

FRASER FIR AND WEED RESPONSES TO HEXAZINONE AND SULFOMETURON.
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Field studies were conducted in 2003 and 2004 to determine Fraser fir and weed responses to applications of hexazinone and sulfometuron. The first study, conducted in 2003 and 2004, consisted of hexazinone applied at 0.25, 0.5, 0.75, and 1 lb ai/A and sulfometuron at 0.035, 0.07, 0.105, and 0.14 lb ai/A. Comparison treatments of flumioxazin (0.25 lb ai/A) and an untreated control were also included. A second study was conducted in 2004 to evaluate mixtures of hexazinone plus sulfometuron. Treatments included hexazinone plus sulfometuron at 0.5 lb/A plus 0.04 lb/A, 0.7 lb/A plus 0.065 lb/A, 0.85 lb/A plus 0.08 lb/A, and 1.7 lb/A plus 0.16 lb/A, respectively, and comparison treatments of simazine (2 lb ai/A) plus pendimethalin (3 lb ai/A) plus glyphosate (0.75 lb ae/A), flumioxazin plus glyphosate, and an untreated control. Treatments were applied on April 15, 2003, and May 3, 2004, before bud-break to established Fraser fir measuring 3 to 4 ft in height. In study 1, Fraser fir injury was 2 to 14% during the growing season with sulfometuron, but did not exceed 2% with hexazinone or flumioxazin treatments. At 4 months after treatment (MAT) quackgrass control exceeded 74% with all hexazinone or sulfometuron treatments, but was 50% with flumioxazin. Horseweed was controlled 78 to 93% with hexazinone, but control did not exceed 63% with other treatments. Common ragweed was controlled 83 to 100% with hexazinone and flumioxazin treatments, but only 40 to 68% with sulfometuron. In study 2, Fraser fir injury ranged 3 to 16% during the growing season with mixtures of hexazinone plus sulfometuron, but injury with comparison treatments did not exceed 2%. Leader growth corresponded to injury and was shorter with all hexazinone plus sulfometuron treatments than the untreated control. At 4 MAT, quackgrass control was 93 to 98% with all hexazinone plus sulfometuron treatments and 77% with either comparison treatment. Control of common ragweed and horseweed with hexazinone plus sulfometuron was generally rate responsive at 58 to 97%; control of the two weeds with the comparison treatments was 50 to 73%. Common milkweed was not controlled in either study.