A NEW MESOTRIONE, S-METOLACHLOR, and ATRAZINE PREMIX FOR THE CENTRAL AND SOUTHERN CORN BELTS. Tom B. Threewitt, Charlie F. Grymes, and Michael D. Johnson, R&D Scientist, R&D Scientist and Technical Brand Manager, Syngenta Crop Protection, Greensboro, NC 27419.

Thirty Five field trials were conducted in 18 states in 2003 to evaluate A14155, a new premix in corn, for weed control and crop safety. Treatments were applied preemergence to field corn in replicated field trials in the states of AL, AR, FL, GA, IL, IN, KS, LA, MD, MO, MS, NC, NE, NY, OH, OK, TN and TX. A14155 is a new premix of mesotrione + S-metolachlor + atrazine at a unique ratio of 1:7.75:7.75. A14155 was evaluated on 39 weeds common to the central and southern corn belt. A14155 at 188+1458+1458 g ai/ha (3104g ai/ha in total) gave better control of Texas panicum, pitted morningglory, red morningglory, entireleaf morningglory, large crabgrass, yellow nutsedge, triazine resistant lambsquarter, sicklepod, broadleaf signalgrass, common ragweed and henbit than 1425 + 1813 g ai/ha of S-metolachlor + atrazine (or Bicep II MAGNUM at 3238 g ai/ha). A14155 and Bicep II MAGNUM gave equal control of palmer amaranth, redroot pigweed, smooth pigweed, common waterhemp, common lambsquarter, Florida beggarweed, southern crabgrass, barnyardgrass, common sunflower, marestail, kochia, ballonvine, fall panicum, Pennsylvania smartweed, wild radish, giant foxtail, yellow foxtail, green foxtail, prickly sida, johnsongrass, Florida pusley, giant ragweed, velvetleaf and cocklebur. A14155 provided crop safety equal to that from Bicep II MAGNUM. The tank mix of mesotrione + S-metolachlor + atrazine at 188+1458+1458 g ai/ha was equal to the premix formulation of these herbicides at the same combined rate of 3104 g ai/ha. Proposed rates of the new premix for a medium soil was determined to be 188+1458+1458 g ai/ha (3104g ai/ha) and for a fine soil to be 220+1705+1705 g ai/ha (3630g ai/ha).

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