

Control of individual saltcedar plants with herbicides

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Abstract:

Field experiments were conducted in northern Wyoming in 2002 through 2004 to determine the best herbicide treatments for killing individual plants of saltcedar (Tamarisk). Herbicides were applied as foliar summer sprays or as dormant-season, basal-bark treatments to individual plants of saltcedar. Nontreated controls were included in all experiments and all treatments were replicated on six plants. Foliar sprays were applied to small saltcedar plants (3 to 4 feet tall with 3 to 6 stems) on July 29, 2002 using a hand-held, backpack sprayer equipped with a single cone-jet nozzle and operated at 25 psi. Sprays were applied to wet plants thoroughly. A power sprayer equipped with a handgun nozzle and operated at 50 psi was used to apply herbicides to individual, large saltcedar plants (6 to 8 feet tall with 10 to 20 stems) on August 15, 2002. Sprays were applied to wet plants thoroughly. A handheld, backpack sprayer equipped with a single cone-jet nozzle adjusted to apply a thin stream of liquid and operated at 25 psi was used to apply dormant-season, basal-bark treatments on either November 4, 2002 or on April 8, 2003. Bark oil was used as a carrier solution for all basal-bark treatments. Saltcedar plants were 6 to 8 feet tall and had 10 to 20 stems. Sprays were applied to wet the lower 1-foot of the plant and the entire circumference of all stems. One year after application, Vista™ (fluroxypyr) applied at 2% v/v with ½% methylated seed oil (MSO), Pasturegard™ (triclopyr + fluroxypyr) at 5% v/v with ½% MSO and Arsenal™ (imazapyr) at 1.5% v/v plus 1% MSO had killed 100% of the small saltcedar plants. Pasturegard at 2% v/v + ½% MSO had killed 60% of the small plants. Only Arsenal at 1.5% v/v with 1% MSO had killed all of the large saltcedar plants one year after application. Percent kill one year after application of Rodeo™ (glyphosate) at 2% v/v with ½% nonionic surfactant, Krenite™ (fosamine) at 3% v/v with ½% MSO, and Pasturegard at 2% v/v with ½% MSO varied from 17 to 40%. Percent kill of large plants with these latter mentioned herbicides improved significantly after 2 years and varied from 60 to 83%. Pathfinder II™ (triclopyr formulated in oil) at 100% v/v, Remedy™ (triclopyr) at 25% v/v, and Pasturegard at 25% v/v applied as basal-bark treatments in November 2002 killed 100% of the saltcedar plants. Stalker™ (oil soluble formulation of imazapyr) at 7.8% v/v killed 67% to 83% of the plants after 2 years. Plants surviving the Stalker treatment were injured severely. Except for Pathfinder II, which killed all plants, and Stalker, which killed similar number of plants, all of the other herbicides applied as basal-bark treatments in April were less effective than the fall treatments.