

# Herbicide Receives EPA Approval

DES PLAINES, ILL. — Frontier® Herbicide, a new chemistry from Sandoz Crop Protection, has been approved by the United States Environmental Protection Agency (EPA) for control of annual grasses and certain broadleaf weeds in corn.

"Farmers are demanding more from their crop protection than just great performance. They want a product that will protect their environment as well as their crop," said Ken Rinkenberger, business director for Frontier. "Through extensive research, Sandoz scientists developed a chemistry that provides consistent performance and helps preserve the environment. Frontier is our answer to crop protection in the 1990s and beyond."

The active ingredient in Frontier—dimethenamid—was discovered in 1982 at Sandoz research laboratories in Basel, Switzerland. During the past 10 years, more than 2,000 research and on farm trials nationwide confirm the consistent performance of the herbicide.

For example, across a wide range of weather and field conditions, compared to preemergence standards, Frontier has shown better or equal control 95 percent of the time. The herbicide has also been rated better in about 80 percent of the trials when differences in control occur.

In 10 years of testing, Frontier has demonstrated good-to-excellent control of grasses, such as foxtail, crabgrass, barnyardgrass, goosegrass, broadleaf signalgrass, seedling johnsongrass, southwestern cupgrass, and panicums; broadleaf weeds such as pigweed, black nightshade, carpetweed, purslane and spurge; and nutsedge. In addition, it has shown partial control or suppression of woolly cupgrass, Florida beggarweed, wild proso millet, lambsquarters, shattercane, ragweed and sandbur.

Dimethenamid belongs to the chloroacetamide class of chemistry, but is not an acetanilide like other chloroacetamide products, such as metolachlor and alachlor. A "Thiophene ring" structure

makes the dimethenamid molecule unique and gives it several beneficial characteristics that contribute to its performance and positive environmental profile. It increases the unit activity of the structure, allowing it to control problem grasses at a much lower rate.

Frontier fits crop residue management systems that protect the land. In conventional and all conservation tillage systems, Frontier has been shown to wash off surface residue and get to the soil quickly, so more active ingredient is readily available for take-up by the weed seedling. Less rainfall is needed to activate Frontier, regardless of the tillage system used.

Frontier will be sold as a 7.5 pound active-ingredient per gallon (900 grams a.i. per liter) emulsifiable concentrate. Recommended use rate is 13 to 25 fluid ounces per acre, depending on soil type—about one pound less a.i. per acre than the standard preemergence grass herbicides.

These lower use rates will reduce environmental loading and will allow applicators to handle less product. For example, a grower treating a 500-acre field (medium soil with about 3 percent organic matter) would normally use about 313 gallons of formulated alachlor or 125 gallons of formulated metolachlor. That same field can be treated with only 78 gallons of formulated Frontier.

The chemical structure of Frontier biodegrades efficiently into dozens of simple compounds and elements, so carryover and crop safety are not concerns. Tests show that young corn plants

quickly metabolize the herbicide and show excellent tolerance, even at two times the recommended rate.

Frontier fits most cropping systems. It can be used early preplant, preplant, preemergence, delayed preemergence, and early post-emergence. It also can be tank-mixed or used in sequence with broadleaf herbicides, such as Banvel®, Marksman®, or Clarity™, for broad-spectrum control of grasses and broadleaves in corn.

Frontier will be available in limited supply throughout the Midwestern Corn Belt for the 1993 growing season.

## Hold Awards Banquet

(Continued from Page C2)

pounds of protein. The Brennemanns also had the high Holstein for butterfat with 1,116 pounds. An average of 827 more pounds of milk and 36 more pounds of butterfat per cow earned the Brennemanns the most improved herd

award as well.

Graywood Farms, owned by Joseph and Steven Graybeal, Peach Bottom, received the high Holstein cow award for milk production, producing 30,755 pounds.

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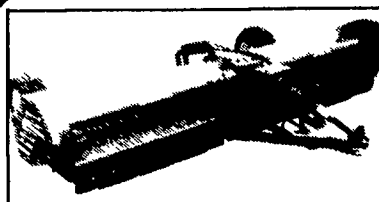
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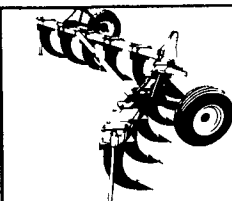
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