

Top corn belt farmers by the thousands this year will join in the big parade to the easy corn-weeding route. And, like others who got a head start in recent years, they'll probably get higher corn yields to boot. ● Instead of making numerous trips across the field with a cultivator, they'll make a single pass with a pre-emergence chemical right after planting. Do the job right, and many of them won't have to go through the field again until harvest time. ● The upward pace in the use of chemicals to kill weeds in corn will accelerate at a faster clip, predict government and private weed control experts. "Once farmers discover the advantages of a new technique for themselves, it doesn't take them long to shift to it," says Dr. W. B. Ennis, Jr., chief of Agricultural Research Service's Crop Protection Branch at Beltsville, Md. ● Chemicals applied before the weeds come up — either at corn planting time or shortly thereafter — have been mainly responsible for the rapid herbicide growth the past couple years. ● "The simplest and surest means of having a weed-free corn field is to prevent the weed growth before it starts," points out Purdue Plant Pathologist O. C. Lee. "Applying an effective herbicide when the corn is planted keeps the weeds away from the corn plants when they're small and helpless; that's when it's of utmost importance." ● Weeds actually steal more moisture and plant food and rob farmers of much more in crop yields and quality than most of them ever realize. Total annual U.S. crop loss due to weeds is an astounding \$5 billion. ● The photo on the right shows a typical farm test. Rows on the left were treated with a pre-emergence application. Rows on the right were not treated. Both plots were cultivated once. The treated rows on the left are weed-free and the yield was 120 bushels per acre. The weedy rows on the right yielded only 103 bushels per acre. ● Corn growers who last year applied pre-emergence materials for the first time were surprised to find they not only could reduce or eliminate cultivating, but that certain chemicals often did a better job than a cultivator. ● "The most promising chemicals for pre-emergence weed control in corn are members of the Triazine group, such as Simazine and Atrazine," points out Dr. J. R. Shay, head of Purdue's Department of Botany and Plant Pathology. ● Because of their special chemical composition, Atrazine and Simazine do just what a weed killer in corn should do — kill virtually every annual plant in the field but the corn . . . the grasses as well as the broadleaves. ● "The results we've had with Atrazine and Simazine have been absolutely amazing," says USDA's Dr. Ennis. "When we broadcast 4 lbs. per acre of Simazine as a pre-emergence spray on



TOP farmer REPORT **I Weeds i**

DON'T STAND A CHANCE

a field of corn, crabgrass, ryegrass, other grasses, lambsquarters, mustard, pig-weed and other broad leaves, the chemical knocked out 100% of the weeds and affected the corn much less than a single cultivation would have." ●

In an Iowa experiment where part of an uncultivated, fertile corn field was treated with blanket applications of various pre-emergence chemicals and the rest left untreated, the Simazine area averaged 131 bu., per acre; Atrazine, 126 bu., and the untreated plot, 79. "These two chemicals out-performed, by far, two others tested," says E. P. Sylwester, Iowa State University plant pathologist. "Excessive rain throughout the season made for weedy plots, except those with Simazine and Atrazine which remained practically clean throughout the season." ● "They cost more than either Radox or 2,4-D," says Purdue's Professor Lee. "But Radox is a grass killer and should not be relied upon to kill broadleaf weeds. On the other hand, 2,4-D does not control annual grasses such as giant, green and yellow foxtail." ● While Corn Belt agronomists are generally quick to cite the possibilities of pre-emergence chemicals, most aren't urging skeptical farmers to go "whole hog" the first year. "We're encouraging all our farmers to try an acre of one or two of the most promising materials under their own conditions, type of soil, moisture, temperature, organic matter content, and their own specific hybrids," explains Iowa State's Sylwester. "As another weapon in our struggle against weeds, pre-emergence chemicals are here to stay."



Weedy area at left was untreated, uncultivated. But a broadcast pre-emergence application of 3 lbs. of Simazine per acre kept the rest of the field virtually weed-free.

14-inch band of Atrazine herbicide over the rows protects young corn as it emerges. Weeds between the rows can be removed by cultivating.