

AE 0317309 - A NEW SELECTIVE HERBICIDE FOR DICOT WEED CONTROL IN WHEAT. Mary D. Paulsgrove, Dean W. Maruska, Kevin B. Thorsness, Michael C. Smith, George S. Simkins and Mark Wrucke, Product Development Manager, Bayer CropScience, Research Triangle Park, NC 27709.

AE 0317309 (pyrasulfotole) is a new postemergence herbicide being developed by Bayer CropScience for dicot weed control in spring wheat, durum, winter wheat, barley and triticale. Pyrasulfotole is the foundation of Huskie™, a new specially formulated herbicide containing active ingredients pyrasulfotole with bromoxynil and a highly effective wheat safener, mefenpyr to control a broad spectrum of dicot weeds. This product utilizes both HPPD and PSII inhibition for a unique mode of action in cereal grains. Huskie will control a broad spectrum of dicot weeds with a short duration of in-season residual activity on some species, such as redroot pigweed and common lambsquarters. Mefenpyr-diethyl is a postemergent safener registered for use on wheat and barley in the United States and Canada. Huskie exhibits excellent crop tolerance alone and in tankmixture.

In field experiments in North America, Huskie was tested on 46 different species and controlled key weeds such as kochia, pigweed sp., wild buckwheat, common lambsquarters, field pennycress, Russian thistle, prickly lettuce, mustards, common waterhemp and nightshade sp.. Huskie is applied to dicot weeds between the 1 - 8 leaf stage of growth depending on weed species. Best weed control is achieved when 0.5 kg/HA AMS or 2.34 - 4.7 L/HA 28% UAN is added to the tankmixture.

Huskie has a very favorable ecological, ecotoxicological and environmental profile with low acute mammalian toxicity and no genotoxic, mutagenic or oncogenic properties noted. Microbial degradation is the primary degradation pathway in the environment. Pyrasulfotole is rapidly degraded and unlikely to pose any risk to succeeding crops. Excellent control of sulfonylurea resistant weeds such as kochia, prickly lettuce and Russian thistle biotypes have been attained with Huskie in field trials.

The excellent weed control and crop safety combined with very favorable toxicological, ecotoxicological and environmental properties will make this product a valuable tool for cereal grain farmers.