UT Extension
W245

Common Herbicides for Fruit and Vegetable Weed Control

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This chart provides recommendations for the best treatments available for weed control in most vegetable crops. The rates and recommendations for these herbicides are specific for fruit, vegetable and other edible crops, and the chart should be used in accordance with the label. Herbicides listed in this chart are common and often easy for consumers to find; there are many other acceptable herbicides on the market that may suit a similar purpose. Always consult the label before applying any pesticide on a specific crop or crop cultivar.

- Products applied for **burndown** of existing vegetation **prior to planting and/or post-directed** for weed control around existing vegetable and fruit crops. Extreme care should be taken to avoid spray contact on the foliage of desired vegetation.
- **Preemergence and/or pre-plant** applied herbicides for **residual control of weeds** in selected edible crops.
- **Postemergence selective weed control** in specific vegetable crops.
- Products applied for **burndown** of existing vegetation **prior to planting and/or post-directed** for weed control around existing vegetable crops in **organic production systems**. Extreme care should be taken to avoid spray contact on the foliage of desired vegetation.

Chemical	Vegetables appearing on label	Weeds controlled	Timing of Application	Application rates
Burndown				
Glyphosate *Trade name: Roundup®, other*	Many crops; see label for specifics.	A non-selective herbicide that controls many weeds.	Pre-plant applications allowed in most plants. Post-directed and spot spray treatments are allowed for certain crops as long as care is taken to avoid contact with any foliage or green tissue. Consult label product labels for more specific information. Glyphosate has no soil residual activity.	1 to 5 pints/acre or 1 to 10% solutions, depending on the crop Surfactant requirements are based upon formulation of glyphosate selected. Please consult label for specific recommendations.
Pelargonic acid *Trade name: Scythe®, other*	Asparagus, artichoke, beet, carrot, parsnip, potato, radish, sweet potato/ yam, turnip, rutabaga, garlic, onion, leek, shallot, celery, cilantrol, cress, endive, lettuce, parsley, rhubarb, spinach, broccoli, Brussels sprouts, cabbage, cauliflower, collards, kale, kohlrabi, greens (mustard and turnip), eggplant, okra, pepper (chili, bell, sweet), pimento, tomato, cucumber, gourd, muskmelon, cantaloupe, pumpkin, squash, watermelon, apple, pear, apricot, cherry, nectarine, peach, plum, prune, blackberry, blueberry, dewberry, grape, strawberry, grape and other fruits and vegetables	A non-selective herbicide that controls many weeds.	Post-directed (avoiding spray on foliage or green bark) and pre-plant applications in all landscape trees, bedding plants, flowers and other ornamentals. Pelargonic acid has no soil residual activity.	3 to 10% solution (spot spray): 3-5%- solution for annual weeds 5-7%- solution for perennial weeds 8-10%- Solution for maximum burn down of mature weeds No additional adjuvant required.

Preemergence And/Or Pre-plant				
Trifluralin *Trade name: Preen™ Garden Weed Preventer*	Many vegetable crops and non-bearing tree fruit and nuts *Not labeled for preemergence applications in cucurbit crops.	Several annual grasses, carpetweed, chickweed, Florida pusley, goosefoot, henbit, knotweed, lambsquarters, pigweed species, purslane	Preemergence weed control when applied to garden vegetables 2 to 3 inches tall but before weeds have emerged. However, application methods may differ with specific crops. This product needs immediate incorporation after application with irrigation, rainfall or light tillage.	1 lb / 400 sq ft for heavy clay soils 1 lb / 960 sq ft for medium loam soils 1 lb / 1280 sq ft for light sandy soils
Trifluralin *Trade name: Treflan® 4L, Treflan® EC, etc.*	Many vegetable crops and non-bearing tree fruit and nuts *Not labeled for preemergence applications in cucurbit crops.	Several annual grasses, carpetweed, chickweed, Florida pusley, goosefoot, henbit, knotweed, lambsquarters, pigweed species, purslane	May be applied prior to planting or transplanting most vegetable crops. Immediate incorporation is necessary for optimal control. See label for more details.	1 to 2 pints/acre depending on crop and soil type (fine textured soils require the highest recommended rate, while coarse-textured soils require the lowest recommended rate)
Pendimethalin *Trade Name: Prowl® H20*	Carrots, sweet corn, edible beans, garlic, grain sorghum, lentils, mints, onions, peas, potato, sunflower and other vegetables	Several annual grasses, carpetweed, chickweed, Florida pusley, henbit, ladysthumb, common lambsquarters, pigweed species, purslane, spurge	Pre-plant incorporated or preemergence applications prior to planting or transplanting vegetable crops. Postemergence applications can be made in certain crops but weed control is dependent on applying prior to weed emergence.	1.5 to 4 pints/acre depending on crop and soil type (fine-textured soils require the highest recommended rate, while coarse-textured soils require the lowest recommended rate)
DCPA *Trade name: Dacthal®, other*	Broccoli, Brussels sprouts, cabbage, cauliflower, all Brassica leafy vegetables, cantaloupe/honeydew/watermelons (not preemergence but 3- to 5- leaf; do not incorporate), onions, radish (from preemergence up to 3-leaf stage), sweet potato, strawberry, tomato/tomatillos/ eggplant (4 to 6 weeks after transplanting or 4 to 6 inch tall seedling)	Several annual grasses, lambsquarters, carpetweed, chickweed, purslane, field pansy and suppression of other broadleaf weeds	Pre-plant or preemergence weed control	6 to 14 pints/acre or 4 to 5 fl oz/1 to 2 gallons (treats 1000 sq ft.)

Corn gluten meal- active ingredient: several dipeptides *Trade name: Preen®* *Organic Vegetable Garden Weed Preventer*, other*	All vegetable crops	Certain annual grasses and black medic, black nightshade, buckhorn plantain, catchweed bedstraw, clover, curly dock, dandelion, lambsquarters purslane, redroot pigweed	Preemergence weed control when applied to garden vegetables 2 to 3 inches tall but before weeds have emerged. Re-apply every 4 to 6 weeks as needed.	5 to 10 lbs/250 sq ft.
* Not registered for certified organic production use.				

Postemergence Selective Weed Control				
Sethoxydim *Trade name: Poast®, other*	apricot, asparagus, beans (dry, succulent), beets, broccoli, Brussels sprouts, cabbage, cauliflower, collards, garlic, kale, kohlrabi, leeks, mustard/ rape greens, cantaloupe, cucumber, honeydew, musk melon, pumpkins, watermelons, onions, radish, sweet potato, carrot, cherries, strawberry, grape, peppers, celery, lettuce, rhubarb, groundcherry, tomato, tomatillos, eggplant, raspberry, blackberry, lettuce, endive, parsley, spinach, mint, nectarine, peach, peanut, potato, plum apples, pears, peas (dry, succulent), artichoke, yam and other vegetables	Provides selective postemergence contact control of several grass species including, but not limited to, bermudagrass, broadleaf signalgrass, crabgrass spp., foxtail spp., goosegrass and johnsongrass.	Provides selective postemergence contact grass control only. Sethoxydim has little to no soil residual activity.	1.5 to 2.5 pints/acre (depending on crop) Add 1% v/v crop oil concentrate.
Clethodim *Trade name: SelectMax®, other*	Bean (dry), broccoli, cabbage, carrot, cauliflower (other head and stem Brassica), celery, cucumber, eggplant (other fruiting vegetables), garden beet, garlic, legume vegetables (garden podded), lettuce, melons (including cantaloupe and watermelon), mint, mustard greens, onion, pea, peanut, peppers, potato, pumpkin, radish, rhubarb, squash, strawberry, sunflower, sweet potato, turnip greens, tomato, yam (other tuberous and corm vegetables) and other vegetables	Provides selective postemergence contact control of several grass species including but not limited to bermudagrass, broadleaf signalgrass, crabgrass spp., foxtail spp. and johnsongrass. Does not always adequately control goosegrass.	Provides selective postemergence contact grass control only. Clethodim has little to no soil residual activity.	Annual grass weeds: 9 to 16 fl oz/acre Perennial grass weeds: 12 to 16 fl oz/acre Add 0.25% v/v nonionic surfactant.
Halosulfuron *Trade name: Sandea®, other*	asparagus, pumpkins, cucumbers, cantaloupes, honeydews, crenshaw melons, watermelons, winter squash, dry beans, succulent snapbeans, tomatoes, sweet corn and other vegetables	Cocklebur, common/ giant ragweed, galinsoga, hemp sesbania, kyllinga spp., ladsythumb/ smartweed, prickly sida, redroot pigweed, sunflower, velvetleaf, Venice mallow, wild radish, wild mustard and yellow/ purple nutsedge.	Provides selective postemergence systemic control. Preemergence control may be less consistent.	½ to 1 1/3 oz/acre, depending on crop Add 0.25% v/v nonionic surfactant.

Bentazon *Trade name: Basagran®, other*	dry/succulent beans, dry/succulent peas, peanuts, corn, spearmint, peppermint and sorghum	Cocklebur, common purslane, eclipta, hairy nightshade, hemp sesbania, jimsonweed, ladysthumb/ smartweed, mayweed, morningglory, velvetleaf, Venice mallow, wild sunflower and yellow nutsedge.	Provides selective postemergence contact control. Bentazon has no soil residual activity.	1 to 2 pints/acre or 0.375 to 0.75 fl oz/1000 sq ft Spot spray: 0.75 fl oz per 1 to 2 gallons of water Add 1% v/v crop oil concentrate.

Organic Burndown*				
Clove oil - active ingredient: eugenol *Trade name: Matratec™, other*	All fruit, nut and vegetable crops.	Many weeds, non-selective herbicide	Herbicide for organic production that provides non-selective postemergence contact desiccation of several broadleaf and grass weeds. Post-directed (avoiding spray on foliage or green bark of crops) and pre-plant applications. Clove oil has no soil residual activity.	5 to 8% solution (spot spray): 5% solution- broadleaf and grass weeds <6 inches tall, temperature above 60° F and sunny 7% solution- broadleaf weeds >6 inches in height, temperature below 60° F and cloudy 8% solution - grasses >6 inches in height, temperature below 60° F and cloudy A non-synthetic adjuvant approved for certified organic crops may be added for improved performance.
Vinegar - active ingredient: acetic acid	All vegetable crops.	Certain broadleaf weeds with grass suppression	Organic post-directed (avoiding spray on foliage or green bark of crops) contact control. Vinegar has no soil residual activity.	At least a 20% solution for the most consistent performance. Multiple applications are often needed for long-term control.
Boiling water (~212°F)	All vegetable crops.	Many weeds	Organic post-directed (avoiding contacting foliage or green bark of crops).	Pour until plant foliage becomes wilted. Multiple applications are often needed for long-term control.
Flame/ torch	All vegetable crops.	Many broadleaf weeds with some grass suppression; broadleaf weeds that are larger or have a waxy cuticle (i.e., purslane) will not be controlled adequately.	Organic post-directed (avoiding contacting foliage or green bark of crops). Some heat stress may be noted on crops even if vegetation does not come in direct contact with the flame.	Flame applications will require approximately 5 to 15 gallons propane/ per acre. Use with caution in accordance with local fire regulations.
* Organic weed control products listed here can cause human harm such as chemical or heat related burns, if used improperly.				

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