

New Approaches and Equipment for Establishing Diverse Species on Western Rangelands

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The rehabilitation of western United States rangelands since the 1950's has largely been accomplished with the use of the rangeland drill. This drill was developed by a precursor to the Rangeland Technology and Equipment Council, the Reseeding Equipment Development Committee, in 1952. This standard rangeland drill worked very well on western rangelands, especially when introduced perennial grasses comprised the majority of the seed mixture. More recently the emphasis has shifted to using native species in rehabilitation and restoration projects necessitating the development of new seeding strategies and equipment to successfully sow hard to plant native seeds. New rangeland drills have been developed that distribute "trashy" seed, place seed at the proper depth in the seed bed, and provide better soil to seed contact than the rangeland drill. Small native shrub seeds are also broadcast aerially in the winter with variable results. Surface broadcast seeders with soil compaction capabilities offer another option to successfully establish small seeded native shrubs. Native forb seeds provide another distribution challenge for range reseeding equipment since seedbed and germination ecology of these species is largely unknown. Seeding equipment development or modifications may be necessary dependent on the results of these forb studies. The challenges in developing seeding equipment and strategies to establish diverse plant communities are many. However, the partnerships of agencies, private industry, and academia under the RTEC umbrella have met these challenges in the past and are expected to do the same in the future.