COMPARISON OF DIFFERENT HERBICIDE MIXTURES WITH FORAMSULFURON + ISOXADIFEN. Jayla R. Allen*, Michael Weber, Gerald Hora, and Gary Henniger. *Product Development Manager, Technical Development Representatives, Bayer CropScience, Research Triangle Park, NC 27709.

Foramsulfuron(1-(4,6-dimethoxypyrimidin-2-yl)-3-(2-dimethylcarbamoyl-5-formamidophenyl-sulfonyl)urea) is a novel sulfonylurea herbicide for post-emergence use in corn. Foramsulfuron is effective against major grass weed species, as well as some broadleaf weeds. It is applied with the new Bayer CropScience safener, isoxadifen-ethyl (ethyl 5,5-diphenyl-2-isoxazoline-3-carboxylate). The trade name for foramsulfuron + isoxadifen is Option® and is formulated as a 35 WG (35% foramsulfuron) in a 1:1 ratio. Option® has a recommended use rate of 37 g a/ha and has the flexibility to be utilized in a wide variety of tankmixes and is applied with methylated seed oil and UAN or AMS.

Foramsulfuron was tested in a variety of herbicide programs across 17 midwestern locations. Included in these trials was a premix formulation of foramsulfuron & iodosulfuron & isoxadifen. The foramsulfuron & iodosulfuron & isoxadifen premix has been submitted for federal registration with the trade name Equip™. The formulation is a 32 WG containing 30% foramsulfuron, 30% isoxadifen, and 2% iodosulfuron.

Foramsulfuron was compared to foramsulfuron & iodosulfuron in pre/post programs, mid post, and with dicamba & diflufenzopyr as a tank mix partner mid post for crop tolerance and weed control. Treatments included isoxaflutole 53 g a/ha + atrazine 560 g pre followed by foramsulfuron 37 g post, isoxaflutole 53 g + atrazine 560 g pre followed by foramsulfuron & iodosulfuron 27 g post, foramsulfuron 37 g post, foramsulfuron + iodosulfuron 27 g post, foramsulfuron 37 g + dicamba & diflufenzopyr 98 g post, foramsulfuron & iodosulfuron 27 g post + dicamba & diflufenzopyr 98 g post, and nicosulfuron & rimsulfuron 39.5 g + mesotrione 70 g + COC + N post. All foramsulfuron and foramsulfuron & iodosulfuron treatments included methylated seed oil and nitrogen.

Pre fb post treatments provided >90% control of all grass weeds. Foramsulfuron provided grass control $\geq$ the commercial standard. Foramsulfuron did not require a tank mix partner for adequate control of velvetleaf, common sunflower and redroot pigweed. Foramsulfuron & iodosulfuron and foramsulfuron + dicamba + diflufenzopyr increased broadleaf weed control for common ragweed, giant ragweed, common lambsquarters, and morningglory species compared to foramsulfuron alone. Foramsulfuron and foramsulfuron & iodosulfuron required the tank mix of dicamba + diflufenzopyr for control of common waterhemp. All treatments provided >95% control for shattercane, common sunflower, and redroot pigweed.

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