

Establishing Native Shrubs
Loren St. John, Aberdeen PMC Team Leader

In the last several months the Plant Materials Center and Plant Materials Specialist have been receiving inquiries about establishing native shrubs, particularly in regards to the Conservation Reserve Program. Here are some pointers to keep in mind when planning a seeding that will include native shrubs in the Intermountain West.

Establishment of native shrubs by direct seeding in the Intermountain West is difficult. Proven methods of establishment are not well known, seed availability is limited, and extreme environmental conditions can limit the success of establishment. Seedbed preparation is critical to the establishment of shrubs and other species in a mix. Seedbeds should be free of competition and firm. Shrub seedlings do not compete well with established grasses or weeds. A firm seedbed is critical to obtain good seed-to-soil contact and to maintain soil moisture during germination and initial establishment. If shrubs are seeded into existing stands, it is recommended that strips of land where the shrubs are to be planted be prepared to remove all existing vegetation. In new plantings, establishing shrubs may also need to be protected from browsing by animals.

The most common shrubs which might be considered in the Intermountain West include Winterfat, Fourwing saltbush, Forage kochia, Bitterbrush, and Sagebrush species.

Winterfat seeds require 2 to 3 months for after ripening for optimum germination and germination rates can rapidly drop during storage. Seed should be used within 2 years of harvest and have a current seed test. Seed should be sown during cool weather, as high soil temperatures are detrimental to seedling establishment. The best success in establishing winterfat is to broadcast the seed onto the soil surface and press the seed into the soil. Dormant fall seedings are most successful and seedling emergence is fairly rapid.

Fourwing saltbush is fairly easy to establish by direct seeding and often is included in a seed mix with grasses. Fourwing saltbush should be seeded to a depth of 0.25 - 0.50 inch and dormant fall to early spring seedings appear to be the most satisfactory.

The major problem with Forage kochia is its inability to maintain seed viability after harvest. It is highly recommended that seed has afterripened for up to 1 month after harvest and that a current germination test be done to ensure that viable seed is being used. From experience, it appears that seed over 1 year old may be too old. The best success in establishing stands is broadcasting seed onto the soil surface and lightly pressing the seed into surface. Dormant fall through early spring seedings are most successful.

Bitterbrush seeds are largely dormant and require prechilling before they will germinate. Artificial seeding of bitterbrush often results in rodents collecting and caching the seeds. The best method for establishing bitterbrush is by transplanting containerized seedlings or dormant fall seeding with seed that is two to three years old at a depth of 0.25 to 0.5 inch.

Sagebrush species were long considered plants that are easily regenerated but research has shown that they are not easy species to establish by direct seeding. The very small seeds are adapted for germination on or very near the surface and there may be an afterripening requirement. The best success in establishing stands is broadcasting seed on snow or on the soil surface and lightly pressing the seed into surface or dragging a chain to provide a light soil cover when possible.

Consult Idaho/Utah Plant Materials Technical Note #24, "Improved Grass, Forb, Legume, and Woody Species for the Intermountain West" and the "Plant Guide Handbook" which provides detailed information on plant characteristics, adaptation, and seeding recommendations. Don't hesitate to call us at the PMC or Dan Ogle in the Boise State Office if you can't find the answers you are looking for!

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