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Chemical Weed Control in Crops

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Chemical Weed Control in Crops

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**THIS BOOK DOES
NOT CIRCULATE**

Agricultural Extension Service

South Dakota State College

U. S. Department of Agriculture

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No. 155

WHEN TO SPRAY WEEDS IN CROPS

<i>Crop</i>	<i>Safest Time to Spray (Most Tolerant Stages of Growth)</i>	<i>Maximum Pounds of Chemical That Can Be Applied Per Acre at Tolerant Stages of Growth Without Undue Risk of Reducing the Yield of the Crop</i>	<i>Type of Weeds That Can Be Controlled</i>
Spring Wheat and Barley	Between 5-leaf and early-boot stages After grain is in the dough	2,4-D: ½ lb. ester or ½ lb. amine 2,4-D: up to 1 lb.	Broad-leaved Broad-leaved
Oats Andrew and Brunker Clinton, Bonda and Ajax Nemaha and Cherokee Mindo and Marion All Varieties	Between 5-leaf and early-boot stages Between 6-leaf and early-boot stages After boot stage All stages equally tolerant After grain in the dough	MCP less toxic than 2,4-D 2,4-D: ½ lb. ester or ½ lb. amine 2,4-D: ½ lb. ester or ½ lb. amine 2,4-D: ½ lb. ester or ½ lb. amine 2,4-D: ¼ lb. ester or ½ lb. amine 2,4-D: up to 1 lb.	Broad-leaved Broad-leaved Broad-leaved Broad-leaved Broad-leaved Broad-leaved
Winter Wheat and Rye	Spring; fully stooled to boot After grain is in the dough	2,4-D: ½ lb. ester or ½ lb. amine 2,4-D: up to 1 lb.	Broad-leaved Broad-leaved
Flax	As soon as weeds are up Grassy weeds 2 inches high or shorter	MCP or 2,4-D: ¼ lb. amine TCA: 5 lbs. (6¼ lbs. 90% sodium salt)	Broad-leaved Grassy annuals
Corn	Before silking and after several cool days; earlier the better	2,4-D: ¼ lb. ester or ½ lb. amine	Broad-leaved
Sorghum	When 4 to 8 inches tall (3 to 5 leaves)	2,4-D: ¼ lb. ester or ½ lb. amine	Broad-leaved
Sugar Beets	Just before beets come up	TCA: 5 to 7 lb. over the row (6¼ to 8¼ lb. 90% sodium salt)	Grassy annuals
Legumes Alfalfa; Red, Alsike and Ladino Clovers	Seedlings when companion crop or weed canopy is 10 to 15 inches high, or estab- lished stands right after mowing	2,4-D or MCP: ¼ lb. amine	Broad-leaved
Alfalfa and Sweet Clover	Seedlings in flax or established stands after mowing	TCA: 5 to 7 lbs. (6¼ to 8¼ lbs. 90% sodium salt)	Grassy annuals
Grasses Bromegrass, blue grass and Wheatgrasses Pastures	Seedlings after they have 4 leaves Established stands anytime except heading time for seed fields Best weed control in June	2,4-D or MCP: ¾ lb. ester or amine 2,4-D, MCP or 2,4,5-T: up to 2 lbs. 2,4-D, MCP or 2,4,5-T: up to 2 lbs.	Broad-leaved Broad-leaved Broad-leaved

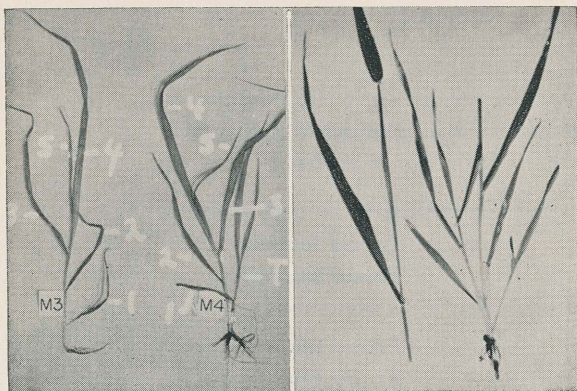


Fig. 1

Fig. 2

Fig. 1. Five-leaf stage of growth in grain. Plant at left has five leaves. Plant at right has five leaves and a tiller (T) which emerged immediately above the first leaf. This leaf dropped off shortly after this picture was taken; therefore, it is necessary to count one leaf for each tiller whether the leaf is on the tiller or not.

Fig. 2. Early-boot stage of growth in grain. Note how the boot is swelling on the stem of the plant shown at the left.

Amounts of Chemical Needed to Kill or Control Annual Weeds

Group I. Weeds that can generally be killed at any stage of growth prior to flowering time with $\frac{1}{4}$ to $\frac{1}{2}$ pound of 2,4-D acid per acre.

Annual sow thistle	Morning glory (1)
Annual vetch	Mustards (1)
Dragonhead mint (1)	Plantains
False flax	Puncture vine (1)
Henbit	Ragweed, common (1)
Lambs quarters	Ragweed, giant (1)
Marsh elder	Wormwood, bitter

Group II. Weeds that can generally be killed before they are 6 inches tall, or stunted, at larger stages, with $\frac{1}{2}$ to $\frac{1}{2}$ pound of 2,4-D acid per acre.

Bachelor's button	Lettuce, wild (2)
Carrot, wild (b)	Mustard, hare's ear (2)
Cinquefoil	Mustard, tansy
Cocklebur (2)	Parsnip, wild (b)
Evening primrose (b) (2)	Pennycress (2)
Goatsbeard (b) (2)	Peppergrass, annual (2)
	Purslane (2)

Group III. Weeds that can be stunted and seed production sometimes prevented if treated at early stages of growth with $\frac{1}{8}$ to $\frac{1}{2}$ pounds of 2,4-D acid per acre.

Buckwheat, wild (3)

Chickweed, common

Flixweed

Mare's tail

Pigweed, rough (3)

Russian thistle (3)

Smartweeds, annual (3)

Sunflower, wild (3)

Velvet leaf (3)

Group IV. Weeds that can not readily be controlled with $\frac{1}{2}$ pound of 2,4-D acid per acre.

Barnyard grass (3) (4)

Black Medic (3)

Bluegrass, annual (4)

Bromegrass, downy (4)

Burdock (b) (3)

Buffalo bur

Catchfly, night flowering (3)

Chess, Japanese (4)

Cockle, corn

Cockle, cow

Cockle, white (3)

Crab grasses (3) (4)

Cucumber, wild

Foxtails (3) (4)

Hemp, wild (3)

Knotweed

Mallow (3)

Mullein (b) (3)

Nettle, hemp (2)

Nightshade, black

Sandburs (4)

Shepherd's purse (3)

Wild barley (4)

Wild oats

Witch grass (4)

(b) A biennial species (germinates one year and sets seed the next).

(1) Weeds that can be generally killed with $\frac{1}{4}$ to $\frac{1}{8}$ lb. of MCP at any stage prior to flowering.

(2) Weeds that can generally be killed before they are 6 inches tall or stunted at later stages with $\frac{1}{8}$ to $\frac{1}{2}$ lb. of MCP acid per acre.

(3) Weeds that are not normally controlled with MCP.

(4) Weeds that can generally be killed before they are over 2 inches tall with 5-10 lbs. of TCA acid per acre.

For additional detailed information, see Experiment Station Circular 101 "Weed Control."

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