

FORAMSULFURON + ISOXADIFEN - SUCCESSES AND LESSONS LEARNED FROM A LAUNCH YEAR. Bill Striegel*, Daren Bohannon, John Cantwell, and Jayla Allen, Technical Development Representatives. Bayer CropScience, Research Triangle Park, NC 27709.

Foramsulfuron (2-[[[[[4,6-dimethoxy-2-pyrimidinyl)-amino]-carbonyl]amino]sulfonyl]-4-(formylamino)-N,N-dimethylbenzamide) is a novel sulfonyleurea 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 with isoxadifen. Option® has a recommended use rate of 0.033 lb ai/A, has the flexibility to be utilized in a wide variety of tankmixes and is applied with methylated seed oil plus UAN or AMS.

Option® received EPA approval for use on March 27, 2002. Nearly 1.1 million acres of corn were treated in 2002. The majority of the acres treated with Option® were tank mixed with various herbicide partners to complete the spectrum of control of broadleaf weeds. Most common tank mix partners were dicamba products, atrazine, flumetsulam + clopyralid, or primisulfuron + prosulfuron. Product performance was tracked with less than 4% of treated acres receiving performance calls for weed control and less than 0.4% of the treated acres receiving calls for crop response.

Excellent crop safety was exhibited and crop response was minimal because of the proprietary safener isoxadifen-ethyl that is formulated with foramsulfuron. Previous research has shown that isoxadifen-ethyl reduces foramsulfuron phytotoxicity in corn by increasing the rate of foramsulfuron degradation¹. Isoxadifen-ethyl has also been shown to reduce phytotoxicity of several broadleaf herbicide partners.

Several proposed label changes have been submitted to the EPA as a result of the experiences learned during the 2002 launch season. Included in the proposed changes will be the addition of the grass weeds reed canarygrass, smooth brome, downy brome, Italian ryegrass, and orchardgrass. Specific guidance will be included for making applications via drop nozzles to corn at a maximum V-8 stage of growth with nozzles directed to avoid application to the corn whorl. Additionally, the maximum application height for giant foxtail and wild oat will be increased from three to six inches. Several tank mix partners are proposed to be added for 2003.

¹Chad Effertz*, Ken Pallett, Richard Rees., 2001. THE EFFECT OF ADJUVANT ON FORAMSULFURON AND ISOXADIFEN-ETHYL PERFORMANCE. In Proceedings of the North Central Weed Science Society, Vol. 56.