

ABSTRACT

MANAGEMENT OF SALT CEDAR RE-GROWTH USING CARPET-ROLLER APPLIED HERBICIDE

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A carpet-roller (7 ft. wide and 6 inch diameter) mounted rearwards on a Ford 7610 farm tractor was used to apply imazapyr to the foliage of 3 to 7 ft. tall saltcedar re-growth. This application method is being investigated as a possible alternative to costly mowing while preserving understory vegetation. This study was initiated in 2005 and is located in a 5000 acre area that has been mowed annually for approximately 40 years by the Bureau of Reclamation. The study area was placed on the upper reach of Caballo reservoir which is fed by the Rio Grande in southern New Mexico. Treatments were placed in a randomized split plot design with 3 application dates (mid- June, July and August), 4 herbicide rates, 3 reps and either one or two passes with the carpet-roller over the saltcedar. Our four main effect treatments were a control, a high rate of imazapyr (1.0 lb a.i./ac), a medium rate (0.5 lb a.i./ac), and a low rate (0.25 lb a.i./ac). Pre-treatment data was collected within a week of application and post-treatment data was collected in October 2005 and May 2006 with a final evaluation scheduled in October 2006. Measurements taken relate saltcedar response to the herbicide treatments by various plant size characteristics including height, number of stems per plant, plant volume, density, and canopy cover. Initial estimates suggest that the high and medium rates were effective in defoliating saltcedar whereas the low rate provided less than 50% defoliation. Larger and more robust plants experienced higher defoliation than lower growing plants for the June treatment date. Further evaluations one and two years post treatment are needed to determine conclusive herbicide efficacy results.