

SAFLUFENACIL: A NEW HERBICIDE FOR PREPLANT BURNDOWN AND PREEMERGENCE DICOT WEED CONTROL. Steven Bowe*, Rex Liebl, Helmut Walter, Thomas Holt, Bernd Sievernich and William Patzoldt, Biologists, BASF, Research Triangle Park, NC 27523 and Limburgerhof, Germany 67117.

Saflufenacil (BAS 800H) is new herbicide being developed by BASF for burndown and residual dicot weed control in multiple agricultural production systems and specialty markets. Saflufenacil is a protoporphyrinogen-IX-oxidase (PPO) inhibitor belonging to the pyrimidinedione class of chemistry. Saflufenacil is readily absorbed by foliage, root and shoot tissue of plants. Once absorbed, saflufenacil is predominantly translocated via the xylem, with limited movement via the phloem. Selectivity is conferred by physical placement and rapid metabolism of saflufenacil in tolerant crop species. Research indicates that saflufenacil applied at 18 to 25 g ai/ha can be used alone or mixed with glyphosate and applied preplant for rapid and complete burndown of weeds prior to emergence of crops including corn, soybean, cereals, and selected legumes. Saflufenacil complements glyphosate by controlling difficult to control weeds such as horseweed (*Conyza canadensis*) and prickly lettuce (*Lactuca serriola*). Research has shown that in corn, saflufenacil can be used preemergence at 50 to 125 g ai/ha for residual control of most dicot weeds including large-seeded species such as velvetleaf (*Abutilon theophrasti*), common cocklebur (*Xanthium strumarium*), ragweed (*Ambrosia* spp.), common sunflower (*Helianthus annuus*) and morningglory (*Ipomoea* spp). Saflufenacil's combination of broad dicot spectrum, complementarity with glyphosate, and preplant crop tolerance make it well suited to be an important component for preplant burndown and residual weed control in many production systems.