

RATIOS OF SULFOMETURON-METHYL AND HEXAZINONE EVALUATED FOR CROP RESPONSE AND WEED CONTROL IN EASTERN CHRISTMAS TREE PRODUCTION. Marsha J. Martin, Donald D. Ganske, Mick F. Holm and Ronnie G. Turner, Field Development and Product Development Manager, DuPont Ag and Nutrition, E. I. DuPont De Nemours and Co., Wilmington, DE 19898.

New ratios of sulfometuron-methyl and hexazinone were evaluated for use in eastern Christmas tree production. Both 1:20 and 1:15 ratios of sulfometuron-methyl and hexazinone were compared to the currently registered, water-dispersible, granular-blended product of 6.5% sulfometuron-methyl and 68.6% hexazinone (Westar<sup>TM</sup>). Tests were conducted in the states of CT, MI, NY, OH and PA.

The two ratios were both tested at 0.375, 0.563 and 0.75 ozai/acre sulfometuron-methyl. The 1:15 ratio had 5.63, 8.4 and 11.25 ozai/acre hexazinone respectively, and the 1:20 ratio had 7.5, 11.25 and 15 ozai/acre hexazinone respectively. The comparison Westar<sup>TM</sup> rates of 6.01, 7.51, and 9.01 ozai/acre, which have 0.52, 0.65, and 0.78 ozai/acre sulfometuron-methyl, were chosen to best match the sulfometuron-methyl rates of the ratios.

Crop safety results showed that Westar<sup>TM</sup> and the two experimental ratios of sulfometuron-methyl and hexazinone gave similar results on crop safety. In 5 tests on Fraser Fir, 2 tests each on Douglas Fir, Colorado Blue Spruce, and Eastern White Pine, and 1 test on Scotch Pine, there were no significant differences between treatments, and crop injury was low, 3% or less on Fraser Fir.

Efficacy results were as follows. The treatment with the lowest amount of hexazinone (5.5 ozai/acre) still gave 97% control of maretail and 99% control of common ragweed. For 90% or greater control of dandelion, ca. 7 ozai/acre hexazinone was required. For season-long quackgrass control and late-season crabgrass control greater than 85%, 0.563 oz ai/acre sulfometuron-methyl was required. On maretail, quackgrass, dandelion, and crabgrass, all sulfometuron-methyl and hexazinone treatments performed significantly better than 4 oz ai/acre flumioxazin.