should make seed**.

Time of Seeding:

Dormant Fall Seeding if Drilled: November 1 – February 15
Dormant Fall Seeding if Broadcast: November 1 – December 31
Note: broadcast seeding includes broadcast spreaders on ATVs or other rough terrain access vehicles, pulling the tubes to dribble the seed from grain drills and aerial application. Seeding should occur after the soil temperature 2 inches below the surface has remained at or cooler than 40° F.

Seeding Operation:

The goal of the seeding operation is uniform seed dispersal and proper seed placement to ensure seed-soil contact. It is critical to match the seeding operation to the seedbed conditions and the seed mixture. Check seedbed conditions at seeding time. Verify seed placement at the beginning of the seeding operation. Adjust as necessary during the seeding operation when the seedbed conditions change.

Broadcast seeding (aerial or Broadcast seeder on ATV or other vehicle) or use of a rangeland drill are likely the best options for seeding. Depends on amount of surface rock.

Request Certified Seed. This will ensure there is no weed seed in the mix. The addition of a forb or legume may be advised though this may limit options for noxious weed control.

Post-Seeding Stand Establishment. The seeded treatment area should be rested one complete year and deferred the second year until seed-shatter of the seeded bunch grasses. This is generally about the middle of July for North Central Washington in the shrub-steppe zone.

Basic Native Species Mix:

Cover Type	Species Selected	Seeding Rate (lbs/ac PLS)
Grass Species	Snake River wheatgrass (Secar or Discovery varieties). If these are not available than look for Whitmar variety. It does well on courser soils and is very drought tolerant.	3.0
	Thickspike wheatgrass (Schwendimar or Bannock varieties)	2.0
	Bluebunch wheatgrass (Anatone variety)	1.0
	Idaho fescue (Nezpurs, Winchester, or Joseph varieties)	1.0
	Big bluegrass (Sherman variety)	0.5
	Sandberg bluegrass (locally sourced within 200 miles north to south, 500 miles to the east, and elevations below 3,000 feet)	0.5
	TOTAL NON-SHRUB NON-FORB SEEDING RATE	**8.0 BUT 16 WHEN BROADCAST**
Forb/Legume Species (Optional)	Blue flax	0.5
	Ladak alfalfa	1.0
	TOTAL NON-SHRUB SEEDING RATE (95% of Treated Acres)	**9.5**
Grass Species (Wet Areas)	**Basin wildrye (Magnar variety) Seed in wet areas as needed. Replace 1 lbs each of Snake River Wheatgrass and Thickspike Wheatgrass and substitute Basin Wildrye.**	**2.0**

Introduced Grass Seeding Mix*:

Cover Type	Species Selected	Seeding Rate (lbs/ac PLS)
Grass Species	Crested/Siberian wheatgrass (Nordan, CD II, Vavilov I or II, or Hycrest varieties)	5.0
	Tall wheatgrass (Jose, Largo, or Alkar varieties)	3.0
	Sheep fescue (Covar variety)	0.5
	Sandberg bluegrass (locally sourced within 200 miles north to south, 500 miles to the east, and elevations below 3,000 feet)	0.5
	TOTAL SEEDING RATE	**9.0**
Grass Species (Wet Areas)	**Basin wildrye (Magnar variety) Seed in wet areas as needed. Replace 1 lbs Tall Wheatgrass and add 2 lbs Basin Wildrye for total of 10.0 pounds/acre/PLS.**	**2.0**

*** If seeding in areas that may also have good stands of native grass species and it will be grazed together you will end up with a palatability difference between the native and the introduced species and the livestock will select for this.**

Post-Plant Weed Control:

1. All noxious weeds will be controlled.
2. All troublesome weeds which threaten the stand will be controlled.
3. Herbicides may be used on grass-only mixtures. Use on stands where weed competition is threatening the desirable perennial plant species. Herbicides must be applied in accordance with the label directions. Follow the label directions and heed all precautions listed on the label. Check state and local regulations and consult your Cooperative Extension Service county agent or local pesticide dealer representative to be sure your intended use is still registered. Participants may be required to replant, without cost-share, any desirable species that are destroyed.
4. Consider spot spraying to minimize the risks.
5. Timely and effective weed control is required critical to ensure a successful establishment of desirable species.

INFORMATION ON DIFFERENT TYPES OF SEEDING OPERATIONS

Broadcast Spreaders

Broadcast spreaders are one of the best methods of uniform seed dispersal with diverse seed mixtures. This type of seeding operation requires a clean and furrowed or ridged seedbed. With loose seedbeds, create furrows or ridges before broadcasting. **Do not broadcast on a firm, flat seedbed. Broadcast seeding is not applicable on seedbeds with high residue.**

Broadcast spreaders should be used only for seeding in November or December. Seedings in February or later should be accomplished with a different seeding method.

Aerial broadcasting often results in skips and seed separation due to different seed sizes and weight. **With aerial broadcasting the seeding rate must be doubled.**

GRAZING:

USDA-NRCS recommends that any new seedings have two full growing seasons without any grazing to allow establishment of the grass plants. If they are grazed when to young they can be pulled out easily by grazing livestock plus it reduces the plants ability to develop a healthy root system that promotes a healthy and vigorous plant. A healthy and vigorous stand of desired perennial grasses helps greatly to reduce the potential for invasion by undesirable and noxious weeds.

The first grazing could occur anytime after July 15th of the second growing season after seeding has occurred. Proper grazing (take half, leave half) of the desirable bunch grass plants should be managed for to allow the stand to maintain its health and vigor.