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Weed Control
in
Vegetable Crops

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Control Series 101

WEED CONTROL IN VEGETABLE CROPS

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It has been estimated that weeds cost Virginia vegetable growers over \$30 per acre each year. Herbicides are available to help reduce these losses.

As of the date of publication, the recommendations listed are in accordance with U.S.D.A. registrations. Residue tolerance restrictions, as established under the Federal Food, Drug, and Cosmetic Act, will be met if applied according to directions on the label. Read and heed all label instructions for safe and effective use.

Use chemicals only on the crops specified, in the amounts specified, and at the time specified. Rates given are for over-all coverage expressed in pounds of active ingredient per acre. If used as band applications use in proportion to the area sprayed. Use lower rates on sandy soils and higher rates on the heavier soils. In many cases granular formulations are available and may be used instead of the sprays, but at the same amount of active ingredient.

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CROP	HERBICIDE AND RATE/ACRE	REMARKS
ASPARAGUS (Established beds)	Monuron (Telvar) 2 lb. in 50 gals. of water	Apply before or after cutting season. Clean cultivate before applying. Total dosage of monuron not to exceed 6 lbs/A. for season. Residue tolerance - 7ppm
	Simazine (Princep) 2 lbs. in 50 gals. of water	Apply in spring prior to emergence or after cutting season. Clean cultivate before applying. Residue tolerance - None established
	Dalapon (Dowpon) 10 lb. in 40 gals. of water	For perennial grass control, apply to actively growing grass foliage before or after cutting season. Cut asparagus spears closely if applied during harvest season. (Apply before spears emerge.) Direct spray below asparagus foliage if applied after harvest season. Residue tolerance - 30.0 ppm
BEANS (Lima, snap)	Dinoseb or DNBP (Premerge, Sinox P.E. Chemox P.E.) 4 lb. in 30 gals. of water	Apply immediately after seeding or at least before beans break through surface. Do not apply to light sandy soil. Residue tolerance - None established
	Trifluralin (Treflan) 1/2-3/4 lb. in 30 gals. of water	Apply to soil and incorporate immediately and thoroughly. Residue tolerance - 0.05 ppm
	(Snap only) DCPA (Dacthal) 8-10 lb. in 30 gals. of water	Apply uniformly to freshly worked soil immediately after seeding. Irrigation or rainfall (1/2") needed within 24-48 hours after application. Do not graze or feed treated plants to livestock. Residue tolerance - 2.0 ppm
	EPTC (Eptam) 3 lb. in 40 gals. of water	Immediately before planting apply to freshly worked soil and incorporate immediately to 3" depth. Do not graze or feed treated plants to livestock. Residue tolerance - None established
BEETS	Pyrazon (Pyramin) 4 lb. in 30 gals. of water	Preemergence spray. Residue tolerance - None established
	Endothall + TCA (Endothal-TCA Herbicide) 4 lb. + 8 lb. in 30 gals. of water	Preemergence spray. Soil incorporation at least 2" deep immediately prior to planting, or after planting but before beets emerge. Do not use treated tops for feed or food. Residue tolerance - None established
BROCCOLI, CABBAGE, COLLARDS, CAULIFLOWER, BRUSSEL SPROUTS	Trifluralin (Treflan) 1/2-3/4 lb. in 30 gals. of water	Apply to soil and incorporate thoroughly and immediately before transplanting. Does not give control of ragweed, jimsonweed, or velvetleaf. Residue tolerance - 0.05 ppm
	CDEC (Vegadex) 3-4 lb. in 30 gals. of water	Apply immediately after seeding. Use lighter rate from 9/15-6/1; heavier rate from 6/1-9/15. Plant 2 weeks earlier and use seed plate with next largest hole than normal. For transplants, use directed spray to clean cultivated soil. Residue tolerance - 0.2 ppm

CROP	HERBICIDE AND RATE/ACRE	REMARKS
BROCCOLI, CABBAGE, COLLARDS, CAULIFLOWER, BRUSSEL SPROUTS (Con't.)	DCPA (Dacthal) 8-10 lbs. in 40 gals. or water	Soil should be weed-free and with uniform surface. Apply immediately after seeding, after transplanting, or after clean cultivation of transplants. Provide sufficient agitation in spray tank. Irrigation or rainfall ($\frac{1}{2}$ ") needed within 24-48 hours after application. Do not graze nor feed treated plants to livestock. Residue tolerance - 1 ppm
CARROTS AND PARSLEY	Petroleum solvent (Stoddard Solvent, Varsol, mineral spirits) 60-100 gals.	Apply to thoroughly wet weed foliage when weeds are small. Spray parsley with only one application as soon as weeds appear. Spray carrots after they reach the 3-leaf stage and weeds are up. Don't spray carrots later than 3 weeks or parsley later than 6 weeks of harvest. Residue tolerance - Exempt
COLLARDS, KALE, SPINACH, TURNIP GREENS	CDEC (Vege dex) 2-4 lb. in 30 gals. of water	Apply immediately after seeding. Use lower rate when applied between 9/15 and 6/1. Residue tolerance - 0.2 ppm
	Chlorpropham or CIPC (Chloro IPC) 1-2 lb. in 30 gals. of water	Apply immediately after seeding. Use lower rate when applied between 9/15 and 6/1. Residue tolerance - None established
	DCPA (Dacthal) 8-10 lbs. in 30 gals. of water	Apply uniformly to freshly worked soil at time of seeding. Do <u>not</u> apply to spinach. Residue tolerance - 2.0 ppm on collards, 5.0 ppm (greens) 2.0 ppm (roots) of turnip greens
SWEET CORN	Butylate (Sutan) 4 lb. in 20 gals. of water	For nutgrass suppression, johnsongrass seedling and annual grasses, apply to soil before seeding and incorporate immediately and thoroughly 3" deep. Residue tolerance - 0.1 ppm (ear, forage and fodder).
	Butylate (Sutan) + atrazine (Aatrex) 3 lb. + 1 lb. in 30 gals. of water	See butylate above. Atrazine gives added broadleaf weed control. Do not plant to any crop except corn or sorghum until the following year. Do not graze or feed forage for 21 days following treatment. Residue tolerance - atrazine 0.25 ppm grain, 15.0 ppm forage and fodder.
	2,4-D - $\frac{3}{4}$ lb. LVE or $1\frac{1}{2}$ lb. amine in 20 gals. of water	Spray immediately after planting. Do not use on sandy soils. Residue tolerance - None established.
	Atrazine (Aatrex) or simazine (Princep) 2 lb. in 40 gals. of water	Spray immediately after planting. Do not replant treated area to any crop other than corn during the season. Some vegetables may be sensitive even in the following year. Do not feed forage for 21 days following atrazine treatment. Do not feed simazine treated forage or graze area. Residue tolerance - Atrazine see above, simazine N.E.
	EPTC + 2,4-D (Knoxweed) 2 lb. + 1 lb. (2 qts. of product) in 30 gals. of water	Spray immediately after planting, and do not plant deeper than 2". Residue tolerance - None established

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SWEET CORN (Con't.)	2,4-D $\frac{1}{4}$ lb. LVE or $\frac{1}{2}$ lb. amine in 10 gals. of water	Use after corn is up. Use drop nozzles after the corn is 12" high to prevent spray from getting into whorl of corn plant. Residue tolerance - None established
CUCUMBER, MUSKMELON, WATERMELON	Naptalam or NPA (Alanap-3) 2-3.5 lbs. in 40 gals. of water	Spray immediately after planting, after transplanting or just before vining (one month after planting) and after clean cultivation. Soil should be moist. Some stunting of crop is to be expected. Residue tolerance - None established
	DCPA (Dacthal) 8-10 lbs. in 30 gals. of water	Weed area thoroughly before applying. Irrigation or rainfall ($\frac{1}{2}$ ") needed within 24-48 hours after treatment. Residue tolerance - 1.0 ppm
ONIONS	KOCN - 8-16 lb. in 100 gals. of water	Wet weed foliage thoroughly. Spray when weeds are small and temperature above 60°F. Use lighter rate on onions with less than 3 leaves; heavier rate on older onions. Do not apply in flag stage. Do not exceed 100 gals. per acre. Do not apply within 30 days of harvest. Residue tolerance - None established.
	CDAA (Randox) 6 lb.	Preemergence spray for annual grasses to direct seeded onion crop just before emergence or for use soon after transplanting. Residue tolerance - none established.
	Chlorpropham or CIPC (Chloro I.P.C.) 2 lb. in 50 gals. of water	Spray immediately after planting seeds or sets (6/1-9/1). Do not apply when onions are in flag stage or within 1 month of harvest. Residue tolerance - None established
	DCPA (Dacthal) 8-10 lb. in 30 gals. of water	Apply to freshly worked soil at seeding, transplanting or lay-by and up to 14 weeks after seeding or transplanting. Irrigation or rainfall ($\frac{1}{2}$ ") needed within 24-48 hours after treatment. Residue tolerance - 1.0 ppm
GREEN PEAS	Dinoseb or DNBP (Premerge, Sinox P.E., Chemox P.E.) $1\frac{1}{2}$ - $4\frac{1}{2}$ lb. in 30-50 gals. of water	Use heavier rate immediately after seeding. Soil should be moist. Use $1\frac{1}{2}$ lbs. in 50 gals. of water when peas are 3-8" tall and weeds are small (preferred method). Do not spray if temperatures are expected to be 85°F or above. Do not apply after flower buds are visible. Do not graze or feed forage or hay within 40 days after application. Residue tolerance - None established
	CDAA (Randox) 4 lb. in 30 gals. of water	Preemergence spray. Residue tolerance - None established

CROP	HERBICIDE AND RATE/ACRE	REMARKS
POTATOES (Irish)	EPTC (Eptam) 6 lb. in 30 gals. of water	Apply either to smooth seed bed before seeding potatoes and incorporate immediately to 3-6" depth with disk or rotary tiller or apply just after drag-off and incorporate immediately by harrow, weeder or cultivator. Soil should be dry and free of weed seedlings at time of application. Good for nutgrass. Residue tolerance - None established
	Dinoseb or DNBP (Premerge, Sinox P.E., Chemox P.E.) 3-5 lbs. in 40 gals. of water	Apply just before potatoes emerge for control of weeds until first cultivation. Use lower rate if temperatures exceed 75°F. Residue tolerance - None established
	Diphenamid (Dymid, Enide) 4-5 lb. in 30 gals. of water	Apply to freshly worked soil at or immediately after planting. Residue tolerance - None established
	DCPA (Dacthal) 8-10 lb. in 30 gals. of water	Apply to freshly worked soil, weeds removed at planting, at drag-off or at lay-by (up to 9 weeks after planting.) Residue tolerance - 2.0 ppm
	Metobromuron (Patoron) 2-3 lb. in 30 gals. of water	For seed potatoes only. Apply to freshly worked soil immediately after planting or as a directed postemergence treatment. Use lower rate on sandy soils. Do not use treated potatoes for food or feed. Residue tolerance - None established
POTATOES (Sweet)	EPTC (Eptam) 3-6 lb. in 30 gals. of water	Apply to dry soil immediately or within 2 days after transplanting, follow immediately with soil incorporation. Some injury may occur at higher rates, especially on light soils. Lower rate for annual grasses. Residue tolerance - None established
	Diphenamid (Dymid, Enide) 2-4 lbs. in 30 gals. of water	Apply to freshly prepared soil immediately after transplanting. Annual grasses effectively controlled with lower rate, higher rate for broadleaf weeds. Do not use cover crop for feed or food within 6 months after treatment. Small grain cover crops may be injured. Residue tolerance - None established
	DCPA (Dacthal) 8 lb. in 70 gals. of water	Apply immediately after transplanting on freshly worked soil. Irrigation or rainfall ($\frac{1}{2}$ ") needed within 24-48 hours after treatment. Residue tolerance - 2.0 ppm
SOUTHERN PEAS (Blackeyed)	DCPA (Dacthal) 8-10 lbs. in 30 gals. of water	Apply to freshly worked soil immediately after seeding. Irrigation or rainfall ($\frac{1}{2}$ ") needed within 24-48 hours after treatment. Do not feed plant refuse to livestock nor graze treated area. Residue tolerance - 2.0 ppm
	Trifluralin (Treflan) $\frac{1}{2}$ - $\frac{3}{4}$ lb. in 30 gals. of water	Apply and incorporate thoroughly immediately before seeding. Residue tolerance - 0.05 ppm

CROP	HERBICIDE AND RATE/ACRE	REMARKS
TOMATOES AND PEPPERS	Trifluralin (Treflan) 3/4 lb. in 30 gals. of water	Apply preplant and incorporate immediately up to time of transplanting. Will not effectively control ragweed or jimsonweed. Residue tolerance - 0.05 ppm
	Diphenamid (Dymid, Enide) 4-5 lb. in 30 gals. of water	Apply at direct seeding, or at transplanting, or within one month after transplanting or seeding and after clean cultivation. Irrigation or rainfall within a few days will ensure weed control. Do not use cover crop for feed or food within 6 months after treatment. Small grain cover crops may be injured. Residue tolerance - None established
	Amiben (Vegiben) 3-4 lb. in 30 gals. of water	Use only when foliage is dry. Apply granules as overall treatment 3 to 5 days after transplanting or 4 weeks after transplanting to clean cultivated soil. Do not use on sandy soil. Do not graze or feed plants from treated area to livestock. Residue tolerance - None established
	DCPA (Dacthal) 8-10 lb. in 30 gals. of water	Apply 4-6 weeks after transplanting to freshly worked soil after all weeds have been removed. Irrigation or rainfall (1/2") needed within 24-48 hours after treatment. Do not feed refuse to livestock nor graze treated area. Residue tolerance - 1.0 ppm
TOMATOES ONLY	Pebulate (Tillam) 3-4 lbs. in 30 gals. of water	May be used prior to transplanting or as an early lay-by (about 1 month after transplanting). Lay-by application preferred. Apply after clean cultivation and incorporate immediately to 2-3" depth. Soil surface should be dry and free of weeds. Do not apply within 8 days of harvest. Residue tolerance - 0.1 ppm

Trade and brand names are used only for the purpose of information and the Virginia Cooperative Extension Service does not guarantee nor warrant the standard of the product, nor does it imply approval of the product to the exclusion of others which may also be suitable.

KEYS TO PROPER USE OF PESTICIDES

1. Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.
2. Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed, or other material that may become harmful if contaminated.
3. Dispose of empty containers in the manner specified on the label. If disposal instructions are not printed on the label, burn the containers where smoke will not be a hazard, or bury them at least 18" deep in a place where water supplies will not be contaminated.

SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.