

Abstract: Post-fire seeding has been widely implemented in the Great Basin in response to the threat of resource degradation and weed invasion following fire disturbance. The longstanding practice of seeding non-native forage grasses has worked well for some purposes, but seeding native species is a more sensible choice if natural vegetation recovery is a long-term objective. Seeding natives raises questions of cost, establishment ability and whether native species will be as effective as non-natives in outcompeting invasive annuals. We consider these issues in the context of a study where outcomes of native and non-native seed mixes were compared during an 18-year timeframe following wildfire. Successional trajectories of seeded treatments were compared with unseeded controls and late-successional reference communities to assess restoration potential of treatment options.

Websites: USDA Forest Service Grassland, Shrubland and Desert Ecosystems Program

USDA Forest Service Great Basin Native Plant Project



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Francis Kilkenny is a research biologist with the USDA Forest Service Rocky Mountain Research Station in Boise, Idaho, with the Grassland, Shrubland and Desert Ecosystems Program and is the technical lead of the Great Basin Native Plant Project. His research focuses on developing seed transfer guidelines and modeling climate change impacts for important restoration plant species. He also studies the long-term ecological impacts of plant species used in post-fire rehabilitation seedings and fuel-breaks, develops agronomic practices for native plant seed production and synthesizes knowledge on the ecological and evolutionary processes involved in species invasions.



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Jeff Ott is a research biologist with the USDA Forest Service Rocky Mountain Research Station in Boise, Idaho, where he is part of the Grassland, Shrubland and Desert Ecosystems Program and the Great Basin Native Plant Project. Jeff has been involved with a variety of research projects dealing with vegetation ecology and ecological restoration in the Interior West and beyond. His current research focuses on seeding techniques, seed mixes and long-term effects of post-fire seeding in the Great Basin. He is also investigating landscape fuel treatments and adaptive genetics of native grasses.



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