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Controlling

GIANT

FOXTAIL

in Illinois

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Circular 828

**University of Illinois
College of Agriculture
Extension Service
in Agriculture**





Competing with crops for nutrients, light, and moisture, giant foxtail can mean costly yield reductions.

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GIANT FOXTAIL, of all annual weeds, represents the most serious threat to Illinois farmers. It is well adapted to our soils and climate, and has spread rapidly since it was introduced from China about 30 years ago. Nearly every county of the state is now infested. Giant foxtail is considered so serious that in 1959 it was added to the list of primary noxious weeds in the Illinois Noxious Weed Law.

HOW TO RECOGNIZE IT

Giant foxtail grows 4 to 6 feet tall, or even taller. The heads droop and are 4 to 8 inches long. Green and yellow foxtails are shorter, with smaller, straighter seed heads.

The upper leaf surfaces of giant foxtail are covered with many fine hairs. Green foxtail leaves are hairless, while yellow foxtail leaves have a few long hairs near the base.

Giant foxtail may be found along roadsides, in fencerows, in waste places, with crops, and almost anywhere that seeds can germinate.

HOW MUCH DOES IT REDUCE YIELDS?

That giant foxtail severely reduces crop yields has been shown by tests at the University of Illinois. In these tests, the spaces between corn and soybean rows were kept clean by ordinary cultivation, but foxtail was left growing in the rows. It was thinned to various intensities by hand. Check rows were left free of weeds. Following are the average results for a 3-year period (1957-1959):

<i>Foxtail plants per foot of row</i>	<i>Corn yield (bushels per acre)</i>	<i>Soybean yield</i>
50.....	70.6	27.6
12.....	78.4	31.9
6.....	82.1	34.6
3.....	85.0	36.2
1.....	86.4	36.8
Check, no weeds.....	93.5	38.5



Soybeans with 50 giant foxtail plants per foot of row produced 11 bushels less than soybeans without weeds.

KEEP IT FROM GETTING A START

The best way to control this pest is to keep it from ever getting established in a field. Always be on the lookout for giant foxtail seeds and plants. Destroy any patches you find along roadsides, fencerows, ditch banks, and in waste places.

Use clean seed. Don't buy hay and straw that might contain giant foxtail seed. Clean machinery before moving it from infested to clean fields.

CONTROL ON INFESTED FIELDS

Fortunately, giant foxtail is an annual. It does not live over winter. New plants arise only from seed, not from old plants.

A single head may produce over 1,000 seeds. One plant may have over 20 heads, thus producing more



Allowed to grow all season, a single giant foxtail head can produce over 1,000 seeds. Clipped plants or those coming from seed that germinates late in the season can produce small heads and mature seeds.

than 20,000 seeds. These seeds do not all germinate the first year after they are produced. Some may remain in the soil for several years before they germinate. Therefore, once the soil becomes infested with giant foxtail seeds, it is extremely difficult to eliminate them completely. However, a good control program aimed at preventing the production of new seeds can hold giant foxtail in check and keep it from "taking over."

For best control, use both good cultural practices and chemicals. Early control is important, especially in cultivated crops. Once the weeds growing in the row are a few inches tall and are establishing crown roots, cultivation has little effect. We do not yet have a post-emergence herbicide for killing grass more than a few inches tall that is growing with corn or soybeans.



Many farmers are applying pre-emergence herbicides at planting time. To cut costs, apply in 14-inch bands over the crop rows. Use timely cultivation to control weeds between the rows.



Using a boom sprayer, some farmers broadcast pre-emergence herbicides on problem areas, such as field edges, within the first few days after planting.

Corn and soybeans

Delayed planting gives extra time for foxtail seedlings to emerge and be destroyed before the crop is planted. If you plant early, consider using pre-emergence herbicides.

Use a rotary hoe or harrow in corn and soybeans as soon after the giant foxtail germinates as possible — definitely before the foxtail is 2 inches high and begins developing a strong root system.

When foxtail appears in the crop rows, smother it by throwing soil into the row with your cultivator shovels. Planting corn in check rows to allow cross cultivation is helpful, but this is not a common practice in Illinois. Look to chemicals for additional help, especially if you drill or hill-drop corn.

Consider using pre-emergence herbicides. These chemicals are applied before the crop or weeds emerge — usually at planting time. After you use them, do not disturb the treated area as long as it is free of weeds.

Giant foxtail is often most serious around the edges of fields. If it occurred in certain patches last year, it will likely occur in these patches again this year. Use pre-emergence herbicides on field edges and on patches where you expect foxtail to occur.

Small grains

Since wheat is well established in early spring, it competes well with giant foxtail and is usually harvested before the weed produces seed. Plowing or disking immediately after harvest will prevent seed production.

Spring oats do not compete with giant foxtail as well as wheat and are usually not harvested until after the foxtail has produced seed.

Pastures

Giant foxtail is palatable to livestock in early growth stages. Grazing infested fields will help prevent seed production.

Hay fields

Clipping new seedlings and cutting hay will reduce the amount of foxtail seed produced, but the clipped foxtail plants can soon regrow and produce small heads with some seed. Follow a good fertility and management program so that the hay crop can compete well with the foxtail.



Giant foxtail in fencerows and along roadsides furnishes seed to infest fields.

Herbicides for Control of Giant Foxtail

CORN: Atrazine **SOYBEANS:** Radox
Simazine Alanap
Radox Amiben*

FENCEROWS: Dalapon

* As of January 1, 1961, Amiben has label approval only for beans to be used for seed.

Fencerows, roadsides, ditch banks, and other non-crop areas

Dalapon will help destroy giant foxtail in these areas. Mix 5 pounds in 30 to 40 gallons of water, and spray before the seed heads appear. Make sure the foliage is thoroughly wet. Spraying can kill the entire plant, while mowing merely cuts off the tops, allowing the weeds to regrow and form new seed heads.

Other soil sterilants may be used in non-crop areas, but they are more expensive than dalapon.

(This circular was prepared by Ellery Knake, Assistant Professor of Crops Extension, and Fred Slife, Associate Professor of Crop Production.)

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