

**Interactive Effects of Imazapyr plus Triclopyr ester
and Imazapyr plus Glyphosate Mixtures
on Woody Weed Seedlings**

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(ABSTRACT)

A rapid primary herbicide screening experiment was conducted to determine if synergism or antagonism occurs with imazapyr(Arsenal®) plus triclopyr ester(Garlon 4®) and imazapyr plus glyphosate(Accord®) mixtures applied to woody weed seedlings. Using a booth sprayer, 66 herbicide treatments were applied to greenhouse grown black cherry (*Prunus serotina*), winged elm (*Ulmus alata*), sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), black locust (*Robinia psuedoacacia*), loblolly pine (*Pinus taeda*), water oak (*Quercus nigra*) and cabbage palmetto (*Sabel palmetto*). The seedlings were rapidly screened and percent mortality, height and dry weight measurements were obtained five months after treatment. The sweetgum, red maple and black locust experienced unacceptable mortality in the control treatments, and were excluded from further analysis. A determination of synergistic or antagonistic interactions was made using response surface analysis, the nonlinear blending method, the isobologram method, and the Colby method. Imazapyr plus triclopyr ester mixtures were found to be synergistic on black cherry ($p < 0.05$), with antagonism occurring at high rates of both herbicides. Imazapyr plus triclopyr ester was additive on the remaining species. The imazapyr plus glyphosate mixtures were found to be additive for all tested species.

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