

Tamarisk control with sulfonyleurea herbicide tank mixes

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Abstract:

A great deal of research has been conducted to evaluate herbicides to control tamarisk before revegetation efforts. The most efficacious treatment to date is imazapyr (Habitat) plus glyphosate (Rodeo) at 0.5 lb ai + 0.5 lb ai/A (Habitat plus Rodeo at 1 qt + 12 fl oz/A). The cost of this treatment is about \$72/A. Sulfonyleurea herbicides have the same mechanism of action as imazapyr and might provide equivalent control and typically cost less than imazapyr.

Sulfonyleurea herbicides at this time could only be applied to areas not immediately adjacent to water. An experiment was established to evaluate sulfonyleurea herbicide tank mixes to control tamarisk. The location was near Berthoud, Colorado where tamarisk surrounds a small lake about 50 acres in size. Herbicides were applied on September 16, 2005 through a CO₂ pressurized backpack sprayer at 30 gallons per acre. Tamarisk was about 4 ft tall and 100% green at application, a result of mowing 12 months earlier. Herbicides evaluated included metsulfuron plus dicamba plus 2,4-D at 1.0 oz ai + 0.87 lb ai + 2.4 lb ai (Escort plus Rangestar at 1.67 oz product plus 6.7 pt/A); metsulfuron plus triclopyr at 1.0 oz ai + 2.0 lb ai/A (Escort plus Remedy at 1 oz product plus 2 qt/A); chlorsulfuron plus triclopyr at 1.0 oz ai + 2.0 lb ai/A (Telar plus Remedy at 1.33 oz product plus 2 qt/A); imazapyr plus triclopyr at 0.5 lb ai + 2.0 lb ai/A (Habitat plus Remedy at 1 qt + 2 qt/A); and imazapyr plus glyphosate at 0.5 lb ai + 4 lb ai/A (Habitat plus Roundup at 1 qt + 4 qt/A). A crop oil concentrate was added to all treatments at 1% v/v (equivalent to 1 gallon per 100 gallons of spray solution). Herbicide treatments in this experiment cannot be used in water. At 8 months after treatments (MAT) were applied, all herbicide combinations controlled 87 to 100% of tamarisk and caused 10 to 90% injury to sedges. Treatments began to break at 11 MAT. Metsulfuron plus dicamba plus 2,4-D, metsulfuron plus triclopyr, and chlorsulfuron plus triclopyr controlled 55 to 68% of tamarisk 11 MAT and caused 20 to 40% sedge injury. Imazapyr plus triclopyr controlled 91% of tamarisk and caused 100% injury to sedges 11 MAT while imazapyr plus glyphosate controlled to 93% of tamarisk and caused 90% sedge injury at the same time frame. The sulfonyleurea herbicide tank mix treatments clearly would have to be re-applied at 12 MAT thus, adding to the expense of management. However, sedge injury from the sulfonyleurea herbicide tank mixes was much less than the imazapyr tank mixes and could save money on seed mixes for revegetation. Use of sulfonyleurea herbicides and their tank mixes need more evaluation before recommending them to control tamarisk.