

TIMING OF ISOXAFLUTOLE BURNDOWN TREATMENTS IN FIELD CORN. George S. Simkins\*, Brent Philbrooke and Matthew Mahoney. Technical Service Representative, Product Development Manager and Product Development Representative. Bayer CropScience. Research Triangle Park, NC. 27709

Field trials were conducted at 10 locations to evaluate the burndown activity of isoxaflutole (79 g/ha) with crop oil concentrate (1% v/v) alone, or in tankmix combinations with atrazine (1120 g/ha) or 2,4-D ester (560 g/ha). Applications were made at three different timings: soon after weed emergence, approximately 10 and 20 days after weed emergence. Weed control was evaluated approximately 10 and 25 days after application for following weed species: giant foxtail, yellow foxtail, fall panicum, common lambsquarter, redroot pigweed, common waterhemp, velvetleaf, wild mustard, giant ragweed, common ragweed, common chickweed, hoary cress, rough fleabane, shepherd's purse, purple deadnettle, white cockle, henbit and common dandelion. Early applications (~1 leaf) to annual grasses (foxtails and fall panicum) provided the most effective burndown of these species. The addition of atrazine to the isoxaflutole treatment improved control and speed of burndown. Isoxaflutole with crop oil concentration alone or in combinations resulted in quick and complete control of common lambsquarter, redroot pigweed, common waterhemp, velvetleaf and common ragweed, irregardless of the weed size. Burndown of wild mustard was slow with isoxaflutole and crop oil concentrate alone. Isoxaflutole combinations on small (<23 cm.) mustard resulted in faster burndown. All treatments ultimately provided good control of small mustard. Giant ragweed burndown was slow, though the speed of burndown was improved by the atrazine combination. Giant ragweed at the four leaf stage was effectively controlled by isoxaflutole in combination with crop oil concentrate and atrazine or 2,4-D ester. Control of larger giant ragweed was inconsistent. Burndown of common chickweed, rough fleabane, purple deadnettle and hoary cress was generally slow. Combinations of isoxaflutole and crop oil concentrate with atrazine or 2,4-D provided effective control, of these weeds in less than 31 days, no matter how large the weeds were when treated. All sizes of shepherd's purse and white cockle were effectively controlled by all isoxaflutole treatments. Burndown of henbit and common dandelion was most effective when treatments were applied to larger weed sizes. Control of both of these weeds varied from fair to excellent, depending on the location. Combinations containing 2,4-D ester were most effective in controlling dandelion.