

Wildland Collection of Native Seed for Agronomic Production: How Much Is Enough?

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There is an ever-increasing demand for a reliable supply of quality native seed as land managers face the challenge of revegetating vast tracts of disturbed lands. One option for increasing the diversity of available native seed is the development of a wildland seed collection program. The process begins with identifying and selecting appropriate species, locating productive stands of target species, conducting wildland seed harvest, and planting under agronomic conditions for the purpose of initial seed increase. The success of native seed collection is influenced by variation within and between species, seasonal climatic and environmental conditions, stand density, seed phenology and size, and experience of the collectors. Grasses are among the easiest to hand-harvest and repeated wildland collection in two National Parks of more than 20 species indicates that mountain brome consistently yielded the greatest amount and averaged 454 grams (1.0 lb) clean seed per person-hour of collection. Assuming standards of seed quality and typical planting techniques, approximately 21 hours of collecting is necessary to establish a 1-ha increase field of mountain brome. Initial increase should be done under cultivated conditions to insure seed viability and quality for subsequent large-scale production by the commercial seed industry. Native perennial species rarely produce a seed crop the establishment year, so a minimum of 2-3 years lead-time must be factored in to achieve production goals. It is most economical to focus collection efforts on species with wide geographic amplitude, good seedling vigor and establishment characteristics, and ones that produce seed that is easy to harvest and condition.